P1200 Standard POS PRINTER
P1300 Hybrid POS PRINTER

DN Utility manual

History of Changes

Rev No.	Date	Page	*Action	Description of Change
1.0	04 August 2020		Add	Initial Release
1.1	06 October 2020	69 - 72	Add	Add Installation manual
		60	Modify	Modify maximum allowed combining XML files from 2 to 3.
		60	Add	Add information regarding combined XML file section sequence.
		All	Modify	Remove TCP and HTTP authentication
		5	Add	Add information of OpenJDK 1.8 or higher support.
		68	Add	Add CLI return code table
		65	Modify	Modify CLI argument for Ethernet Interface
		30 - 37	Modify	Update printer setting list table
		All	Modify	Remove DFUX USB information
1.2	09 November 2020	70	Modify	Remove License Agreement
		72	Modify	Remove Interface installation for Linux
		30-37	Modify	Update printer settings table
1.3	03 December 2020	6, 58, 61	Modify	Change Set Printer Statistic feature to Clear Printer Statistic
		All	Modify	Update Pictures
		30-38	Modify	Updated Special Font setting list Remove eco setting (disable/enable) Updated Print Density setting Removed receipt print mode setting
1.4	06 January 2021	35	Add	Add 90 W option in power supply setting
		32	Modify	Change Carriage Return to Auto Line Feed
		35	Modify	Change Color Density setting category to Eco Function
		59	Modify	Change Sensor Monitoring picture
1.5	08 February 2021	40	Add	Added print test receipt on Eco Function tab in Printer Settings.
		9, 16, 18	Modify	Changed P1200 printer image
		38	Add	Added comment in IP Address setting
		34	Modify	Changed Receipt Shooting time's available setting items
		60	Modify	Changed Reset Factory description
		64	Modify	Updated the Combine XML file information for Service and Maintenance Feature
		35, 38	Modify	Change the default setting value for : 1. Paper Core Diameter Adj => 23mm 2. Remaining Length Adj => 1 mm. 3. Cash Drawer Open Delay => 17 (1700 mm) 4. Data Error (RS232) => Ignore

1.6	02 March 2021	33	Modify	Change compatible top margin default setting to disabled
2.0	21 June 2021	6	Delete	Delete Ethernet from support interface P1300 (Hybrid) Model
		7	Add	Add P1300 Limitation
		7, 69	Add	Support P1300 (Hybrid) Model
		7, 60, 61, 68	Add	Added Sample Print Option for Slip Station
		16	change	Change The printer to P1200
		21,22	Add	Dot health analyses, add sensor BOF and TOF
		26	Add	Display for P1300
		30, 31,39	Add	Add P1300 in Printer Setting Page
		53	Add	Receipt station spec for P1300
		64	Add	Maintenance counter clear for P1300
		47	Add	Remark for Logo download support for P1200 and P1300 (Receipt only).
2.1	6 August 2021	32, 34, 35, 36, 37, and 39	Change	Update printer setting list
	24 August 2021	6	Change	Added JRE limitation for FW Download export and import functionality
2.2	8 October 2021	8	Add	Added limitation for sensor monitoring function vie using RS232.
2.3	22 October 2021	23	Add	Added information for BM sensor health analysis for P1200 printer (Non BM model)
		40	Add	Added Wait For Slip Paper and Clamp Delay setting
2.4	13 April 2022	8	Add	Add limitation for window OS and JRE installation

Note: *Action - Change / Add / Delete

Table of Contents

1.   Overview

This document describes the specifications for the Printer Utility and provides a guide to operate it.
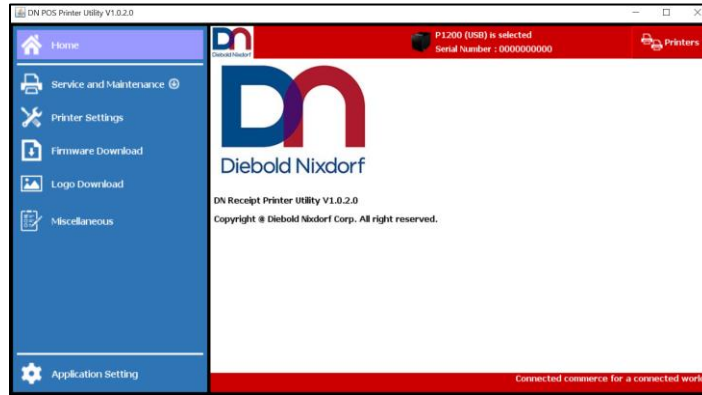
Figure 1 Application

Below sections will provide some basic overview of the application.

1.1   Operating System & Application Dependency

In order to run the functionality of the utility, below components are required:

Function	Components
Operating System	- Windows 10 Enterprise (64 bit) - Windows 7 (32 bit and 64 bit) - SUSE Linux Enterprise Desktop 11 (SLED11) SP3 (32 bit) - SUSE Linux Enterprise Desktop 12 (64 bit) - CentOS-6 (32 bit and 64 bit) - CentOS-7 (32 bit and 64 bit)
Java Run Time Environment	Oracle Java 1.8.0.161 or higher, or OpenJRE 1.8.0.161 or higher

Table 1. Application/System Dependency

1.2   Target Devices

Below table shows the supported printer model.

Printer Model	Interface	Description
P1200	**- USB :** Printer Class **- Serial (RS232C)** **- Ethernet**	Single side receipt printer
P1300	**- USB :** Printer Class **- Serial (RS232C)**	Hybrid (Receipt & Slip) printer

Table 2. Target devices

1.3   Feature List

Main Features	Sub Features	Description
Service and Maintenance	**Printer Information**	Retrieves and displays the printer general information
	Health Analysis	Check and displays the printer health and predict the remaining life for some of the printer peripherals
	Error History	Check and displays the latest error history since the printer is retrieved
	Analyze Thermal Head	Displays all the dots resistance value in the printer's thermal head with table and graph
Printer Configuration		Retrieves and configures printer settings.
Firmware Download		Performs firmware downloading
Logo Download		Download image to printer. Set image for watermark, top and/or bottom logo.
Miscellaneous	**Factory Reset**	Reset printer setting to factory default.
	Configuration Print	Print the current printer configuration.
	Command Line	User can input any command in hex format and send them to the printer
	Print Sample Receipt	Print a sample receipt
	Print Sample Slip	Print a sample slip printing
	Cash Drawer Test	Performs cash drawer open and close operations
	Clear Printer Statistic	Clear the printer maintenance counters.
	Sensor Check	Perform state monitoring on all the printer sensors

Table 3. Application Features

1.4 Limitations

This section contains some limitations in the application.

- Application can only communicate with one printer.

- If there are multiple USB printers with same product ID connected, only the first found printer will be able to be communicated to.

- Logo Download not support for Slip Station

- When running sensor monitoring function using RS232 interface, the application flow control must be set to "None".

- Application can only support if the Windows OS and JRE both is 64 bit or both is 32 bit.

  If Windows OS is 64 bit but the JRE is 32 bit or the other way round, the application will return error.

2. GUI Manual

2.1 Main Window

The first time the application is opened, the main window will be shown and it will go directly to the Home page as below.
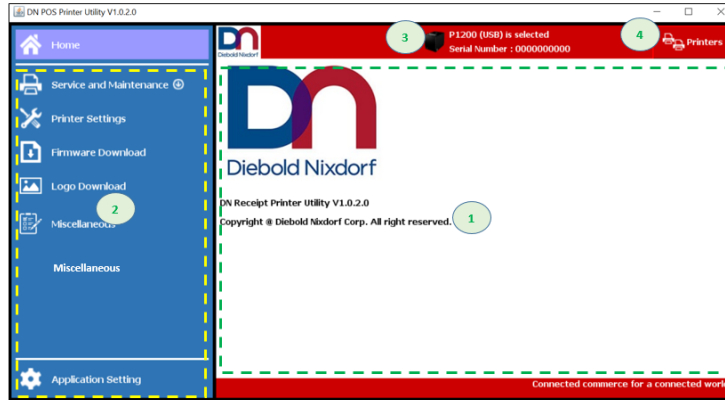

Figure 2 Application Main Window

Below are each main window components detailed explanation.

1. **Main Page**
   This page will change depending on the selected feature in the left side of the application. When the application is opened, the default page is the Home page.

2. **Feature Selection Area**
   This area contains all the supported features of the application. Each feature has its own page. Selecting one of the feature will change the Feature page area. Below are the main feature list.

Feature Buttons	Detailed Description
Home	Show the home page
Service and Maintenance	Please refer to section 2.3 Service and Maintenance
Printer Settings	Please refer to section 2.4 Printer Settings Page
Firmware Download	Please refer to section 2.5 Firmware Download Page
Logo Download	Please refer to section 2.1 Logo Download Page
Miscellaneous	Please refer to section 2.2 Miscellaneous Page
Application Setting	Please refer to section 2.3 Application Setting Page

Table 4 Feature Buttons List

3. **Printer Description**
   Displays the selected printer information and the selected printer image. The information shows will also varies depending on the printer selection and interface.

Condition	Messages	Printer Image
No printer selected	No Printer Selected. Please click the 'Printers' button to add printer	-
Unknown Printer Selected	Unknown (Interface) printer is selected. Serial Number :	
Known printer is selected	Model (Interface) printer is selected. Serial Number : 0000000000000	

Table 5. Printer description messages

4. Printers Button

Open Printer List page to add, select, or delete printer. Please refer to section 2.2 Printer List Page.

2.2 Printer List Page

Click the 'Printers' button in the Main Window to open the printer list page. In this page, user can define a new printer, delete or modify the interface parameter of the printer. Maximum printer which can be listed are 10 printers (excluding USB Printers).

Figure 3 Printer List Page

Below are each component description of the Printer List Page.

1. **Menu Button**

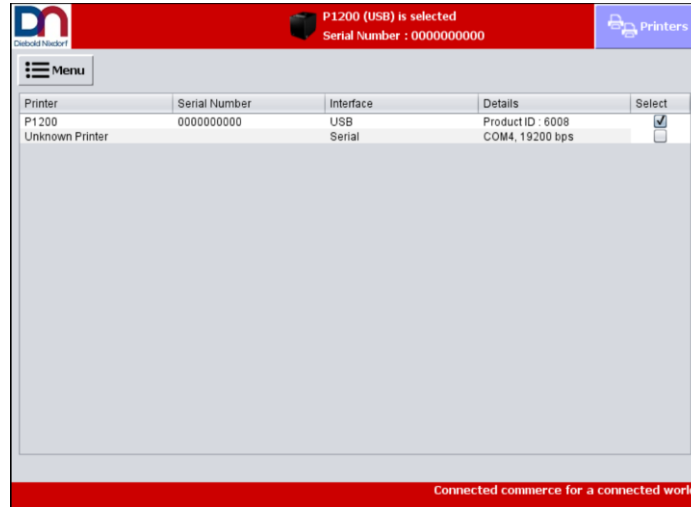   Depending on the selected printer in the table, clicking this button will pop up a selection menu as below.

Menu Items	Condition to appear	Function
Refresh	-	Communicate to all the listed printers in the table and update each of their serial number information.
Add Serial Printer	-	Open the Add Serial Printer dialog to set serial parameter options and add the printer.
Add Ethernet Printer	-	Open the Add Ethernet Printer dialog to set Ethernet parameter options and add the printer.
Edit Serial Printer	Serial printer is selected	It will open up the edit serial printer dialog to edit the serial interface parameters.
Edit Ethernet Printer	Ethernet printer is selected	It will open up the edit Ethernet printer dialog to edit the Ethernet interface parameters.
Delete All Printers	-	Delete all listed printer in the table, except USB printer.

Table 6. Print List Page's Menu Items

Below table will show the list of available menu items which will be changed depending on the condition.

USB	Serial	Ethernet
Refresh Add Serial Printer Add Ethernet Printer Delete All Printers	Refresh Add Serial Printer Add Ethernet Printer Edit Serial Printer Delete All Printers	Refresh Add Serial Printer Add Ethernet Printer Edit Ethernet Printer Delete All Printers

Table 7 Menu Items will be shown depending on the Interface Type

2. Printer List Table

It will list all the previously added serial or Ethernet printers and any connected USB printer. The table will provide the following information.

Column name	Detailed Description
Printer	If printer is connected, it will show the printer Model name. If the printer is not connected, it will show "Unknown printer".
Serial Number	The printer serial number. If printer is not connected, this information will be empty. To re retrieve the serial number, perform the Refresh operation.
Interface	The printer interface.
Details	The printer detailed information. Below are the information shown. - USB Printer : Shows the USB Product ID - Ethernet Printer : Shows the IP address - Serial Printer : Shows the port name and baud rate
Select (Checkbox)	An editable column. Click the checkbox to select the printer. Only 1 printer can be selected at a time.

Table 8 Printer list table column details

There are 3 actions user can do on the added printers:

- *Left clicking the mouse button.*
  It will highlight the printer. Click the "Select" check box to select the printer.
- *Right clicking the mouse button.*
  If the mouse cursor is pointing to the USB printer, it will not do anything. However, if it is pointing to the Ethernet or Serial printer, it will pop up an option menu as below.

1. Edit Printer. It will pop out the edit dialog (*Figure 7* Edit Serial Printer Dialog & *Figure 9* Edit Ethernet Printer Dialog).
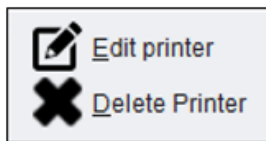**2. Delete.** To delete the printer.

Figure 4 Right click menu on Printer List Table

- *Double clicking the mouse button.*
  It will pop out the edit dialog (*Figure 7* Edit Serial Printer Dialog & *Figure 9* Edit Ethernet Printer Dialog) if the printer interface is Serial or Ethernet.

2.2.1   Add USB Printer

In case of USB printer, the application will automatically list the connected USB printers in the table. As USB printer is automatically added, it cannot be edited, removed, or deleted manually, except by disconnecting the printer.

2.2.2   Add/Edit Serial Printer

Follow below steps to set add a serial printer.

- Click the Menu button.
- Select the "Add Serial Printer" option.
- The Add Serial Printer dialog will be opened as below.
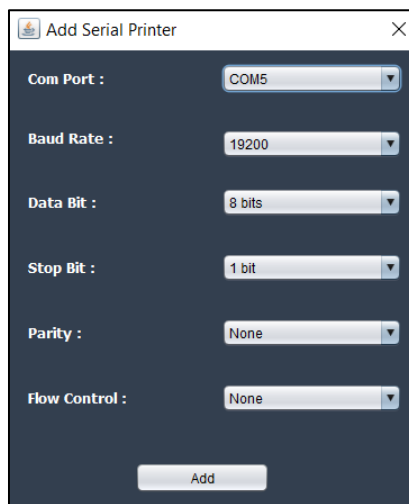

Figure 5 Add Serial Printer Dialog

Note: The PC's available comports will be listed automatically in the "Com Port" combo box.

- Set the Serial parameter, then click "Add" to add the printer in the Printer List Table.

Figure 6 Serial printer will be listed by the Add button

To edit the added serial printer parameter, please follow below steps.

- Open the Edit Serial Printer dialog.
  There are 3 methods available to open the dialog as below:
  Method #1:
    - Left click on the serial printer in the table
    - Click Menu button
    - Select the "Edit Serial Printer" option to open the Edit Serial Printer dialog
  Method #2:
    - Right click on the serial printer in the table
    - Select "Edit Printer" from the pop up menu selection to open the Edit Serial Printer dialog.
  Method #3:
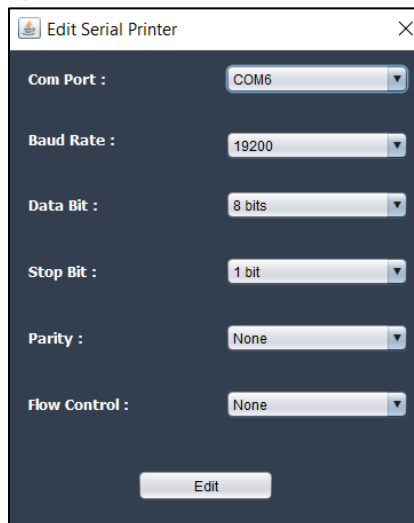   - Double click on the serial printer in the table

Figure 7 Edit Serial Printer Dialog

- Set the new serial parameter.
- Click the "Edit" button to edit the printer.

 Note: Duplicate com port name is not allowed. If the Printer List table is already populated with a Serial Printer with same com port, an error message will pop out when the "Add" or "Edit" button is clicked.

2.2.3   Add/Edit Ethernet Printer

Follow below steps to set add an Ethernet printer.

- Click the Menu button.
- Select the "Add Ethernet Printer" option.
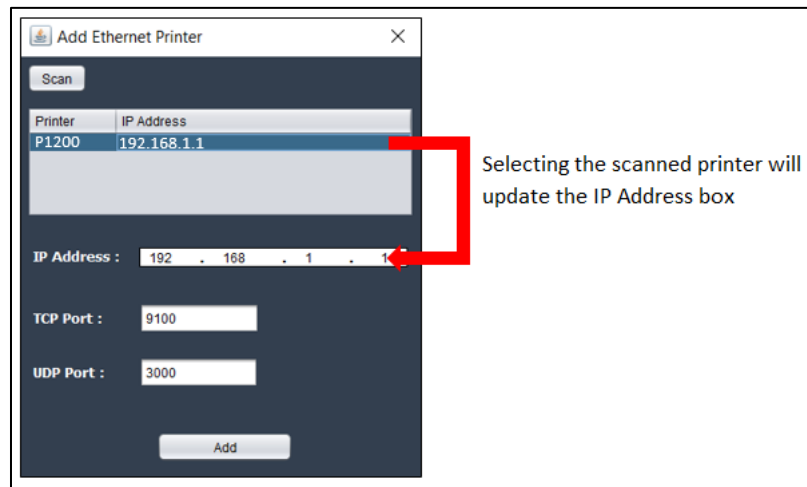- The Add Ethernet Printer dialog will be opened as below.

Figure 8 Add Ethernet Printer Dialog

The first time the dialog is opened, it will scan all the DN printer connected through Ethernet interface using broadcast. If the listed printer is selected, the IP Address box will be updated with the selected printer's IP address.

Click the scan button to re-scan the connected printers.

Note: The scanning function may not work with the following conditions:

- The printer SNMP setting is disabled.
- The subnet mask of the network interface in the PC differs with the printer subnet mask.

- Once the IP address has been set, set the other Ethernet interface parameters, then click "Add" to add the printer.

To edit the added Ethernet printer, please follow below steps.

- Open the Edit Ethernet Printer dialog.
  There are 3 methods available to open the dialog as below:
  Method #1:
    - Left click on the Ethernet printer in the table
    - Click Menu button
    - Select the "Edit Ethernet Printer" option to open the Edit Ethernet Printer dialog
  Method #2:
    - Right click on the Ethernet printer in the table
    - Select "Edit Printer" from the pop up menu selection to open the Edit Ethernet Printer dialog.

Method #3:

- Double click on the Ethernet printer in the table
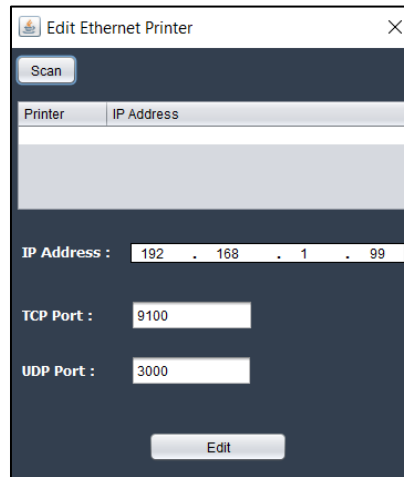
Figure 9 Edit Ethernet Printer Dialog

- Set the new Ethernet parameters.
- Click the "Edit" button to edit the printer.

Note: Duplicate IP address is not allowed. If the Printer List table is already populated with an Ethernet Printer with same IP address, an error message will pop out when the "Add" or "Edit" button is clicked.

2.2.4   Remove Printer

Follow below steps to set remove the serial and Ethernet printer.

To remove all printers:

- Click Menu button
- Select the "Remove All Printers" from the pop up menu.

To remove one printer:

- Right click on the printer in the table
- Select "Delete" to remove the printer

2.2.5   Select Printer

In order to be able to select any printer, please make sure the printer is already added and listed in the Printer List Table. Please follow below step to select the printer.

- Left click on the "Select" checkbox on the printer.

Figure 10 Clicking the Select checkbox will select the printer

Once the printer is selected, the printer information should be updated in the top side of the application window.

Figure 11 P1200 information will be updated once the printer is selected

2.3   Service and Maintenance

Service and Maintenance page has the capability to provide additional printer health information aside of standard printer statistics. It consists of four features:

- Printer Information
- Health Analysis
- Error History
- Thermal Head Analyzer

These four features are hidden and will only be shown when the Service and Maintenance button is clicked.
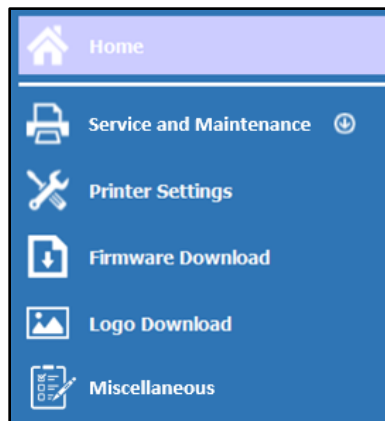

Figure 12 Service and Maintenance features are hidden
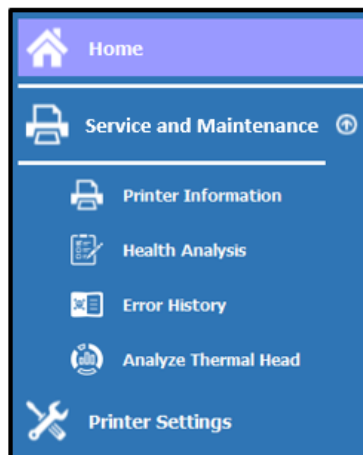

Figure 13 Service and Maintenance features are shown after the Service and Maintenance button is clicked

Please refer to below sections for more detailed information for these features.

2.3.1 Printer Information Page

This page will show the general printer information to the user. There are several information which is retrieved from the printer and shown as below.

- Model Number and Serial Number
- Firmware Version
- Printer Configuration
- Printer Tally
- Sensor Calibration Value
- Current Sensor Value
- Sensor Status
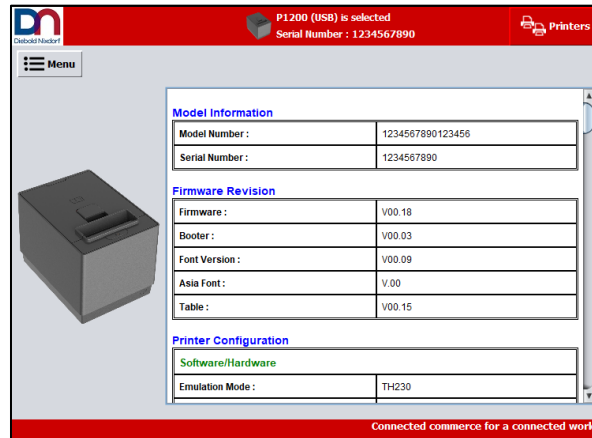
Figure 14 Printer Information Page

Below are each component description of the Printer Information Page.

1. **Menu Button**

   Clicking this button will pop up a selection menu as below.

Menu Items	Function
Refresh	Retrieve the information from printer and update the page.
Export as XML File	Export the statistical information to a xml file (.xml)
Import XML File	Import the exported xml file, convert the data, then show the converted data on the page

Table 9. Printer Information's Menu Items

2.3.1.1 Retrieve Information from Printer

There are two ways for the application to get the required statistical information for the Printer Information feature from the printer.

First method:

- When the Printer Information page is opened, if there is a DN printer connected, the application will automatically communicate to the printer and retrieve the statistical information.

Second method:

- Click the Menu button
- Click Refresh

2.3.1.2   Command Line Supports

Printer information feature is supported in CLI. Application will only retrieve the information from printer and export it to a file. Similar to GUI, CLI have the capability to export data to xml file.

Please note that the file saved location will be defined the file path "-p" parameter. Please refer to "**–p FileName**" in section "**3.1 CLI** Arguments". If this argument is omitted, the default directory and the default file name will be used. The default directory is the execution directory. The default file name format is:

Format: [PrinterSerialNumber]_ Information_[YYYYMMDD]_[hhmmss].[FileExtension]

Example : 12345678901_Information_20200325_195412.xml

For the command line format used to retrieve the information, please refer to section 3.3 Retrieve Data from Printer.

2.3.2   Health Analysis Page

This page will analyze the printer condition and show any abnormal condition in the printer based on its usage rate.

When the Health Check page is selected in the Main Window, before the page is shown, the Operating Hours setting dialog will be opened as shown in below figure.
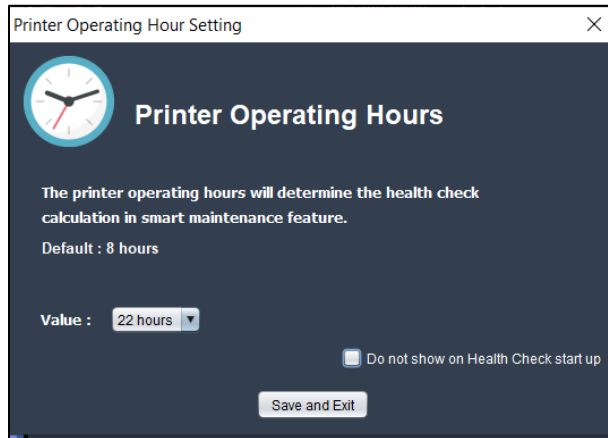
Figure 15 Operating hours setting dialog will show up when Health Check page is open

In order for the health check is performed accurately, it is necessary to set the actual printer operating hours for a day in the setting dialog.

In order to disable the setting dialog to show up every time the Health Check page is opened, check the "Do not show on Health Check start up" option. Please refer to the 2.3.2 Operating Hours section for more detailed information.

Once the setting dialog is closed, the Health Check page will be opened as below.
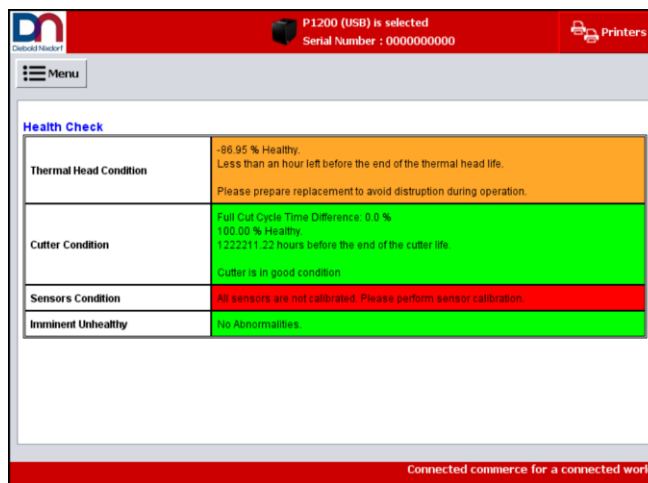
Figure 16 Health Check Page (P1200)

Below are each component description of the Health Check Page.

1. **Menu Button**
    Clicking this button will pop up a selection menu as below.

Menu Items	Function
↻ Refresh	Retrieve the information from printer and update the page with the health analysis result.
Export as XML File	Export the statistical information to a XML file (.xml)
Import XML File	Import the exported xml file, convert the data, then show the converted data on the page

Table 10. Health Analysis's Menu Items

2. **Health Analysis Result Text Box**
    Show the result of the printer health analysis. Please refer to section 2.3.2.1 Health Analysis Information for more detailed information.

2.3.2.1 Health Analysis Information

There are 4 area which will be checked during printer health analysis as below.

- **Thermal Head Condition**
  The analysis for thermal head condition will provide user with below information.
  - The prediction of the remaining thermal head life
  - Number of dot failures
  - Suggested action for user if there is any abnormality
- **Dot Head Condition (P1300 only)**
  The analysis for dot head condition will provide user with below information.
  - The prediction of the remaining dot head life
  - Number of dot failures
  - Suggested action for user if dot is any abnormality

- **Cutter Condition**
  The analysis for cutter condition will provide user with below information.
  - The prediction of the remaining cutter life
  - The cut cycle time difference
  - Suggested action for user if there is any abnormality
- **Sensors Condition**
  The following are the sensors which will be checked.
  - Paper Jam Sensor
  - Paper Low Sensor
  - Black Mark Sensor (P1200 only)

Note: P1200 printer is separated into BM model and non BM model. If non BM model is used, utility will show a warning that the BM sensor is not calibrated even though it does not have Black Mark sensor. This is a limitation.

- TOF Sensor (P1300 only)
- BOF Sensor (P1300 only)

The analysis for the above sensors condition will provide user with below information.

- Warning if sensor is not yet calibrated
- Warning if the latest sensor ON or OFF voltage value is abnormal
- Suggested action for user if there is any abnormality

- **Imminent Unhealthy**
  It will list down the latest error occurrence in the printer within the last 7 days. If during the last 7 days span the error occurrence is above the allowed threshold, a warning information will be shown and the next suggested action for user will be shown.

2.3.2.2   Retrieving Information from Printer

There are two ways for the application to get the required statistical information for the Health Analysis feature from the printer.

First method:

- When the Health Analysis page is opened, if there is a DN printer connected, the application will automatically communicate to the printer and retrieve the statistical information.

Second method:

- Click the Menu button
- Click Refresh

2.3.2.3   Command Line Supports

The Health Analysis feature is supported in CLI. Application will only retrieve the information from printer and export it to a file. Similar to GUI, CLI have the capability to export data to xml file.

Please note that the file saved location will be defined the file path "-p" parameter. Please refer to "**–p FileName**" in section "**3.1 CLI** Arguments". If this argument is omitted, the default directory and the default file name will be used. The default directory is the execution directory. The default file name format is:

Format: [PrinterSerialNumber]_ HealthAnalysis_[YYYYMMDD]_[hhmmss].[FileExtension]

Example : 12345678901_ HealthAnalysis_20200325_195412.xml

For the command line format used to retrieve the information, please refer to section 3.3 Retrieve Data from Printer.

2.3.3   Error History Page

Show the latest error occurrences in the printer with a detailed printer condition when the error happened. The printer can store up to 255 error logs. The error history is preserved even if printer is turned off.

Note: If "Reset Factory" is performed, the error history will be cleared.
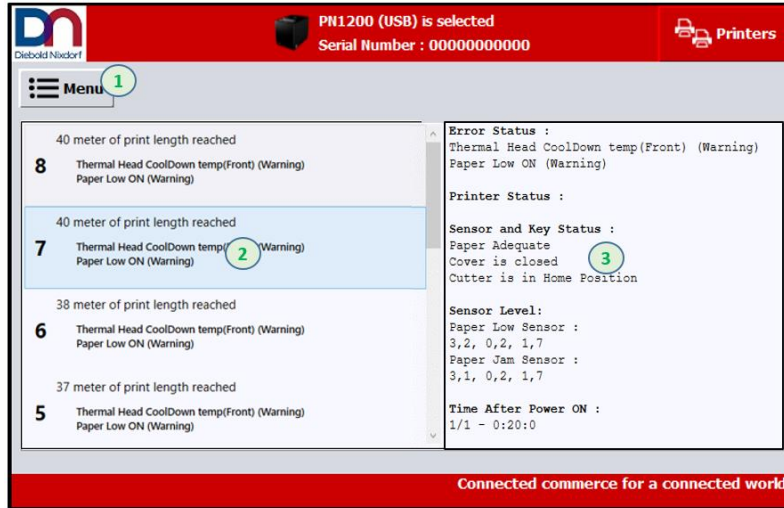
Figure 17 Error History Page

Below are each component description of the Error History Page.

1. **Menu Button**

   Clicking this button will pop up a selection menu as below.

Menu Items	Function
Refresh	Retrieve the information from printer and update the page with the error history information.
Get and Export FW Detail Log	Ask the printer to store its FW detail log. Application will retrieve the log then export it to a binary file (.bin)
Export as XML File	Export the error history information to XML file (.xml)
Import XML File	Import the exported binary data, convert it, then show the converted data on the page
Filter	Open a filter dialog to set which error to be shown
Show Graph	Show a graph to analyze the error occurrence. The graph will represent the number of errors which is changed over the length of paper feed by the printer.

Table 11. Error History's Menu Items

2. **Error List Selection**

Error List Selection area provides the list of error which has occurred in the printer and will be listed in descendent order based on error ID. The selected error information will be shown in the Error Information area.
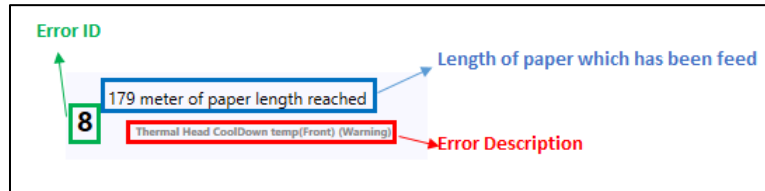
Figure 18 Error selection information

3. **Error Information**

Show the selected error detailed information. This information contains the latest command number, printer and sensor status, sensor value, time after power ON, tally information, and cut cycle time when the error occurred.

2.3.3.1 Retrieving Error History from Printer

There are two ways for the application to get the error history from the printer.

First method:

- When the Error History page is opened, if there is a DN printer connected, the application will automatically communicate to the printer and retrieve the statistical information.

Second method:

- Click the Menu button
- Click Refresh

2.3.3.2 Export FW Detail Log

The Error History page supports the functionality to get the FW detail log from the printer and store it to a binary file (.bin). To use this feature, please refer to below steps.

- Select the "Get and Export FW Detail Log" from the Menu button
- After the application completed the get data from the printer, a browse dialog will be opened.
- Select the .binary file to store the FW detail log.
- Click OK to close the browse dialog and complete.

The following sequence will be performed on this feature.

- It will ask the printer to store the 64KB FW detail log into a non-volatile memory.
- It will retrieve the stored FW detail log from the printer.
- It will export the raw data into a binary file.

2.3.3.3 Filter

The Error History page supports the functionality to filter the list of error information which will be shown. When Filter selection is clicked from the Menu, the Filter dialog will be opened.
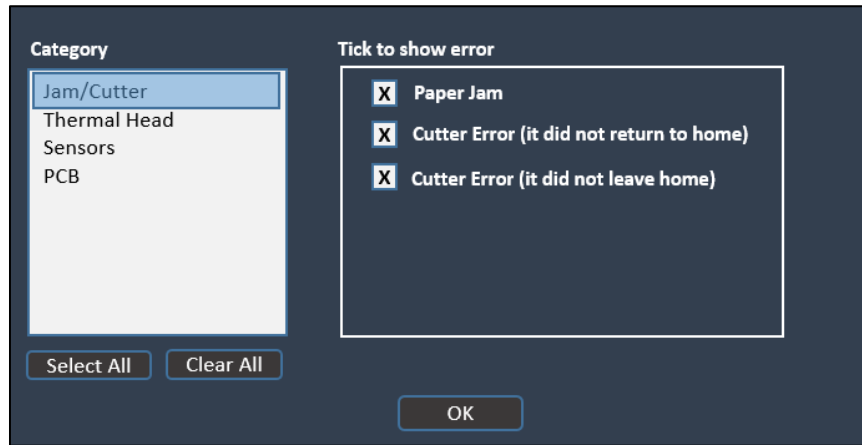
Figure 19 Filter Dialog P1200
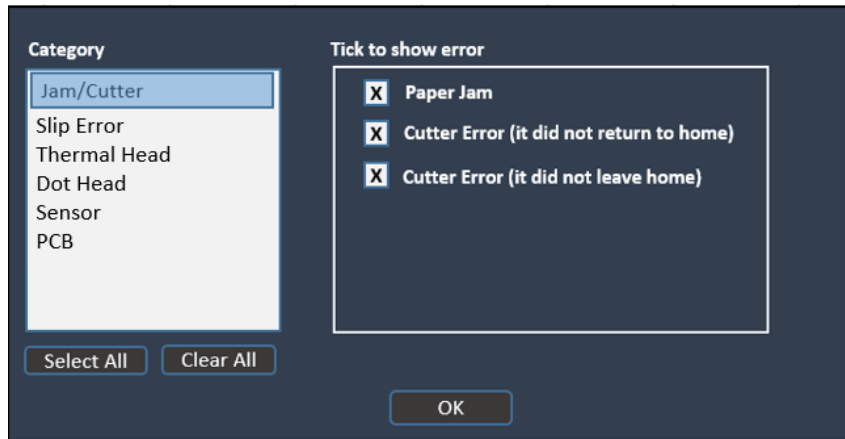
Figure 20 Filter Dialog P1300

The ticked errors will be shown in the UI.

2.3.3.4   Show Graph

The Error History's graph will represent the number of errors which is changed over the length of paper feed by the printer. To show the graph, select the "Show Graph" selection from the Menu button.
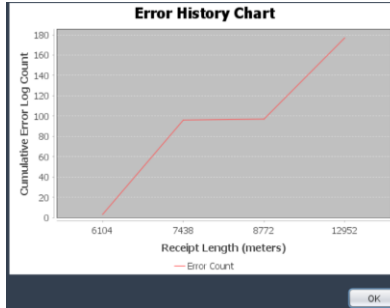
Figure 21 Error History's Graph

2.3.3.5   Command Line Supports

The Error History feature is supported in CLI. Application will only retrieve the information from printer and export it to a file. Similar to GUI, CLI have the capability to export data to xml file.

Please note that the file saved location will be defined the file path "-p" parameter. Please refer to "**–p FileName**" in section "**3.1 CLI** Arguments". If this argument is omitted, the default directory and the default file name will be used. The default directory is the execution directory. The default file name format is:

Format: [PrinterSerialNumber]_ ErrorHistory_ [YYYYMMDD]_[hhmmss].[FileExtension]

Example : 12345678901_ ErrorHistory _20200325_195412.xml

For the command line format used to retrieve the information, please refer to section 3.3 Retrieve Data from Printer.

2.3.4 Analyze Thermal Head Page

In this page, application will retrieve the thermal head dot resistance values from printer and display them in a table. A graph will show whether each thermal head dot is still within the expected range.

Note: If the thermal head contains few dot failures which are located outside the printable area, the print quality will not be affected.
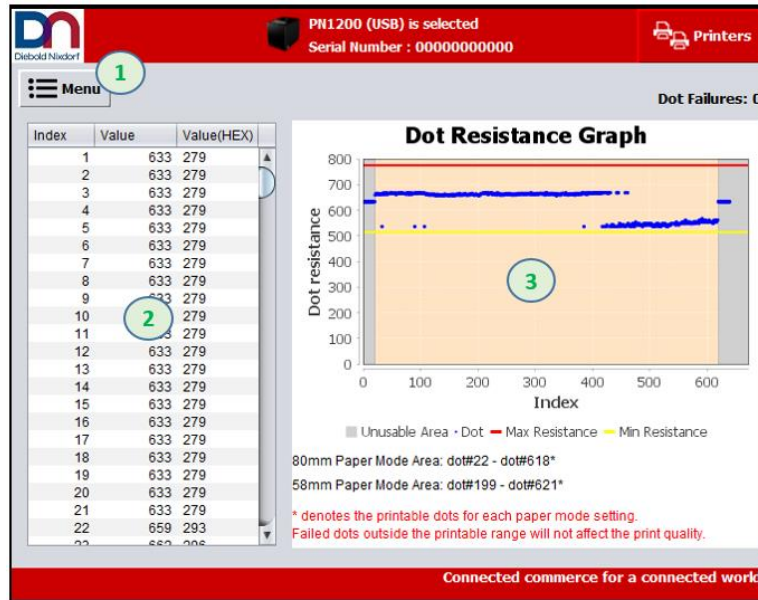
Figure 22 Analyze Thermal Head Page

1. **Menu Button**
   Clicking this button will pop up a selection menu as below.

Menu Items	Function
Refresh	Communicate to the printer and retrieve the thermal head dots information, convert, then show it.
Export as XML File	Export the thermal head dot resistances data a XML file (.xml)
Import XML File	Import the exported xml file, convert the data, then show the converted data on the page

Table 12. Analyze Thermal Head's Menu Items

2. **Thermal Dot Resistance Table**
   This table will list down all the thermal head dot resistance values. Below information will be listed.
   - **Index.** This is the dot position.
   - **Value.** The resistance value.
   - **Value (HEX).** The resistance value in hexadecimal format.

3. **Graph**

Show the thermal head dot resistance as graph. The graph will represent the dot resistance value for each dot index.

Right below the graph, the following information will be shown.

- The usable dot range in 80 mm paper mode.
- The usable dot range in 58 mm paper mode.

In the graph the unusable dot range is represented with a gray color. The graph will adjust its view depend on the Paper mode setting as below.

80 mm Mode	58 mm Mode
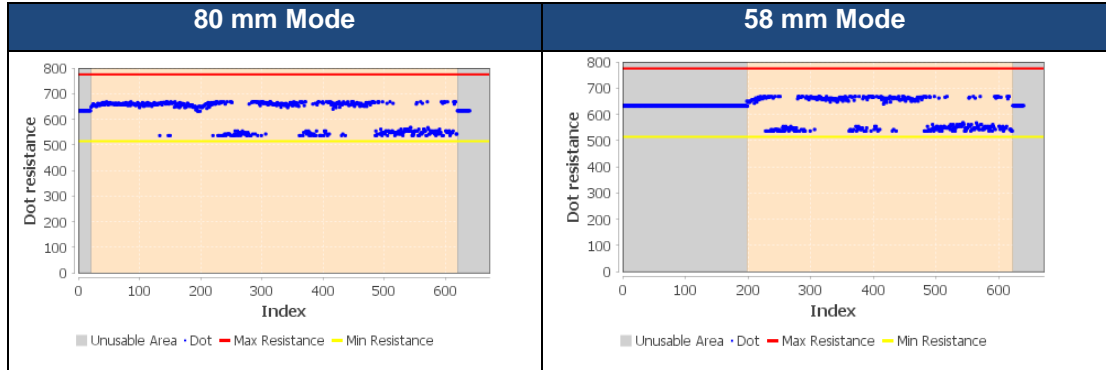
Table 13. Thermal Head graph comparison based on paper mode setting

2.3.4.1 Retrieve Information from Printer

There are two ways for the application to get the thermal head dots information from the printer.

First method:

- When the Analyze Thermal Head page is opened, if there is a DN printer connected, the application will automatically communicate to the printer and retrieve the information.

Second method:

- Click the Menu button
- Click Refresh

2.3.4.2 Command Line Supports

The Health Analysis feature is supported in CLI. Application will only retrieve the information from printer and export it to a file. Similar to GUI, CLI have the capability to export data to xml file.

Please note that the file saved location will be defined the file path "-p" parameter. Please refer to "**–p FileName**" in section "**3.1 CLI** Arguments". If this argument is omitted, the default directory and the default file name will be used. The default directory is the execution directory. The default file name format is:

Format: [PrinterSerialNumber]_ AnalyzeThermalHead_[YYYYMMDD]_[hhmmss]. [FileExtension]

Example : 12345678901_ AnalyzeThermalHead _20200325_195412.xml

For the command line format used to retrieve the information, please refer to section 3.3 Retrieve Data from Printer.

2.4 Printer Settings Page

The printer settings page is used to read and changes the printer configurations. The available settings can be found in each of the product's Firmware Specification document in section
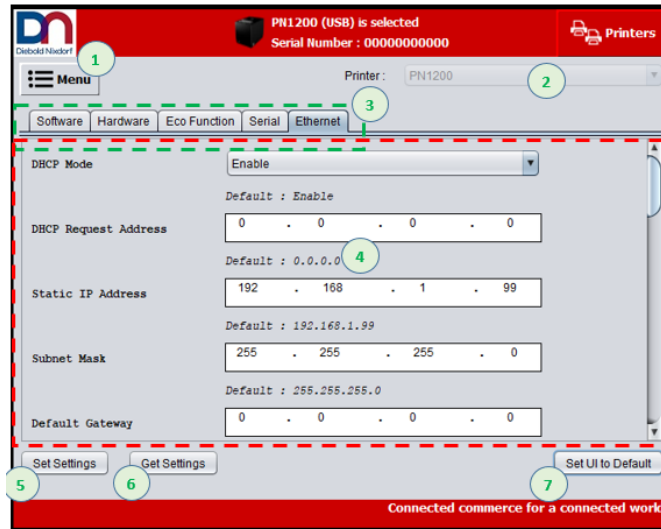
Figure 23 Printer Settings Page P1200

Below are each component description of the Printer Settings Page.

1. **Menu Button**

   Clicking this button will pop up a selection menu as below.

Menu Items	Function
Export to XML File	Export all the current settings to a XML file. This file can be imported later.
Import XML File	Export settings from a XML file.

Table 14. Printer Setting's Menu Items

2. **Model Selection**

   Change the printer model. Changing this selection will update the list of UI components depending on the supported settings for each respective product. If the settings is retrieved from the selected printer, this selection will be disabled.

   Note: Currently P1200 and P1300 is supported.

3. **Setting Category Tab**

   The printer settings are separated to a different category.
   For P1200 There are 5 categories as below.
   - Software
   - Hardware
   - Eco Function
   - RS232
   - Ethernet

31 of

For P1300 There are 5 categories as below.

- Software
- Hardware
- Eco Function
- RS232
- Slip Station

4. **Setting Components**

Display the definition and parameter of the settings based on the selected category and model. Please refer to section *0*

Printer Setting List for the supported setting list.

5. **Set Settings Button**
    Set all the settings to the printer.

6. **Get Settings Button**
    Get all the settings from the printer.

7. **Set UI to Default**
    Reset all settings to default. This will only change the UI components value. It will not communicate to the printer. Click the Set Settings button to set the settings.

2.4.1   Printer Setting List

Category	Setting Name	Default	Selection
Software	Emulation	TH230 (for P1200) P1300 (for P1300)	P1300 (For P1300 only) TH230 or TH320 (For P1300) ESC/POS
Software	Code Page	437	437 (Default) 850 852 860 863 865 858 866 1252 862 737 874 857 KZ 1048 1251 1255 1253 1254 1250 28591 28592 28599 28605 864 720 1256 28596 KATAKANA. 755 1257 28594

Category	Setting Name	Default	Selection
Software	International character set	U.S.A	U.S.A (Default) France Germany U.K. Denmark I Sweden Italy Spain I Japan Norway Denmark II Spain II Latin America Slovenia/Croatia China Korea Arabia
Software	Default lines per inch	7.52 lines per inch	8.13 lines per inch 7.52 lines per inch (Default) 6 lines per inch
Software	Asian mode (Enable /Disable DBCS font)	Asian mode Off	Asian mode 932 On Asian mode Off (Default) Asian mode 936 On Asian mode 949 On Asian mode 950 On Asian mode GB18030 On
Software	Auto Line Feed	Use CR as Print cmd	Ignore CR Use CR as Print cmd. (Default)
Software	Special Font	Disable : Original font	Disable : Original font (Default) Mode 1 : Constructed 874
Software	Compatible Top Margin	Disable	Disable (Default) Enable
Software	Compatible top margin time out	Disable	Disable (Default) Time out value (100ms~25.5s)
Software	Power on notice	Disable	Disable (Default) Enable

Category	Setting Name	Default	Selection
Software	Paper near end notice	Enable	Disable Enable (Default)
Software	Listen to real time	Always	Always (Default) Buffer not full
Software	Legacy printer support	Disable	Disable (Default) Enable
Software	Receipt Shooting	Disable	Disable (Default) Enable
Software	Receipt Shooting Time	Endless	Endless(Default) Time out value (250ms~63.75s)
Software	Top Logo Print	Disable	Disable (Default) Enable
Software	Bottom Logo Print	Disable	Disable (Default) Enable
Software	Top logo alignment	Left justification	Left justification (Default) Centering Right justification
Software	Bottom logo alignment	Left justification	Left justification (Default) Centering Right justification
Software	Top logo while paper feeding to the cutting position	Enable	Disable Enable (Default)
Software	Top logo at power on	Disable	Disable (Default) Enable
Software	Top logo when cover is closed	Enable	Disable Enable (Default)
Software	Top logo while clear buffer	Enable	Disable Enable (Default)
Software	Top logo after paper Feed button pressed	Disable	Disable (Default) Enable
Hardware	USB Speed	Full Speed	Full Speed (Default) High Speed
Hardware	Auto Recovery	Off	Off (default) Recovery without buffer clear Recovery with buffer clear

Category	Setting Name	Default	Selection
Hardware	Max. Print Speed	14 ips	1.5 ips 2 ips 4 ips 6 ips 8 ips 10 ips 12 ips 14 ips (Defaultl)
Hardware	Paper Width	80 mm	80 mm (Default) 58 mm
Hardware	Black Mark Sensor (P1200 only)	Enable	Disable Enable
Hardware	Black Mark Adjustment (P1200 Only)	0 mm	-127 ~ -1 : Reverse offset 0~127 : forward offset (unit : 0.125 mm)
Hardware	Color paper option	One Color Paper	One Color Paper (Default) Two Color Paper
Hardware	Auto cut after cover close	Enable	Disable Enable (Default)
Hardware	Buzzer sound	Disable	Disable (Default) Enable
Hardware	Buzzer tone (frequency)	Middle	Low Middle (Default) High
Hardware	Paper Low detection	Enable	Disable Enable (default)
Hardware	Paper Core diameter – paper low adjustment	23mm	0 to 15 :(10mm ~ 25mm)
Hardware	Paper thickness – paper low adjustment	0.06mm	0 to 5 :(0.05mm ~ 0.1mm)
Hardware	Remaining length adjustment – paper low adjustment	1mm	-15 ~ 15 : (-7.5m ~ +7.5m)

Category	Setting Name	Default	Selection
Hardware	Power Supply option	Auto	Auto(Defult) 48W 55W 75W 90W 110W
Hardware	LED Control Mode	Auto Mode	Auto Mode (Default) User Mode
Hardware	Power on (Sleep mode) to Cash drawer opening delay	1700ms	No delay Delay value (100ms~5sec)
Eco Function	Eco function	Disable	Disable (Default) Enable
Eco Function	~~Standby~~ Sleep mode	Disable	Disable (Default) Enable
Eco Function	Sleep Mode waiting time	1	Endless (1-255) * 10 Sec
Eco Function	Power off mode	Disable	Disable (Default) Enabled 60 mins Enabled 120 mins Enabled 180 mins Enabled 240 mins Enabled 300 mins

Category	Setting Name	Default	Selection
Eco Function	Color Density	100%	-10 : 50% - 9 : 55% - 8 : 60% - 7 : 65 - 6 : 70% - 5 : 75% - 4 : 80% - 3 : 85% - 2 : 90% - 1 : 95% 0 : 100% 1 : 105% 2 : 110% 3 : 115% 4 : 120 5 : 125% 6 : 130%
Eco Function	Print density	0	-10 : 50% - 9 : 55% - 8 : 60% - 7 : 65 - 6 : 70% - 5 : 75% - 4 : 80% - 3 : 85% - 2 : 90% - 1 : 95% 0 : 100% 1 : 105% 2 : 110% 3 : 115% 4 : 120 5 : 125% 6 : 130%
Eco Function	Remove lines containing only spaces	Disable	Disable (Default) Enable
Eco Function	Remove Upper Space	Disable	Disable (Default) Enable

Category	Setting Name	Default	Selection
Eco Function	Remove Lower Space	Disable	Disable (Default) Enable
Eco Function	Line Space Reduction	Disable	Disable (Default) Enable
Eco Function	Line Feed Reduction	Disable	Disable (Default) Reduce 100% Reduce 25% Reduce 50% Reduce 75%
Eco Function	Barcode Height Reduction	Disable	Disable (Default) Reduce 25% Reduce 50% Reduce 75%
Eco Function	Registered Logo Removal	Disable	Disable (Default) Enable
Eco Function	Force Single High Font	Disable	Disable (Default) Enable
Eco Function	Bold Font Removal	Disable	Disable (Default) Enable
Eco Function	Force Single Wide Font	Disable	Disable (Default) Enable
Eco Function	Allow white/black reverse	Enable	Disable Enable (Default)
Eco Function	Remove space only lines	Disable	Disable (Default) Enable
RS232	Baud rate	19200 bps	115200 bps 57600 bps 38400 bps 19200 bps (Default) 9600 bps
RS232	Number of data bit	8 data bits	8 data bits (Default) 7 data bits
RS232	Number of stop bit	1 stop bits	1 stop bits (Default) 2 stop bits
RS232	Parity	No parity	No parity (Default) Even parity Odd parity

Category	Setting Name	Default	Selection
RS232	Flow control	DTR/DSR	XON/XOFF DTR/DSR (Default)
RS232	Data error option	Ignore errors	Ignore errors Print "?"
RS232	DSR signal option	Enable DSR signal	Enable DSR signal (Default) Disable DSR signal
RS232	Receive Buffer Capacity	64KB	64KB (Default) 45 Bytes
Ethernet	DHCP Mode	Enable	Disable Enable (Default)
Ethernet	DHCP Request Address	0.0.0.0	IP address
Ethernet	Static IP Address	192.168.1.99	IP address Note: It is changeable only if DHCP mode is disabled.
Ethernet	Subnet Mask	255.255.255.0	IP address
Ethernet	Default Gateway	0.0.0.0	IP address
Ethernet	TCP Number	9100	0-65535
Ethernet	UDP Number	3000	0-65535
Ethernet	SNMP Community	0000000000000000	16 digits ASCII numeric
Ethernet	SNMP	Enable	Disable Enable
Ethernet	SNMP Trap 1	Disable	Disable (Default) Enable
Ethernet	SNMP Trap 1 Address	0.0.0.0	IP address
Ethernet	SNMP Trap 1 Community	0000000000000000	16 digits ASCII numeric
Ethernet	SNMP Trap 2	Disable	Disable (Default) Enable
Ethernet	SNMP Trap 2 Address	0.0.0.0	IP address
Ethernet	SNMP Trap 2 Community	0000000000000000	16 digits ASCII numeric
Slip Station	Slip Left Margin	0	-15 ~ 15 : (-15 ~ + 15m)
Slip Station	Slip Aligment	0	-15 ~ 15 : (-15 ~ + 15m)
Slip Station	Wait for Slip Paper	Forever	Forever 1 Minute 3 Minutes 5 Minutes

Category	Setting Name	Default	Selection
Slip Station	Clamp Delay	1 Sec	1 Sec 0.5 Sec

Table 15 Supported Printer Setting List

2.4.2 Change the Printer Settings

When the user updates the value for each setting component, the component text color will be changed to red color. This color indicates that the setting has been changed from its initial value.
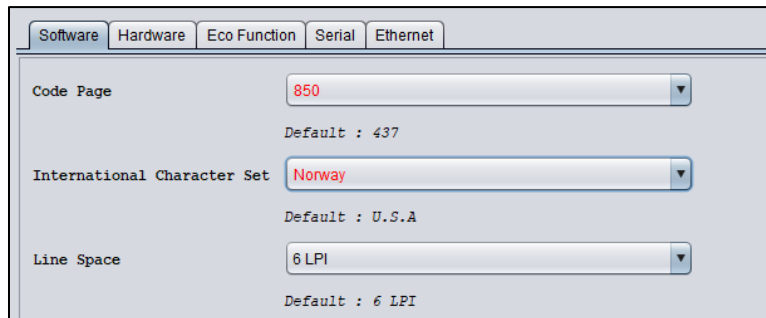

Figure 24 Changing the settings will update each component text color

Once the settings are changed, click the "Set Settings" button to set the printer settings. There are 4 processes occurred when the application is attempting to update the printer settings as below.

- Set the printer settings
  The application will send the commands to set the printer settings.
- Reboot.
  Once all commands have been send successfully, it will reboot the printer.
- Retrieve the current settings
  It will retrieve the printer settings.
- Comparing
  It will compare the retrieved settings with the settings attempted to be changed previously. If any settings are not changed correctly, an error message box will pop out.

2.4.3 Retrieve Settings

The first time the Printer Settings page is opened, if there is a printer connected and selected, the application will automatically attempt to retrieve the current printer settings from the printer.

Once the page has been opened, please follow below steps to retrieve the current printer settings.

- Click the "Get Settings" button.

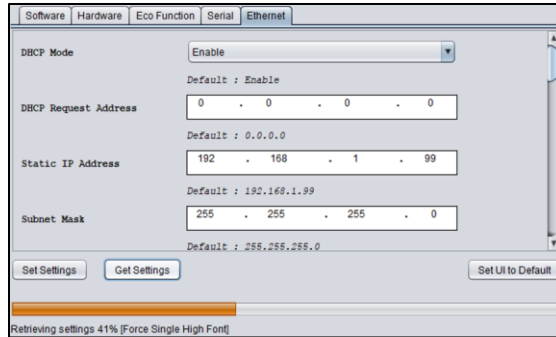After the settings are retrieved successfully, the UI components will be updated with the new value.

Figure 25 Application is retrieving the printer settings after Get Settings button is clicked

2.4.4 Eco Functionality Image Preview & Test Receipt

The Eco Function setting tab, is provided with additional features to print a sample receipt and an image preview to see the settings effect.
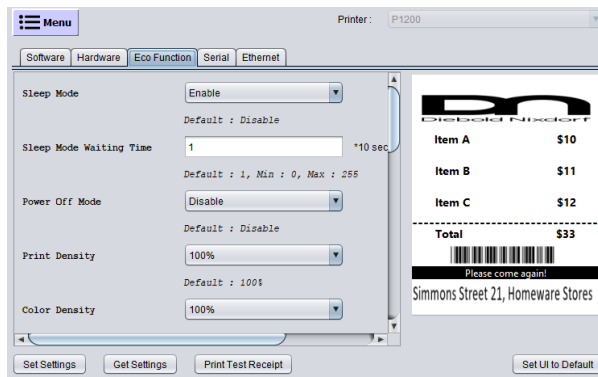
Figure 26 Eco Function Tab has an image preview and print test receipt button

Print Test Receipt will print a sample receipt with a downloaded logo in Flash with keycodes 32/32. If there is no logo downloaded in that memory, an information message will pop out.

2.4.5   Command Line Supports

The Printer Settings feature is supported in CLI. There are 2 functionalities from the Printer Settings feature which are supported as below.

- **Load Settings**

  It will load all settings which values are stored in the CLI's xml config file to the printer. Please refer to section 3.2 Download Data to Printer for more detailed information.

- **Read Settings**

  It will read all settings which listed in the CLI's xml config file from the printer, then stored the information in a xml file. This created XML can be imported in GUI mode.

  Please note that the file saved location will be defined the output path "-p" parameter. Please refer to "**–p FileName**" in section "**3.1 CLI** Arguments". If this argument is omitted, the default directory and the default file name will be used. The default directory is the execution directory. The default file name format is:

  Format: [PrinterSerialNumber]_ PrinterSettings_ YYYYMMDD]_[hhmmss].[Extension]
  Example : 12345678901_ PrinterSettings _20200325_195412.xml

  For the command line format used to retrieve the information, please refer to section 3.3 Retrieve Data from Printer.

2.5 Firmware Download Page

The page is used to upgrade/downgrade the FW version. The application supports 2 kinds of download, Online Download and IPL Download.

There are several supported types of firmware files that can be sent to the printer as below.

- Boot FW
- Main FW
- SBCS Font
- DBCS Font
- Table FW

Figure 27 Firmware Download Page

Below are each component description of the Firmware Download Page.

1. **Menu Button**

   Clicking this button will pop up a selection menu as below.

Menu Items	Function
Remove All Files	Clears all files from table.
Export to XML File	Creates the CLI's xml configuration file to be used as CLI mode's command line argument.
Import XML File	Import the exported XML configuration file to retrieve the stored FW files then update the FW table. This will also stored the default value of the options of Export to XML file window. Refer to *Figure 30 Create CLI's XML Config File Dialog*.

Table 16. Firmware Download's Menu Items

2. **Browse Button**

   Browse and add firmware files. Multiple files can be browsed at one time. The supported file format are ".ipl", ".mfw", ".sfn", ".dfn", and ".tbl".

3. **Firmware Files Table**

   Table to list down all the added firmware files. File with the same name cannot be added.

   In the Firmware List Table, user can have another options to take further action for the listed firmware's. By clicking the mouse right button on one of the firmware, a pop up menu will be shown as below.

   - **Download.** Download the current selected file only.
   - **Remove.** Remove the selected file.
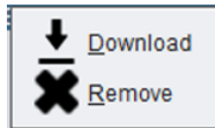
Figure 28 Mouse right click menu on Firmware List Table item

4. **Download All Files Button**

   Download all the firmware files in the table.

2.5.1   Adding FW Files

There are three ways to add the FW files, the first method is by using the Browse option in the Menu button. The second method, user can drag the file from their respective folder then drop it in the application's list box. Multiple files can be added, however the files must have different names.

Note: In Windows OS, if the application is run in administrator privilege, the Drag and Drop feature will not be available.

The third method, if there is already a FW files stored in a XML configuration file, user can import the XML file to load the stored files in the FW list table.

To open the FW file stored in the xml config file which has been created, please follow below steps.

- Click the Menu button
- Click "Import XML File" from one of the menu to open a browse dialog
- Once the file is opened, the FW table will be updated with the FW file stored in the XML file.

No.	File Name	Version	Type	Printer	Build Date	Status
1	P1200_Main_V01.mfw	V00.18	MAIN	P1200	27/02/2020	

Figure 29 Stored FW file in the XML file will be listed in the table

Note:

- The FW file loaded from Import XML file is not a real file. The path to the file will be lost and only the FW data will be kept by the application.
- If there is already FW file loaded in the table, the file list will be updated with the new file list. The previous FW file list will not be deleted.
  However, if a same file name is already listed in the table, the new file will not be added and a warning message will be shown.

2.5.2 Download

The application will automatically select the download mode depending on the printer condition.

Online download is performed when the printer is running in main firmware (online mode). The download time is much faster than IPL download mode. In case the printer's main firmware is corrupted, online download mode may not be available.

IPL download should be performed only if the printer unable to boot up properly to enter online mode. The download will be performed automatically when the printer is running in IPL mode. IPL download method is only supported for USB interface.

2.5.3 Command Line Supports

The Firmware Download feature is supported in CLI. It will download the firmware files specified by parameter stored in xml configuration file. When the xml file is created it stored the firmware files data inside. The existence of the firmware files are not required when the firmware download is performed.

To create the required XML configuration file, please click the Menu Button then select the "Export as XML File" option. In CLI mode, the application will use the created XML file by this feature to determine the downloading process behavior. Selecting this option will open a new dialog as below.
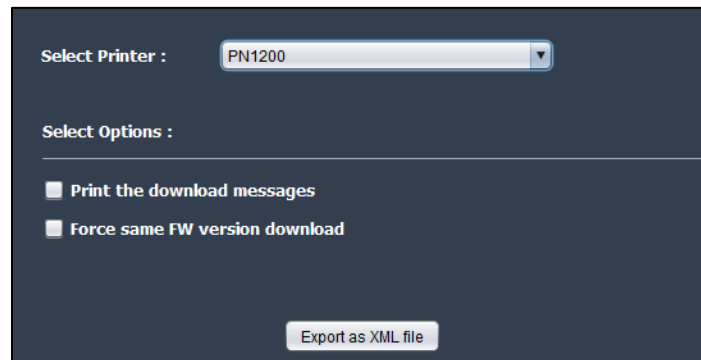

Figure 30 Create CLI's XML Config File Dialog

As shown in Figure 30, below options are available.

- **Select Printer**
  Select the printer model. It will determine the download process and communication. Selecting the wrong model may cause unexpected behavior during downloading.
- **Print the download Messages**

Enabling this setting will trigger the printer to print download status messages before and after the download process.

Once the downloading process starts, it will show a message that the updating process is executing. This message will be printed by the printer with below message format:

"WARNING"
"Executing F/W update."
"PLEASE DO NOT"
"TURN OFF THE PRINTER"
"[FW_Type] FW File : Vxx.xx" -> file_1
"[FW_Type] FW File : Vxx.xx" -> file_2
"[FW_Type] FW File : Vxx.xx" -> file_n

By default, the updating process will skip the FW downloading process if the printer FW level is same or higher than the file FW level. If the application detects that one or more of the printer FW level is same or in higher version than the FW file level, the print message format will be change as following:

"WARNING"
"Executing F/W update."
"PLEASE DO NOT"
"TURN OFF THE PRINTER"
"[FW Type] FW File : Vxx.xx -> Will be skipped"
"[FW Type] FW File : Vxx.xx   "
"[FW Type] FW File : Vxx.xx -> Will be skipped"

If the application detects that all of the printer FW version is same or in higher version than the FW file version, the application will not perform any update and below message will be printed:

"No Update is required"..

For each FW which is not skipped and updated, once the download process has been completed, the following messages will be printed for each of the FW.

"New [FW_TYPE] FW Version is Vxx.xx"

Note: All the above print messages data will not be sent to the printer if the printer is in error condition (Cover Open, Paper Out, or Paper Jam).

- **Force download**
  By default application will compare the current printer firmware level and the file firmware level. If the current printer firmware level is same or newer, application will skip downloading the firmware.

When this setting is enable, application will download the firmware without performing the firmware comparison.

Once Export as XML file button is clicked, it will open a browse dialog for user to select the XML file to store the firmware file list and CLI parameter. During downloading in CLI mode, the existence of the FW files are not required.

2.1 Logo Download Page

Logo download is support for P1200 and P1300 (Receipt only). The logo download feature has the following capabilities.

- Browse an image file (*.png, *.bmp, *.jpg ,*.jpeg)
- Download an image
- Print the downloaded images
- Direct print images without downloading
- Delete the downloaded images
- Set the downloaded image as Watermark
- Set the downloaded image as Top Logo
- Set the downloaded image as Bottom Logo
- Retrieve the downloaded images information
- Retrieve the remaining memory size and the usage size for the logo area
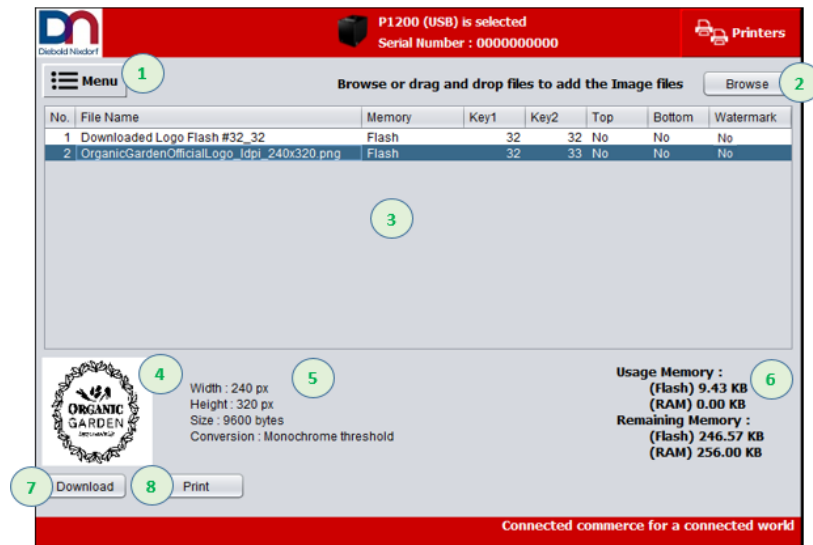
Figure 31 Logo Download Page

Below are each component description of the Logo Download Page.

1. **Menu button**

   Clicking this button will pop up a selection menu with some options depending on some certain conditions as below.

Menu Items	Function
Refresh	Communicate to the printer to retrieve the list of the downloaded logo and the memory information for the logo area
Export to XML File	Creates the CLI's xml configuration file to be used as CLI mode's command line argument.
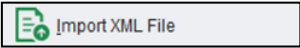
Menu Items	Function
Import XML File	Import the exported XML configuration file to retrieve the stored image files then update the image list table. This will also stored the default value of the options of Export to XML file window. Refer to *Figure 30 Create CLI's XML Config File Dialog*.

Table 17. Logo Download's Menu Items

2. **Browse Button**
   Browse and add image files. Multiple files can be browsed at one time. The supported file format are ".png", ".bmp", ".jpg", and ".jpeg.
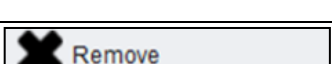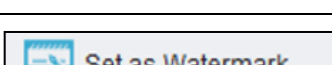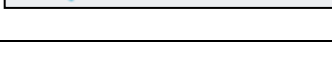
3. **Image List Table**
   This table will show both the added images and the downloaded images in the printer. Once the image has been downloaded, user can choose to set the image as Watermark or Top/Bottom logo by clicking the mouse right button. The downloaded images, however, will lose its original name and will be named with below format.
   Downloaded Logo_[Memory]_#[KeyCode1]_[KeyCode2]

   In the Image List Table, user can have another options to take further action for the listed images.
   If browsed imaged is right clicked, below menu items will be shown.

Menu Items	Condition to Appear	Function
Change image setting	-	Open the setting dialog to change the image settings.
Download	-	Download the image.
Print	-	Print the image. If the image is a browsed image, it will direct print the image without downloading.
Remove	-	Remove the image from the table
Set as Watermark	The image must not been set as Watermark yet.	Set the image as watermark logo.
Cancel Watermark	The image must has been set as Watermark Logo.	Cancel the previous watermark setting which has been set. It will update the watermark information in the table to "No".
Set as Top Logo	The image must not been set as Top Logo yet.	Set the image as top logo.

Menu Items	Condition to Appear	Function
Cancel Top Logo	The image must has been set as Top Logo.	Cancel the previous top logo setting which has been set. It will update the top logo information in the table to "No".
Set as Bottom Logo	The image must not been set as Bottom Logo yet.	Set the image as bottom logo
Cancel Bottom Logo	The image must has been set as Bottom Logo.	Cancel the previous bottom logo setting which has been set. It will update the bottom logo information in the table to "No".

Table 18. Browsed Image's Mouse Right Click Menu

If downloaded image is right clicked, the following menu items will be shown.

Menu Items	Condition to appear	Function
Print	-	Print the image. If the image is a browsed image, it will direct print the image without downloading.
Delete	-	Delete the image from the printer and from the table.
Set as Watermark	The image must not been set as Watermark yet.	Set the image as watermark logo. It will directly send the set watermark command to the printer.
Cancel Watermark	The image must has been set as Watermark Logo.	Disable and cancel all watermark settings. It will directly send the cancel watermark command to the printer.
Set as Top Logo	The image must not been set as Top Logo yet.	Set the image as top logo. It will directly send the set top logo command to the printer.
Cancel Top Logo	The image must has been set as Top Logo.	Disable and cancel the top logo setting. It will directly send the cancel top logo command to the printer.
Set as Bottom Logo	The image must not been set as Bottom Logo yet.	Set the image as top logo. It will directly send the set bottom logo command to the printer.
Cancel Bottom Logo	The image must has been set as Bottom Logo.	Disable and cancel the top logo setting. It will directly send the cancel bottom logo command to the printer.

Table 19. Downloaded Image's Mouse Right Click Menu

4. **Image Preview**

It will show the browsed image picture. The downloaded image picture will not be shown.

5. **Image Information**

It will show the browsed image information. If a downloaded image is highlighted in the table, this information will be blank.

6. **Logo Memory Area Information**

It will show the usage memory (Flash/RAM) size for the image memory area in the printer. It will also show the remaining memory size for the image memory area in the printer.

Note: If the remaining memory is not enough for next image download, the image download will be terminated unless the user deleted some of the downloaded logo to increase the memory space.

7. **Download Button**

Clicking this button will pop up 2 more selections as below.

- Download All Images. Download all the listed browsed image in the table.
- Download the Selected Images. Download the selected browsed images in the table. If there is no browsed image selected, this option will not be visible. Multiple images can be selected.

Figure 32 The Download button click menu

The download button will be disabled if there is no browsed images in the table.

8. **Print Button**

Clicking this button will pop up 2 more selections as below.

- Print All Images. Download all the images in the table.
- Print the Selected Images. Print the selected image in the table. If there is no image selected, this option will not be visible. Multiple images can be selected.
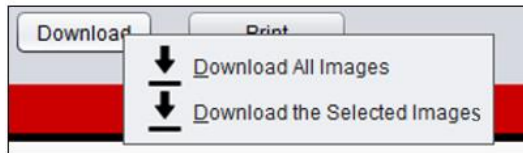
If the image is not downloaded yet, the application will direct print the image without downloading.
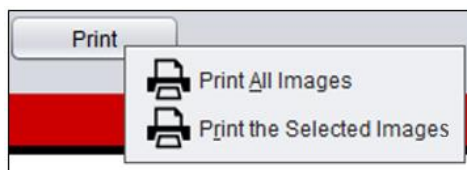
Figure 33 The Print button click menu

2.1.1   Refresh Information

Refresh process will make the application to communicate to the printer to retrieve below information.

- Downloaded Logo Memory (Flash/RAM)
- Downloaded Logo Key Code 1 and Key Code 2
- If the image is set as Watermark/Top/Bottom Logo
- Both Flash and RAM memory usage size for logo area
- Both Flash and RAM memory remaining size for logo area

When the page is opened, if there is a printer connected and selected from the Printer List Page, it will automatically attempt to retrieve the downloaded images information from the printer.

After the page has been opened, to re-refresh the information, please follow below steps.

- Click Menu button
- Select Refresh

2.1.2   Adding an Image

There are three ways to add the image files, the first method is by using the Browse option in the Menu button. The second method is by dragging the file from their respective folder then dropping it in the application's list box. Multiple files can be added.

The third method, if there are already image files stored in a XML configuration file, user can import the XML file to load the stored files in the FW list table.

To load the image files stored in the xml configuration file which has been created, please follow below steps.

- Click the Menu button
- Click "Import XML File" from one of the menu to open a browse dialog
- Once the file is opened, the Image list table will be updated with the image files stored in the XML file.

No.	File Name	Memory	Key1	Key2	Top	Bottom
1	OrganicGardenOfficialLogo_ldpi_240x320.png	RAM	32	32	No	No
2	WoodTexture.jpg	Flash	32	33	No	No

Figure 34 Stored FW file in the XML file will be listed in the table

Note:

- The image file loaded from Import XML file is not a real file. The path to the file will be lost and only the image data will be kept by the application.
- Only the image files with a different Key1 and Key2 value will be added.

- Loading image using this method, will not trigger the Image setting dialog to be opened. Please refer to Figure 35 Logo Download's Image Setting Dialog. The images however, are still able to be edited once they are loaded.

Except from the Import XML File method, once the images have been loaded, for each image a setting dialog will pop out for user to set the image settings.
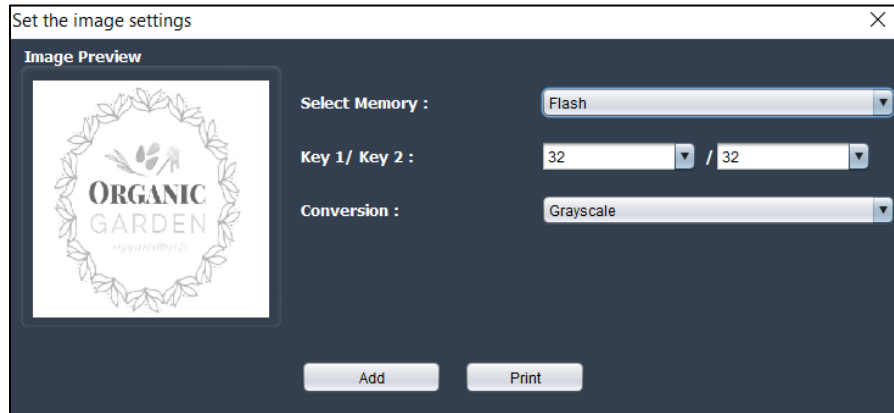
Figure 35 Logo Download's Image Setting Dialog

Below options are available to be set.

- **Select Memory**
  Select the target memory (Flash/RAM) to download the image.
- **Key 1/ Key 2**
  Select the key code 1 and key code 2 to download the image.
  Range: 32 – 127.
  Note: Duplicate key codes in the image list table is not allowed. If the inputted key codes are already listed in the table, a reserved message will be visible and the Add button will be disabled.

Figure 36 If duplicate key code is inputted, the reserved message is shown and the add button is disabled

- **Conversion**
  Select the image conversion. By default, when the image is added, the conversion type is Grayscale. There are 5 conversions available as below.
    - Grayscale

- Monochrome dispersed dither
- Monochrome clustered dither
- Monochrome error diffusion
- Monochrome threshold.
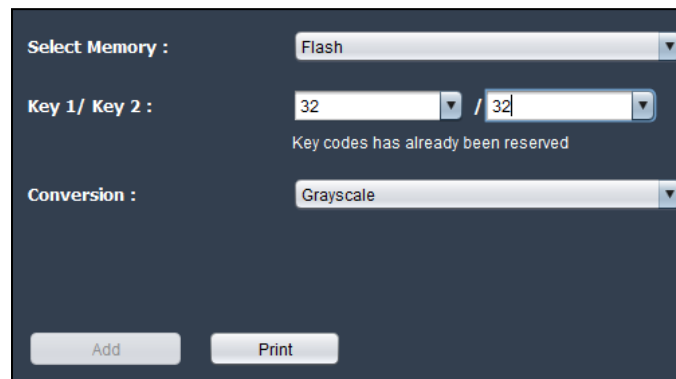 If monochrome threshold is selected, user can set the threshold value from 0-255 range.

Figure 37 Threshold Slider will be available if Monochrome Threshold conversion is selected

- **Print**
  Direct print the image without download.

If the image size is out of specification, the application will automatically rescale the image based on the image width. Below are the image specification for each printer which will affect the Image Download tool rescaling feature.

Model	Maximum Image Width	Maximum Image Height	Maximum Image Size	Condition to rescale the image
P1200	576 px (80 mm) 400 px (58 mm)	2304 px	262144 bytes	Image width > 576 px
P1300 (Receipt only)	576 px (80 mm) 400 px (58 mm)	2304 px	262144 bytes	Image width > 576 px

Table 20. List of Printer image specification

If the image size is bigger than the maximum size even after image is rescale, it will not be added to the image list and an information message will be shown.

2.1.3   Change Added Image Settings

Once the browsed image has been added, it is possible to change the image setting by opening the setting window by double clicking the browsed image. However, please note that double clicking the downloaded image will not do anything.

Similarly user can change the image settings by clicking the mouse right button then selecting the "Change Image Settings" option from the pop up menu.

2.1.4 Download an Image

To download an image, make sure there is a browsed image in the image table.

There are 2 ways to download an image.

- Using Download button
  Click the download button then choose "Download All Image" or "Download the Selected Image" from the pop up menu

- Using right click mouse button
  Right click on one of the browsed image, select "Download" from the pop up menu.

2.1.5 Set/Cancel Image as Watermark

If the image is a browsed image, please follow below steps to set the image as watermark.

- Right click on the browsed image in the table
- Select "Set as Watermark" from the pop up menu to open the Set Watermark Settings Dialog.
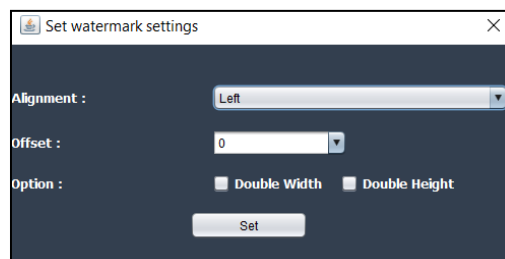
Figure 38 Set Watermark Settings Dialog

These options will be available in this dialog.
- **Alignment**
  The watermark alignment. Below are the available options.
  1. Left
  2. Center
  3. Right
  4. Roll 1 (Left -> Center -> Right -> Left -> ...)
  5. Roll 2 (Right -> Center -> Left -> Right -> ...)
  6. Twist (Left -> Center -> Right -> Center -> Left -> ...)
- **Offset**
  The distance between watermark image in dots. Range is 0 – 255.
  Note: 1 mm = 8 dots.
- **Option**
  Set double width or double height.
- Click the Set button.
  Now the watermark information of the browsed image should be set to Yes.

No.	File Name	Memory	Key1	Key2	Top	Bottom	Watermark
1	Downloaded Logo Flash #32_32	Flash	32	32	No	No	No
2	OrganicGardenOfficialLogo_ldpi_240x320.png	Flash	32	33	No	No	Yes

Figure 39 Watermark information for the browsed image is set to Yes

- Click the Download button.
- Select either Download All Images or Download the Selected Image(s) from the menu.
  It will download the logo, then set the logo as Watermark.

If the image is a downloaded image, please follow below steps to set the image as watermark.

- Right click on the browsed image in the table
- Select "Set as Watermark" from the pop up menu to open the Set Watermark Settings Dialog. Please refer to Figure 38 Set Watermark Settings Dialog.
- Set the preferred setting from the dialog.
- Click the Set Button.
  The utility will directly send the set Watermark command to the printer.

To cancel the watermark settings, please follow below steps.

- Select one of the downloaded image in the table
- Right click on the image
- From the pop up menu, select "Cancel Watermark".
  The application will directly send the Cancel Watermark command to the printer.

Note: Doing above similar steps to the browsed image, will set the watermark information to "No". It will not send the Cancel Watermark command to the printer.

2.1.6   Set/Cancel Image as Top Logo

If the image is a browsed image, please follow below steps to set the image as top logo.

- Right click on the browsed image in the table
- Select "Set as Top Logo" from the pop up menu to open the Set Top Logo Settings dialog.
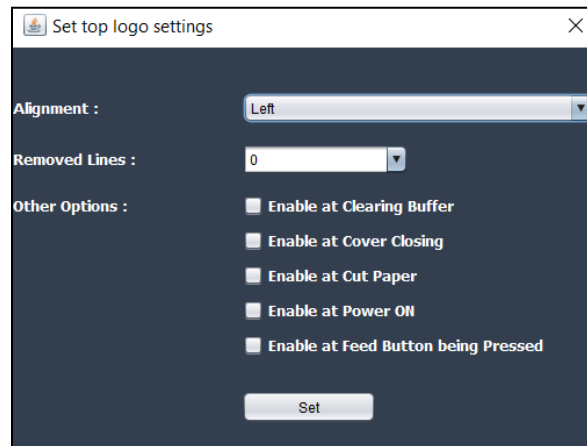
Figure 40 Set Top Logo Settings Dialog

These options will be available in this dialog.

- **Alignment**
  Set the Top Logo alignment. Available options are Left, Center, and Right.
- **Removed Lines**
  Set the number of lines removed when printing top logo. Range is 0-255.

- **Enable at Clearing Buffer**
  When this setting is selected, the top logo will be printed when clear buffer command is sent to recover from a recoverable error.
- **Enable at Cover Closing**
  When this setting is selected, the top logo will be printed every time the cover is closed.
- **Enable at Cut Paper**
  When this setting is selected, the top logo will be printed after cut command is executed.
- **Enable at Power ON**
  When this setting is selected, the top logo will be printed when the printer is turned ON.
- **Enable at Feed Button being Pressed**
  When this setting is selected, the top logo will be printed every time feed button is pressed.

- Click the Set button.
  Now the top logo information of the browsed image should be set to "Yes".

No.	File Name	Memory	Key1	Key2	Top	Bottom	Watermark
1	Downloaded Logo Flash #32_32	Flash	32	32	No	No	No
2	OrganicGardenOfficialLogo_ldpi_240x320.png	Flash	32	33	Yes	No	No

Figure 41 Top Logo information for the browsed image is set to Yes

- Click the Download button.
- Select either Download All Images or Download the Selected Image(s) from the menu.
  It will download the logo, then set the logo as top logo.

If the image is a downloaded image, please follow below steps to set the image as top logo.

- Right click on the browsed image in the table
- Select "Set as Top Logo" from the pop up menu to open the Set Top Logo Settings Dialog. Please refer to Figure 40 Set Top Logo Settings Dialog.
- Set the preferred setting from the dialog.
- Click the Set Button.
  The utility will directly send the set top logo command to the printer.

To cancel the top logo settings, please follow below steps.

- Select the downloaded image in the table which has been set as top logo

- Right click on the image
- From the pop up menu, select "Cancel Top Logo".
  The application will directly send the cancel Top Logo command to the printer.

Note: Doing above similar steps to the browsed image, will set the top logo information to "No". It will not send the cancel Top Logo command to the printer.

2.1.7   Set/Cancel Image as Bottom Logo

If the image is a browsed image, please follow below steps to set the image as bottom logo.

- Right click on the browsed image in the table
- Select "Set as Bottom Logo" from the pop up menu to open the Set Bottom Logo Settings dialog.
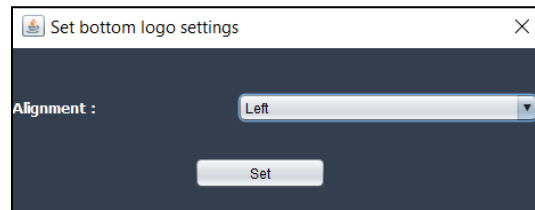

Figure 42 Set Bottom Logo Settings Dialog

In this dialog, user can set the alignment setting for the bottom logo. The available alignments are Left, Center, and Right.
- Click the Set button to set the image as bottom logo.
  Now the bottom logo information of the browsed image should be set to "Yes".

No.	File Name	Memory	Key1	Key2	Top	Bottom	Watermark
1	Downloaded Logo Flash #32_32	Flash	32	32	No	No	No
2	OrganicGardenOfficialLogo_ldpi_240x320.png	Flash	32	33	No	Yes	No

Figure 43 Bottom Logo information for the browsed image is set to Yes

- Click the Download button.
- Select either Download All Images or Download the Selected Image(s) from the menu.
  It will download the logo, then set the logo as bottom logo.

If the image is a downloaded image, please follow below steps to set the image as bottom logo.

- Right click on the browsed image in the table
- Select "Set as Bottom Logo" from the pop up menu to open the Set Bottom Logo Settings Dialog. Please refer to Figure 42 Set Bottom Logo Settings Dialog.
- Set the preferred setting from the dialog.
- Click the Set Button.
  The utility will directly send the set top logo command to the printer.

To cancel the bottom logo settings, please follow below steps.

- Select the downloaded image in the table which has been set as bottom logo
- Right click on the image
- From the pop up menu, select "Cancel Bottom Logo".
  The application will directly send the cancel Bottom Logo command to the printer.

Note: Doing above similar steps to the browsed image, will set the bottom logo information to "No". It will not send the cancel Top Logo command to the printer.

2.1.8   Command Line Supports

The Logo Download feature is supported in CLI. Below features are supported in CLI.

- Download all images stored in the xml configuration file.
- Clear all logo in Flash or RAM memory before start to download
- Set or Cancel the Watermark/Top/Bottom logo.

When the xml configuration file is created it stored the data of the image files. The existence of the image files are not required when the logo download is performed. Please refer to section 3.2 Download Data to Printer for more detailed information.

To create the required XML configuration file, please click the Menu Button then select the "Export as XML File" option. In CLI mode, the application will use the created XML file by this feature to determine the image downloading process behavior. Selecting this option will open the setting dialog.
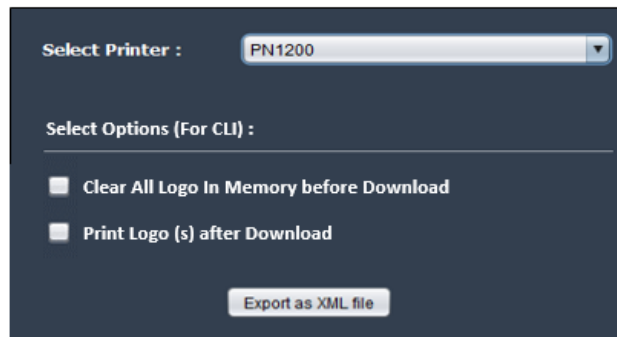

Figure 44 Create CLI's XML Configuration File Dialog

Below options are available.

- **Select Printer**
  Select the printer model. It will determine the data conversion and communication. Selecting the wrong model may cause unexpected behavior during image downloading.
- **Clear All Logo in Memory before Download**
  Before start downloading logo, it will erase all logo from either RAM or/and Flash Memory. When this option is checked, user can select the memory to be cleared.
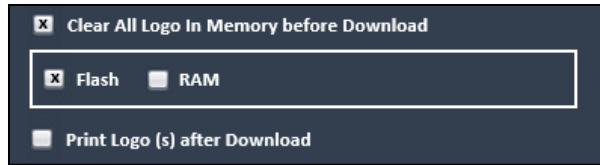
Figure 45 Additional options when Clear All Logo in Memory option is checked

- **Print Logo(s) After Download**
  Enables the printer to print the downloaded logo after the downloading process is completed.

Once Export as XML file button is clicked, it will open a browse dialog for user to select the XML file to store the image list with their settings (top/bottom/watermark settings) and other CLI parameters.

Note:

- If any of the image is set as Top, Bottom, Watermark logo from the image list, when the generated XML file is used in CLI mode, the Set Top, Bottom, or Watermark logo command will be send to the printer at the end of CLI operation. The set logo command being sent will depend on what logo setting is set to "Yes".
- If there are no image set as any of the top, bottom, or watermark logo from the image list, when the generated XML file is used in CLI mode, the Cancel Top Logo, Bottom Logo, or Watermark command will be send to the printer at the beginning of CLI operation. The cancel logo setting command being sent will depend on what logo setting is set to "No".

2.2 Miscellaneous Page

This page is contained with miscellaneous features such as options to perform various tests or operations on the printer.
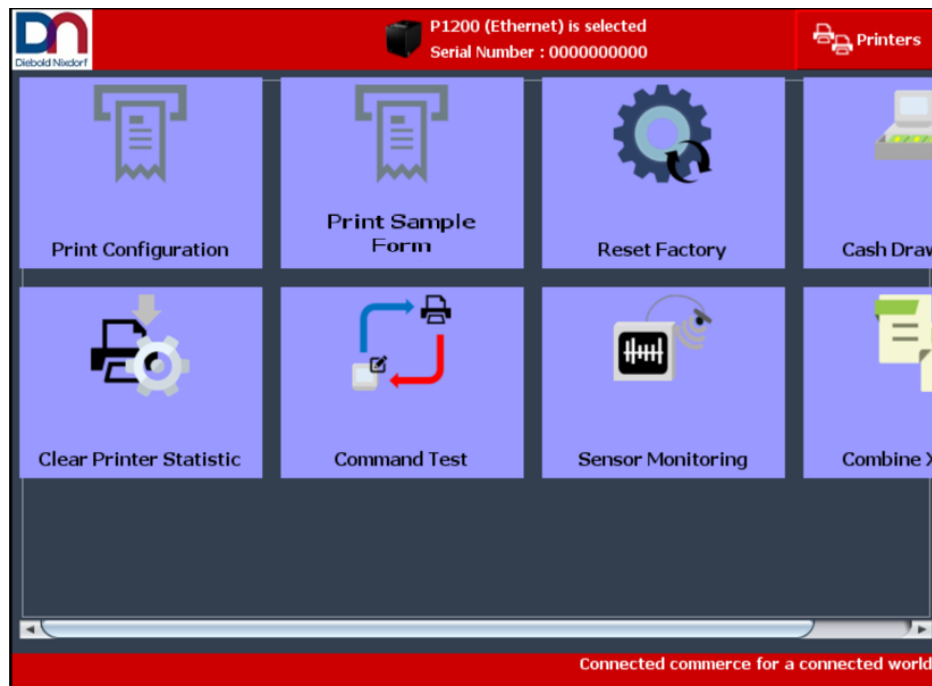

Figure 46 Printer Test Page

The available features are below.

2.2.1 Print Configuration

Prints the current printer configuration. If the printer is in error condition, the application will terminate the process and show an error message.

2.2.2 Print Sample Form

Prints a sample data on Receipt Station and Slip Station (DNP1300 Only). The printer will be a combination of below printing.

- Normal Text
- Combination of Line Spaces
- Graphic/Logo
- Barcode

If the printer is in error condition, the application will terminate the process and show an error message.

By default the sample print pattern is generated by the application. However user is allowed to edit the print pattern in the Settings page. Please refer to section 2.3.3 Edit Sample Receipt.

For P1300 have additional dialog, because P1300 able perform printing test on 2 station (Receipt Station and Slip Station)
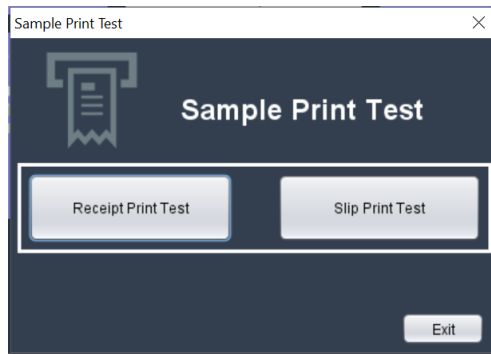

Figure 47 Sample Print Test

2.2.3   Reset Factory

Reset the printer configuration to its default condition when the printer is received. It will reboot the printer at the end.

A confirmation message box will appear when the Reset Factory button is clicked to ask user if they would like to proceed the factory reset.

2.2.4   Sensor Check

Monitor the printer sensors state and their latest ON and OFF voltage value. Any error occurred in the printer will also be periodically monitored.
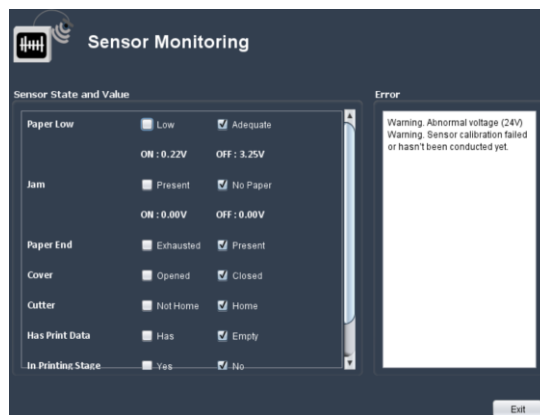

Figure 48 Sensor Check Dialog

Not all sensors will have their latest ON and OFF value monitored. For P1200 the sensors which have their latest voltage value monitored are Paper Low and Paper Jam sensors. For P1300 the sensors which have their latest voltage value monitored are Paper Low, Paper Jam sensors, TOF Sensor, and BOF sensor.

If during monitoring, printer is in error condition, the details of the error will be listed in the Error box.

Note: <u>When the sensor check dialog is opened, it is not recommended to have other application which communicate to the printer to be opened. Having so may cause unexpected behavior.</u>

2.2.5   Command Test

Selecting this option will open a new dialog. There are 3 features in this page.

- **Input and Send Command**

In this page, it is possible for user to input a command in hex format. It is also possible to send a test script in .txt and .bin format.

- **Receive status return**

Receive status from the printer.

- **Real Time Transfer**

Send and receive real time command and status.

Below are the command line dialog figure.

Figure 50 Command Line Window (Real Time Transfer)

The dialog will have an option to select whether to perform a normal transfer or a real time transfer. In case of serial printer is selected, the Real time transfer is performed same as normal transfer.

2.2.6   Cash Drawer Test

Perform a cash drawer test. Selecting this feature will open a Cash Drawer test dialog.
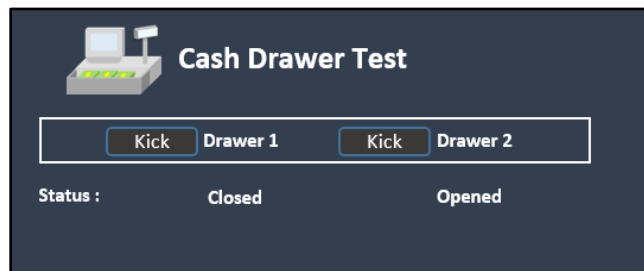
Figure 51 Cash Drawer Test Dialog

Below are the dialog's component explanation.

- Kick Button
  Kick either the cash drawer 1 or cash drawer 2 to be opened. If the cash drawer is already opened, an error message will be shown.

When the dialog is opened, it will periodically checking the cash drawer state.

Note: When the cash drawer test dialog is opened, it is not recommended to have other application which communicate to the printer to be opened. Having so may cause unexpected behavior.

2.2.7 Clear Printer Statistic

Open the Clear Printer Statistic dialog. This dialog is used to clear the printer Maintenance Counters.

For P1200 Supported statistics which can be reset are below:

- Number of Line Feed
- Head Energizations
- Auto Cutter Operations
- Cutter Errors
- Black Mark Errors
- Thermistor Errors
- Low Voltage Errors
- High Voltage Errors
- Cover Open Counter
- Maximum Head Temperature
- Duration of Printer Operation

For P1300 Supported statistics which can be reset are below:

- Number of Line Feed
- Head Energizations
- Auto Cutter Operations
- Cutter Errors
- Thermistor Errors
- Low Voltage Errors
- High Voltage Errors
- Cover Open Counter
- Maximum Head Temperature
- Duration of Printer Operation
- Slip Paper Feed Lines
- Slip Print Characters
- Slip Carriage Driving
- Slip Platen/Roller Opening/Closing Mechanism
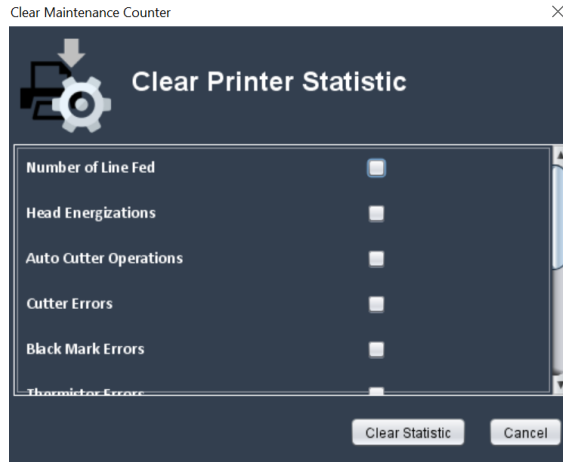
Figure 52 Clear Printer Statistic Dialog

Note: Clearing the printer statistic by user is not recommended. Please contact the Diebold Nixdorf maintenance team for any required assistance.

2.2.8   Combine XML File

Combine the XML configuration file generated by "Export XML File" feature from the GUI page. By using this feature, it is possible to have 1 XML configuration file to have multiple functions. For example, if XML configuration file created from the Firmware Download page is combined with the Logo Download page's XML file, the combined file will have both the firmware files data and images file data with their CLI parameters inside.

When Combine XML File is clicked, below dialog will be opened.

Figure 53 Combine XML File Dialog

Up to 3 files can be combined at one time. To combine the XML file, browse both the XML file, then click the Combine button to open a browse dialog to select/create a new XML file to store the combined information.

XML file created from Service and Maintenance feature page cannot be combined.

Note:

- Combining 2 XML file which both contains information from Printer Settings page is allowed. However, the last settings information will be ignored.

- Combining 2 XML file which both contains information from Firmware Download page is allowed. However, if there is a duplicate FW file name, the FW file from the first XML file will be used.
- Combining 2 XML file which both contains information from Logo Download page is allowed. However, if there is a duplicate key code 1 and key code 2 of an image, the image file from the first XML file will be used.
- The combined XML file section information will always be ordered in below sequence. Firmware Download -> Printer Settings -> Logo Download.

2.3 Application Setting Page

This page is used to change the application settings.

Figure 54 Setting Page

There are several settings available as mentioned in below sections.

2.3.1 Logging

In this page, user can choose the options to enable or disable the log file. It is also possible to change the log folder name.
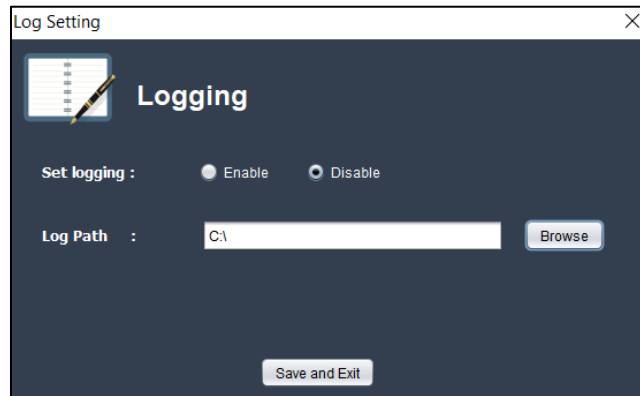
Figure 55 Log Setting Dialog

Note:

- The default setting for logging is disabled.
- The log file name is generated by application. It cannot be changed.

2.3.2 Operating Hours

In this page user can set their printer operating hours for a day. This value will be used in the Service and Maintenance's health check feature to determine the printer's health. The default value is 8 hours.
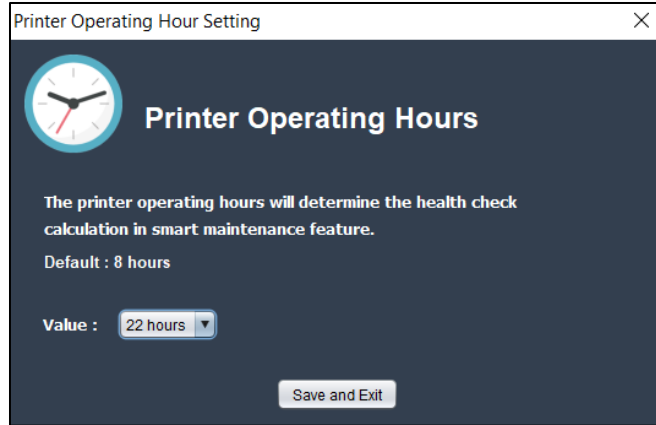
Figure 56 Printer Operating Hours Setting Dialog

2.3.3 Edit Sample Receipt

Edit the sample receipt. By default the sample receipt is generated by the application, however user is allowed to use their own print data from an external file as the sample receipt. The data should be stored in a binary (.bin) file.
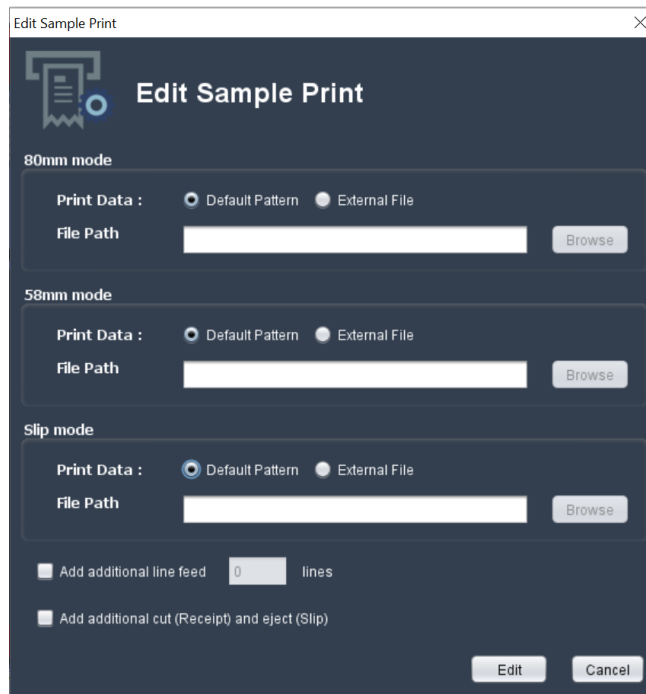
Figure 57 Edit Sample Print dialog

The sample print receipt for the 80 mm paper mode, the 58 mm paper mode, and the slip printing mode are using separate print pattern. User can specified the print pattern for either one of the three modes. Additional line feed and paper cut is also available to be added.

Slip Printing Mode options are available for P1300 model only.

3.   CLI Manual

3.1   CLI Arguments

The utility are able to run from command line or using batch file by writing specific instruction and parameter with the defined format. The command line format is:

Format (Windows): *DNPrinterUtilityLauncher.exe [Interface] [command]*

Format (Linux): *dnprinterutility.sh [Interface] [command]*

- **DNPrinterUtility.bat/.sh**
  It is the application executable script name. The batch script (windows) or the shell script (Linux) could be located in the installation folder.
- **Interface**
  Define the printer interface and the interface parameters.
- **Command**
 The command parameter are separated into main command and additional command. The main command must be specified as it defines the instruction for the printer. The additional option is an additional parameter and it can be omitted.

  Below are the available interface arguments.
  1. **–U PrinterModel(Optional)**
     The application will run in CLI mode using USB Interface. If CLI is run in Download mode, the printer model information is stored in the XML configuration file. In this case the **PrinterModel** parameter is not required. If CLI is run in Receive mode and the **PrinterModel** parameter is omitted, the default value will be used. By default, the **PrinterModel** value is P1200.

Parameter	Detailed Description
PrinterModel (Optional)	The Printer model name. Supported values: 1. P1200 (default) 2. P1300

Table 21 USB Interface CLI Parameter

  2. **–S Portx:BaudRate,DataBit,Parity,Stopbit,Flowcontrol**
     Execute using Serial interface. All the parameters are case insensitive.

Parameter	Detailed Description
Portx	Serial port. **Windows:** COMx (1 <= x <= 255) **Linux:** /dev/ttySx (0 <= x <= 255)
BaudRate	9600, 19200, 38400, 57600, 115200
DataBit	7, 8

Parity	None, Odd, Even
Stopbit	1, 2
FlowControl	None, XonXoff, DtrDsr

Table 22 Serial Interface CLI Parameter

3. –L IPAddress :TCPPort(Optional): UDPPort(Optional)

Execute using Ethernet interface. The TCPort and UDPPort parameter can be omitted.

Parameter	Detailed Description
IPAddress	xxx.xxx.xxx.xxx. With xxx : 1-255
TCPPort	1-65535. (Optional, default is 9100)
UDPPort	1-65535. (Optional, default is 3000)

Table 23 Ethernet Interface CLI Parameter

Below are the available main command arguments:

1. **– h or -?**

   Show the help information.

```
Show help
Usage: Windows : DNPrinterUtilityLauncher.exe [interface] [command]
       Linux   : dnprinterutility.sh [interface] [command]
Interface:
 -U PrinterModel(Optional)                     : Execute using USB interface
    Parameters:
    PrinterModel    = P1200(default)
 -S COMx:BaudRate,DataBit,Parity,Stopbit,Flowcontrol  : Execute using Serial interface
    Parameters:
    COMx         = COM1-COM255 (Windows) or /dev/ttyS0-/dev/ttyS255 (linux)
    BaudRate     = 9600, 19200, 38400, 57600, 115200
    DataBit      = 7, 8
    Parity       = None, Odd, Even
    Stopbit      = 1,2
    FlowControl  = None, XonXoff, DtrDsr
                                         Please follow the argument sequence:
                                         eg: -S COM1:115200,8,None,1,None
 -L IPAddress:TCPPort(Optional):UDPPort(Optional) : Execute using Ethernet interface
    Parameters:
    IPAddress    = xxx.xxx.xxx.xxx. With xxx = 1-255
    TCPPort      = 1-65535. (Optional, default is 9100)
    UDPPort      = 1-65535. (Optional, default is 3000)
                                         Please follow the argument sequence:
                                         eg1: -L 192.168.1.2
                                         eg2: -L 192.168.1.2:9100:3000
Commands:
 -h or -?                   : Show help information
 -c                         : Show Error Codes information
 -v                         : Show Application Version and Copyright
 -d                         : Download data stored in the XML file to the printer.
                              This argument must be combined with '-p' path argument
                              to specify the XML file name and path.
 -r FeatureID               : Retrieve one of the application's feature information from the printer
                              and export it as an xml file. If the '-p' path is omitted, the default file name will be used.
    Parameters:
    FeatureID: 0(PrinterInformation),1(HealthAnalysis),2(ErrorHistory),3(AnalyzeThermalHead),4(PrinterSettings)
 -p FileName                : Determine the xml file name for both Download and Receive mode.
Options:
 -s                         : Enable silent mode without any message
 -t FolderName (Optional)   : Enable trace or logging option. Default folder name is current folder.
                                         eg1: -U -t
                                         eg2: -U -t C:\TestFolder
```

Figure 58 CLI's help information

2. **-c**

   Show the list of error codes and their meanings.

3. **–v**

   Show application's current version.

4. **–d**

   Download data stored in the XML file to the printer. This argument must be combined with "-p" path argument to specify the XML file name and path.

   For more detailed information, please refer to section 3.2 Download Data to Printer.

---

5. **–r FeatureID**

   Similar to GUI, it will retrieve one of the application's feature information from the printer and export it as an xml file.

Parameter	Detailed Description
FeatureID	0 : Printer Information 1 : Health Analysis 2 : Error History 3 : Analyze Thermal Head 4 : Printer Configuration

   Table 24. -r parameter detailed description

   This arguments can be combined with the "-p" path argument to specify the export file name. If the "-p" path is omitted, the default file name will be used.

   For more detailed information, please refer to section 3.3 Retrieve Data from Printer.

6. **–p FileName**

   Determine the xml file name for both Download and Receive mode.

Below are the supported additional commands.

1. **–s**

   Enable silent mode without any message.

2. **–t TracePath(Optional)**

   Enable tracing or logging feature. The trace folder name can be omitted and the default trace files will be stored in the current folder.

3.2 Download Data to Printer

The CLI supports the functionality to load data to the printer. The data are stored in the XML configuration file which is created in the GUI page. The XML configuration file is one of the mandatory command line argument to load a data to the printer in CLI mode.

To load data to the printer, please run below command in Command line.

Format (Windows): *DNPrinterUtilityLauncher.exe [interface] –d –p [xmlconfigfile] [additionaloptions(Optional)]*

Format (Linux): *dnprinterutility.sh [interface] –d –p [xmlconfigfile] [additionaloptions(Optional)]*

The options will determine the interface used. Available options arguments are "-U", "-S", and "-L". Additional options can be omitted. Please refer to section 3.1 CLI Arguments.

Example:

1. To load printer settings using USB interface in Windows.

DNPrinterUtilityLauncher.exe -U –d -p settings.xml

2. To download firmware files using Serial interface in Linux with Silent Mode.

dnprinterutility.sh –S COM1:19200,8,Even,1,None –d -p fwfiles.xml -s

Below list shows the type of feature which are supported in CLI's Download mode and the GUI page which is used to generate the XML configuration file.

GUI Page	Type of Feature	Details
Printer Settings	Load Printer Settings	Load the stored settings in the XML file to the printer. Refer to section 0
Firmware Download	Download Firmware File	Download the stored FW data in the XML file to the printer. Refer to section 2.5.3
Logo Download	Clear Logo in Memory	Delete all logo in either Flash or/and RAM memory. Refer to section 2.1.8
	Download Logo	Download the stored logo with the specified download parameter in the XML file. Refer to section 2.1.8
	Print Downloaded Logo	Print a downloaded logo with a specified parameter in the XML file. Refer to section 2.1.8
	Set or Cancel Watermark	Set or cancel watermark settings. Refer to section 2.1.8
	Set or Cancel Top Logo	Set or cancel top logo settings. Refer to section 2.1.8
	Set or Cancel Bottom Logo	Set or cancel bottom logo settings. Refer to section 2.1.8

Table 25 List of load feature in CLI

3.3   Retrieve Data from Printer

To retrieve data from the printer please use below format.

Format (Windows):

DNPrinterUtilityLauncher.exe [options] –r [FeatureID] –p [xmlfilename] [additionaloptions(Optional)]

Format (Linux):

DNPrinterUtility.sh [options] –r [FeatureID] –p [xmlfilename] [additionaloptions(Optional)]

Note: –p *[xmlfilename]* can be omitted. In this case default folder and file name will be used to export the xml file.

Please refer to section 3.1 CLI Arguments for the –r argument explanation.

Example:

1. Retrieve Printer Settings from the printer and export it as XML file using USB interface.

DNPrinterUtilityLauncher.exe -U –r 4 –p D:\NewFolder\ExportedFile.xml

2. Retrieve Error History from the printer and export it as XML file in the current folder and default file name using Ethernet interface with enable trace to current folder.

dnprinterutility.sh -L 192.168.1.1:admin –r 4 -t

Please refer to "Table 24. -r parameter detailed description" for the FeatureID information.

Note: If the file format is not supported by the specified FeatureID parameter, an error code will be returned.

3.4   Return Code List

Return Code	Description
0	Success or No Error
-1	Communication Error
-2	Invalid CLI Arguments
-3	File not exist
-4	Invalid Data Parsing / Conversion
-5	Printer model is not supported
-6	reserved
-7	Printer settings have not been changed properly
-8	Create file/folder failed
-9	Export format not supported
-10	Invalid Data
-11	Internal Error

Table 26 Return Code List

4. Installation

This sections contains the required steps to run the setup.

4.1 Normal Installation

4.1.1 Windows

Please refer to the following steps to perform installation on Windows operating system.

- Run the **DNPrinterUtility_Vx.x.x.x.exe**.
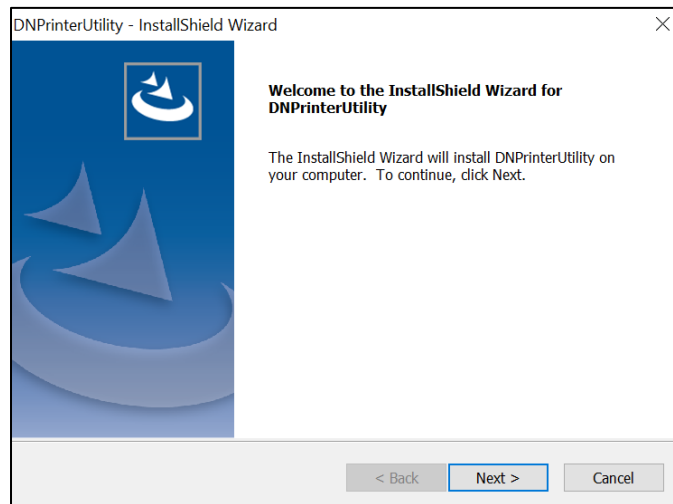- The installation window will be opened. Click next to continue.

Figure 59 Installation Start Page
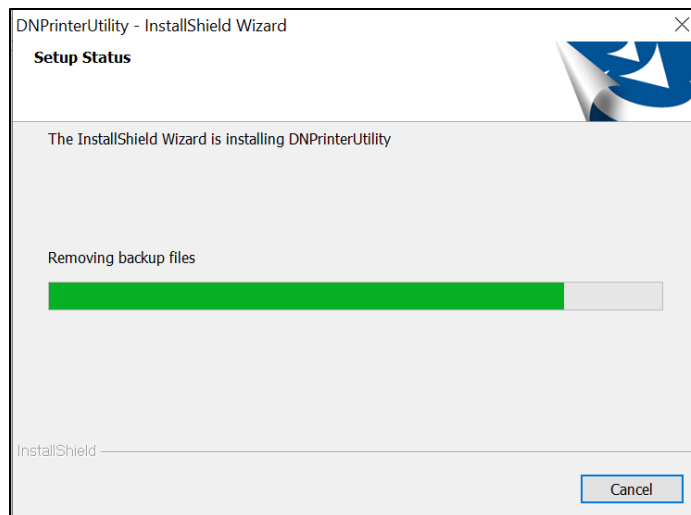
- Installation process will start.

Figure 60 Installation starting
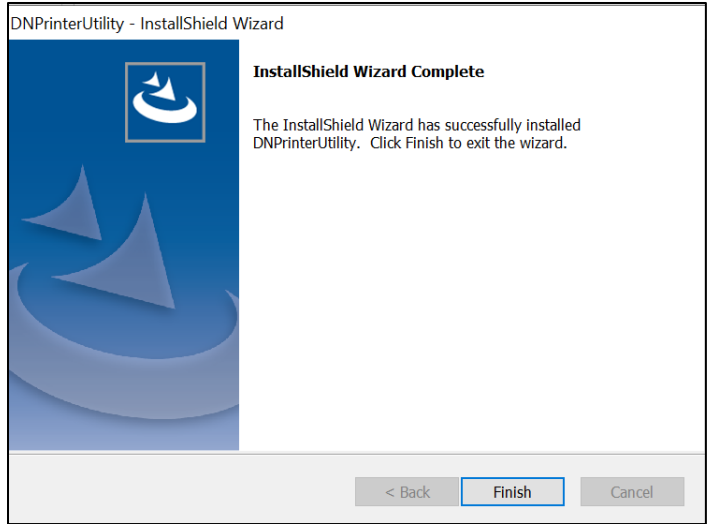
- Click Finish to complete the installation.

Figure 61 Installation completed

- A confirmation message will prompt out to run the application.
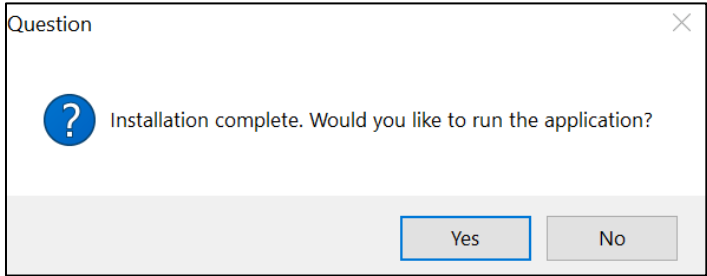

Figure 62 Confirmation to open the application

4.1.2   Linux

Please refer to the following steps to perform installation on Linux operating system.

- Extract the tar file using the following command.
  Command: `tar -xzvf DNPrinterUtility_Vx.x.x.x_Linux_x64.tar.gz`
  Note: A root access may be required.
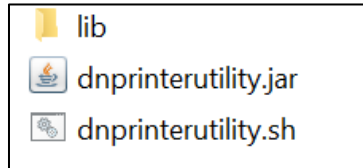- It should provide the following package files after extraction.

Figure 63 Linux package files

- In order for the interface library to run properly, libus-1.0-0 library must be installed. In the latest version of Linux distribution, the library should already be installed as the default installation. If it is not installed, please run the following command to search the library.
  Suse Linux Enterprise Desktop   :]# sudo zypper se libusb
  CentOS   :]# sudo yum search libusb
  Above command should list out all the libusb package as below.

Figure 64 Available libusb package

To install the libusb please run the following command.

Suse Linux Enterprise Desktop   :]# sudo zypper in libusb-1_0-0
CentOS   :]# sudo yum install libusb-1_0-0

- Run the DNPrinterUtility.sh to open the application.

Note:

- if the shell script (*.sh) file cannot be executed, user will need to add the executable rights to the script. For example:]# chmod +x DNPrinterUtility.sh

4.1.2.1   Linux USB and Serial Port Access

If USB or serial communication is not working, please run the *.sh script as root to make sure the utility can access the USB or serial driver. However, If running the shell script as root is not

an option, please refer to the following steps to give the interface library an access to write to the USB or serial port.

Serial Port:

- Create "serial.rules" under "/etc/udev/rules.d" folder
- Edit "serial.rules"
- Modify mode for desire serial port device. For example, to allow access /dev/ttyS0]# ACTION=="add", KERNEL=="ttyS0", MODE="0666"
- Save "serial.rules". Reboot system for setting to take effect

USB Port:

- Create "usb.rules" under "/etc/udev/rules.d" folder.
- Edit "usb.rules"
- Modify mode for desire USB port device. For example, to allow access USB device]# SUBSYSTEM=="usb", MODE="0666"
- Save "usb.rules". Reboot system for setting to take effect

4.2   Silent Installation

4.2.1   Windows

For silent install, it is required to perform the following main steps:

- To record a silent Install Shield installation by running the setup -r command.
- To play back a silent Install Shield installation by running the setup -s command.

Below are the detailed steps to prepare the installation record file.

- Make sure the application has not been installed.
- Open command line.
- Run the installer file (**DNPrinterUtility_Vx.x.x.x.exe**) from command line or batch file with below command.
  Example, DNPrinterUtility_V2.1.0.0.exe is stored in "Temp" folder and an iss file called install.iss is required to be created and recorded in the same folder. Below command line could be sent through command line to create the iss file.

  C:\temp>DNPrinterUtility_V2.1.0.0.exe /r /f1c:\temp\install.iss

- Perform manual installation until it is completed. The install.iss file should be created in the same folder as in the execution file.

Note: Above steps are **one time** requirement. The record file can be run on all windows platform. It is not required to create the record file for every platform.

To perform silent install or uninstall please refer to the following steps.

- Make sure the installer and the record file are saved in the same folder.
- Run the following command from command line or batch file to perform the silent install.
  Example, install.iss and DNPrinterUtility_V2.1.0.0_Windows.exe file are copied and saved to another system in the "Temp" folder. Below command line could be sent to install silently.

  C:\temp>DNPrinterUtility_V2.1.0.0.exe /s /f1c:\temp\install.iss

- The DN PrinterUtility will installed silently. Once done, there is a setup file created and you can read the Resultcode. If Resultcode=0 means Done.

Same procedure for create and record iss file for uninstallation