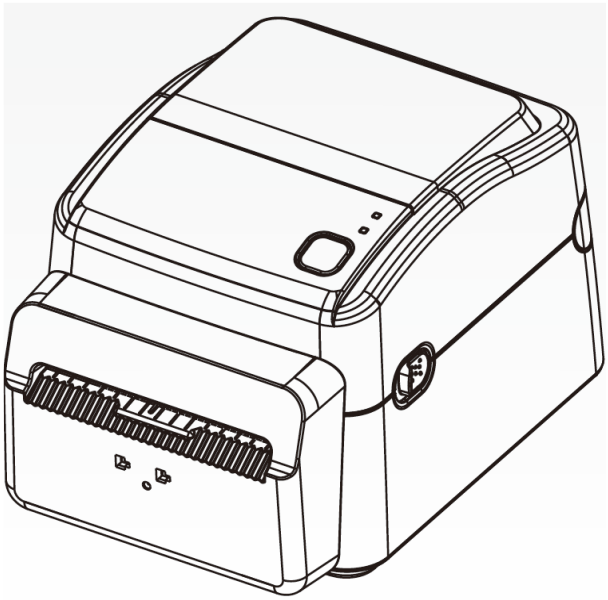
# D4-280plus Printer

# User Manual



Version: 1.2

http://www.argox.com

service@argox.com

Media Installation Video

# FCC ID

In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

# FCC Warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions in this manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

# FCC Statement for Optional RF module

This device complies with RF radiation exposure limits set forth for an uncontrolled environment.

The antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all people and must not be collocated or operating in conjunction with any other antenna or transmitter.

## Bluetooh / Wireless LAN Communication

Compliance Statement

This product has been certified for compliance with the relevant radio interference regulations of your country or region. To make sure continued compliance, do not:

- Disassemble or modify this product.
- Remove the certificate label (serial number seal) affixed to this product.

Use of this product near microwave and/or other Wireless LAN equipment, or where static electricity or radio interference is present, may shorten the communication distance, or even disable communication.

## WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

(for USA only)

## Liability Disclaimer

ARGOX Corporation takes steps to assure that the company’s published engineering specifications and manuals are correct; however, errors do occur. ARGOX reserves the right to correct any such errors and disclaims any resulting liability. In no event shall ARGOX or anyone else involved in the creation, production, or delivery of the accompanying product (including hardware and software) be liable for any damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or other pecuniary loss) arising out of the use of or the results of use of or inability to use such product, even if ARGOX has been advised of the possibility of such damages.

## Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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# 1. Introduction

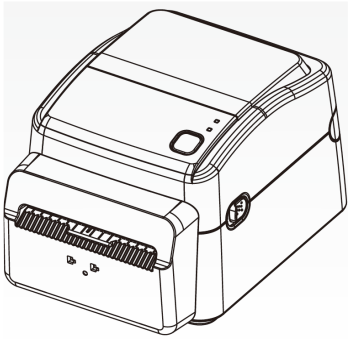
Thank you for purchasing the ARGOX D4-280plus printer. This manual provides information about how to set up and operate your printer, load the media and solve common problems.

## 1.1 Features

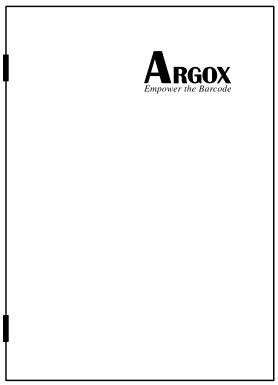
- **Various Connectivity Options** USB, Ethernet, RS-232
- **Easy Operation** One-button design for easy control
- **Fast Print Speed** Max 6 inches/sec
- **Wireless LAN Connection** Build a Wireless LAN printing environment with Bluetooth
- **External Memory** The extra USB port allows you to use a USB flash drive for storage

# 1.2 Unpacking

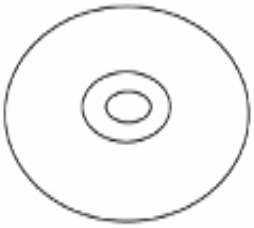
Make sure all of the following items are included in your package.



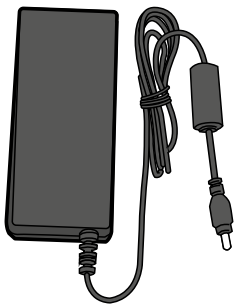
ARGOX D4-280plus Printer




Quick Installation Guide

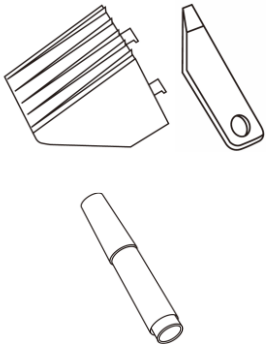


DVD



Power Supply

AC Power Cord



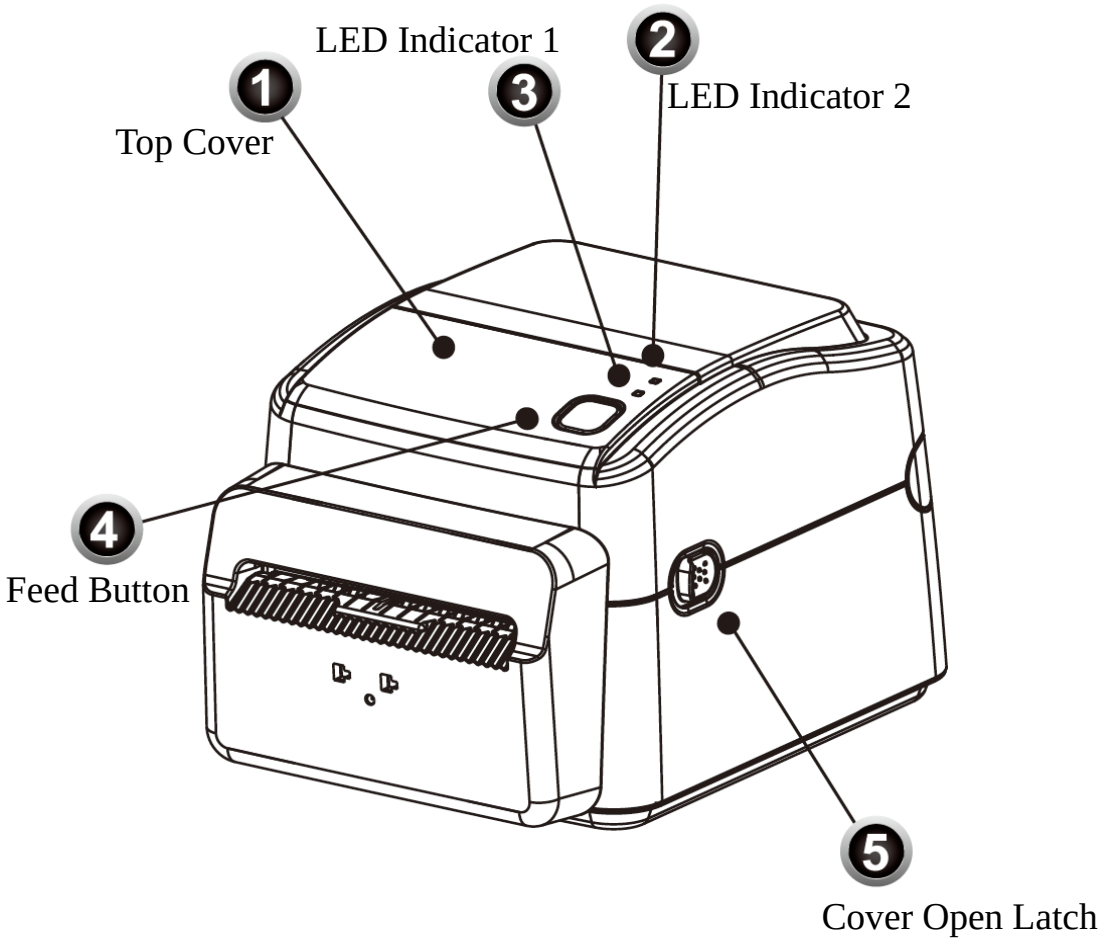
Accessories

When you receive the printer, open the package immediately and inspect for shipping damage. If you discover any damage, contact the shipping company and file a claim. ARGOX is not responsible for any damage incurred during shipping. Save all package materials for the shipping company to inspect.

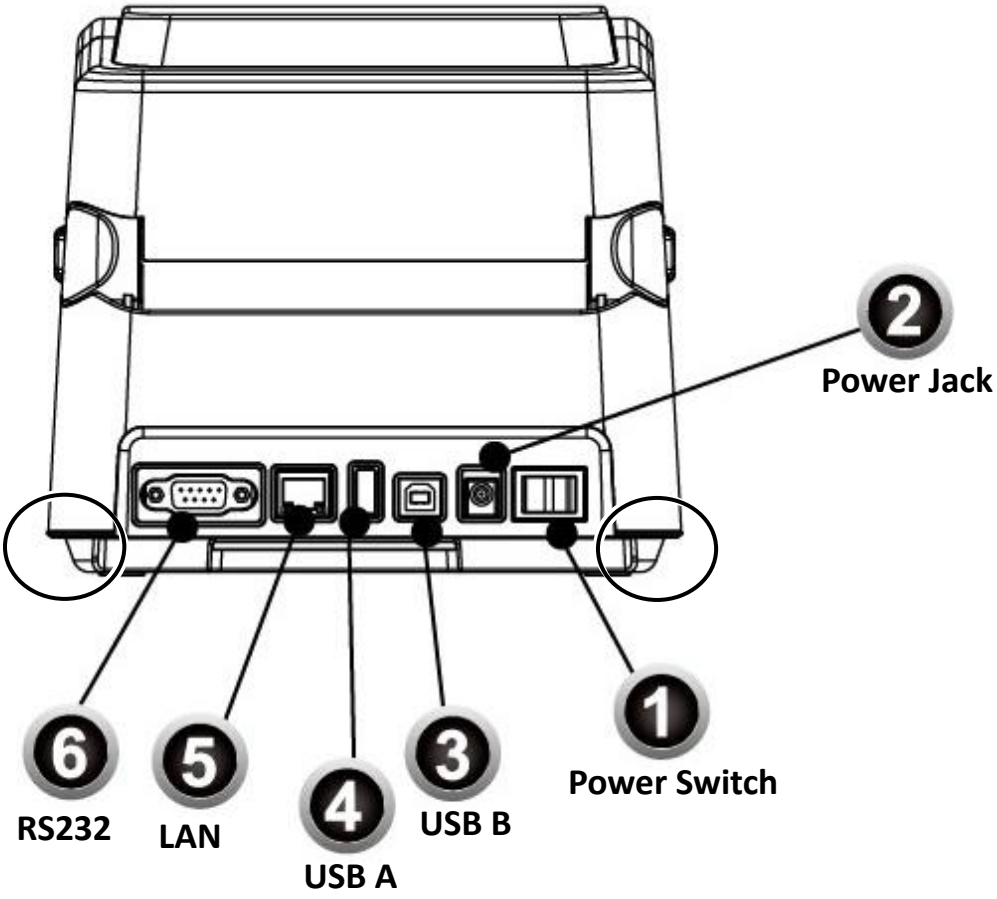
**Note** If any item is missing, please contact your local dealer.

# 1.3 Understand your printer

## 1.3.1 Perspective view



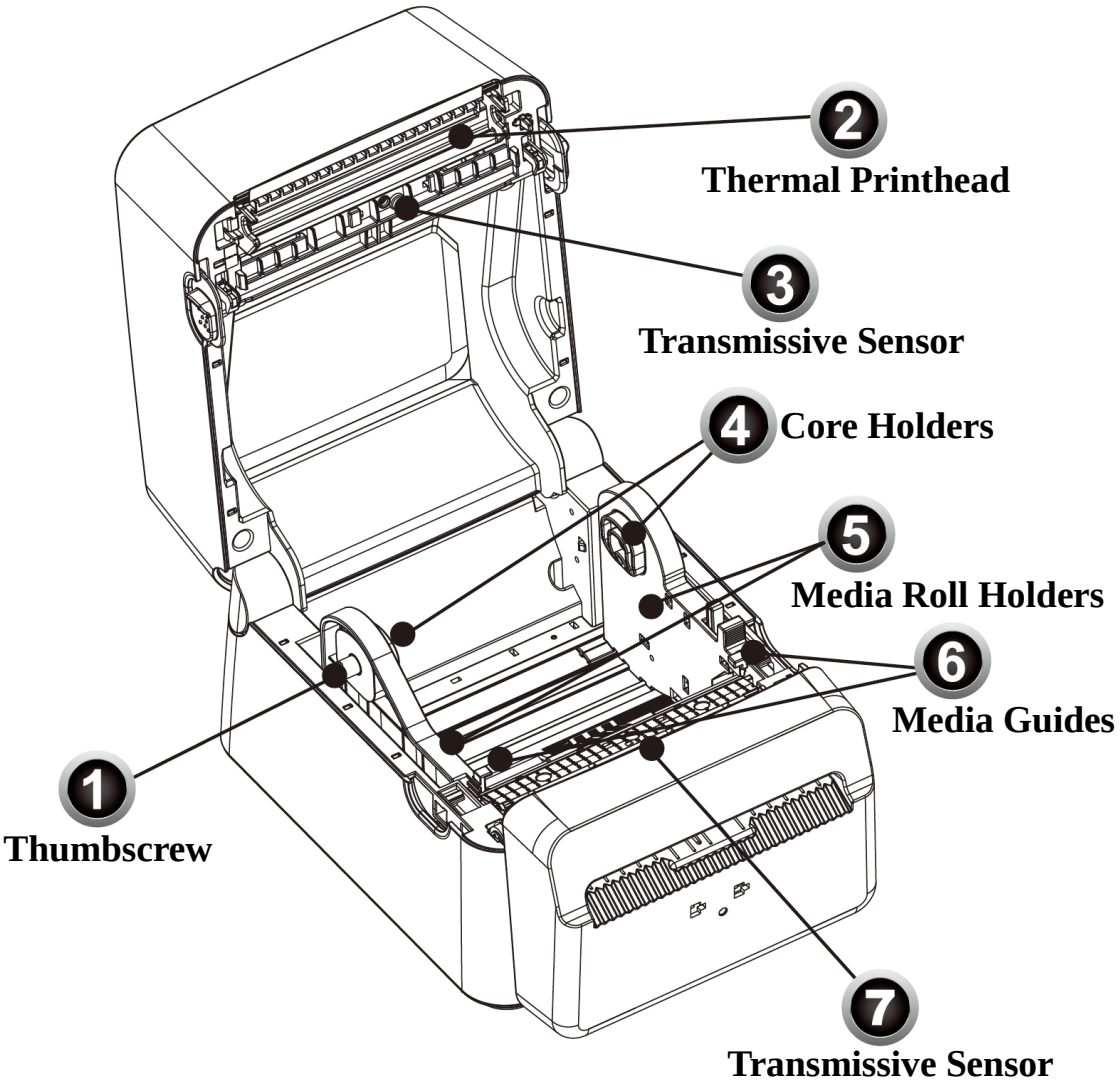
## 1.3.2 Back view




**Caution** The areas indicated by the ellipse have sharp edges. To avoid injury, be careful not to touch them when handling the printer.

**Caution** To avoid injury, be careful not to trap your fingers in the Paper Slot while opening or closing the Top Cover.

## 1.3.3 Interior view



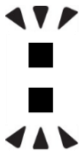

**Warning** The thermal printhead becomes very hot during printing. Do not touch the thermal printhead or touch around it directly after printing. By doing so you may get burnt.

# 1.4 Printer lights

There are two LED lights that show the status of your printer.

## 1.4.1 Status lights

Status lights help you check printer's condition. The following tables show the blinking speed of status lights and the conditions they indicate.

| LED image | Blinking Speed | Blinking Interval |
|---|---|---|
| | Lightening | Always on |
| | Slow | 0.8 Second |
|  | Fast | 0.2 Second |

| LED image | Blinking Pattern description |
|---|---|
| | Alternate blinking. |
| | Blinking at the same time. |

| Blinking pattern | LED 2 | LED 1 | Description | |
|---|---|---|---|---|
| | **Green** | **Green** | The printer is ready to print. | |
| | **Green** | **Green** | In pause. | |
| | **Green** | **Green** | The printer is receiving data. | |
| | **Green** | **Green** | TPH high temperature. | |
| | **Green** | **Green** | The printer is writing data to the flash or USB memory.<br>The USB memory is being initialized. | |
| | **Amber** | **Amber** | Paper jam.<br>The media is out when the print data sent to the printer.<br>Paper end. | |
| | **Red** | **Red** | H/W Error | The printhead is broken.<br>Communication error (RS-232C).<br>Cutter error (with optional cutter).<br>The RTC battery is low. (If the printer has a built-in RTC) |
| | **Red** | **Red** | Command Error | An EEPROM for backup cannot be read or written properly.<br>A command has been fetched from an odd address.<br>Word data has been accessed from a place other than the boundary of the word data.<br>Long word data has been accessed from a place other than the boundary of the long word data.<br>Command error. |

| Blinking pattern | LED 2 | LED 1 | Description | |
|---|---|---|---|---|
| | **Red** | **Red** | Top Cover Open | The print module is opened when the printer is turned on. |
| | | | | Cover (Thermal Head) open error during printing. |
| | **Red** | **Red** | USB R/W Error | Flash ROM on the CPU board error or USB memory error. |
| | | | | An erase error has occurred when formatting the USB memory. |
| | | | | Unable to save files due to insufficient USB memory. |

## 1.4.2 System mode

The system mode consists of status light color combinations. It contains a list of commands for you to select and run.

To enter the system mode and run the command, do the following:

1. Turn off the printer.
2. Press and hold the **FEED** button, and turn on the printer.
3. Both status lights glow solid amber for a few seconds. Next, they turn to green shortly, and then turn to other colors.
4. When status lights show the color combination you need, release the **FEED** button immediately.
5. Press the **FEED** button to run the command.

The following table is the command list of the system mode.

| LED 2 | LED 1 | Command |
|---|---|---|
| Red | Green | Transmissive Sensor Calibration |
| Red | Red | Resetting Your Printer |
| Amber | Red | Reserved |
| Green | Red | Disable Checking RTC Battery Charge |
| Red | Amber | Reserved |
| Green | Amber | Self Test |

# 2. Get started

This chapter describes how to set up your printer.

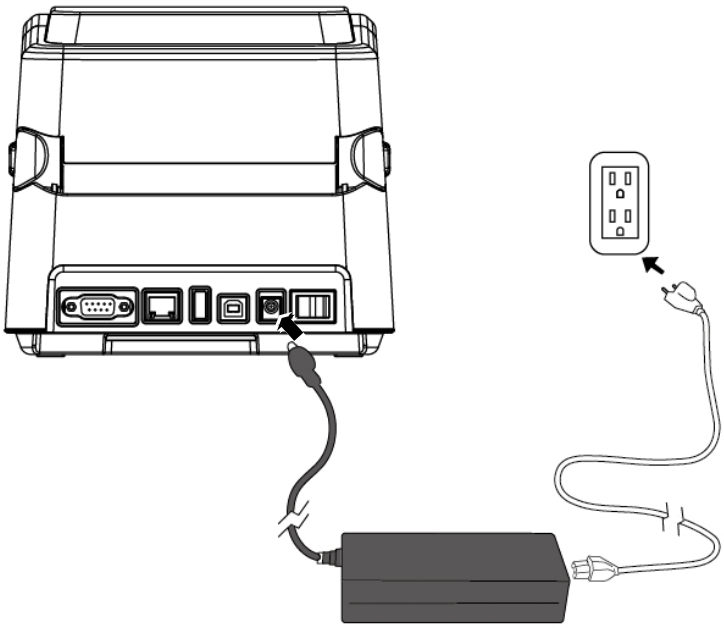
**Caution** Do not use your printer in areas exposed to splashing water or any other liquid.

**Caution** Do not drop your printer, or place it in an area subject to humidity, vibration or shock.

## 2.1 Attach the power cord

1. Make sure the power switch is set to the **OFF** position.
2. Insert the power supply's connector into the printer power jack.
3. Insert the AC power cord into the power supply.
4. Plug the other end of the AC power cord into the wall socket.

**Important** Use only power supplies listed in the user instructions.



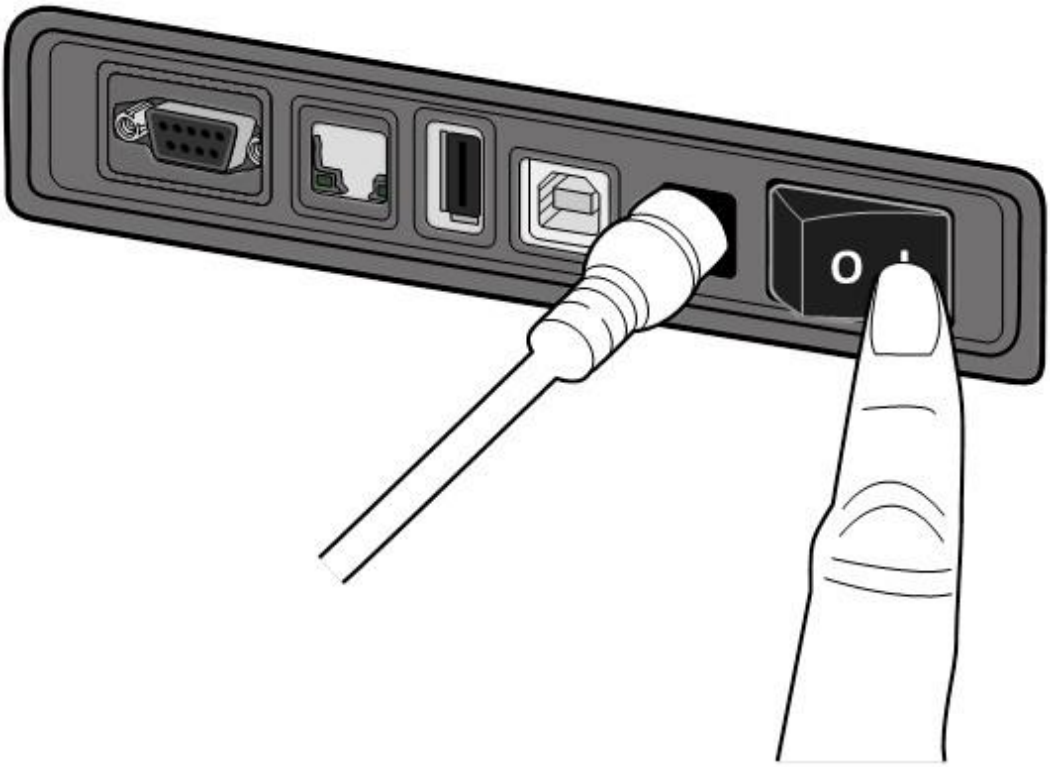
**Warning** Do not plug the AC power cord with wet hands, or operate the printer and the power supply in an area where they may get wet. Serious injury may result from these actions!

# 2.2 Turn on/off your printer

When your printer is connected to a host (a computer), it is good to turn on the printer before turning on the host, and turn off the host before turning off the printer.

## 2.2.1 Turn on your printer

1. To turn on your printer, turn on the **Power Switch** as below. The "I" is the **ON** position.

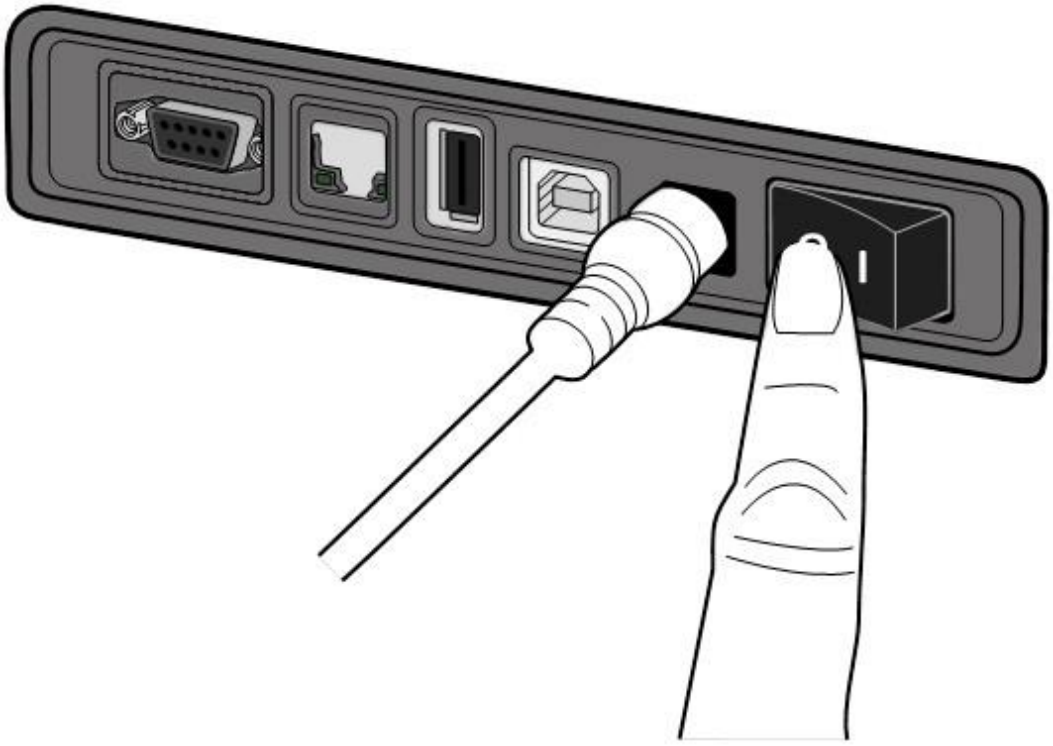


2. Both status lights glow solid amber for a few seconds, and then LED 2 goes out, while LED 1 turns to solid green.

**Note** If you connect the printer to the internet or insert a USB drive before turning on the printer, it will take longer for the printer to enter the online mode (LED 1 glows solid green) after you turn it on.

## 2.2.2 Turn off your printer

1. Make sure LED 2 is off and LED 1 is solid green before turning off the printer.
2. To turn off your printer, turn off the **Power Switch** as below. The “O” is the **OFF** position.



**Caution** Do not turn off your printer during data transmission.

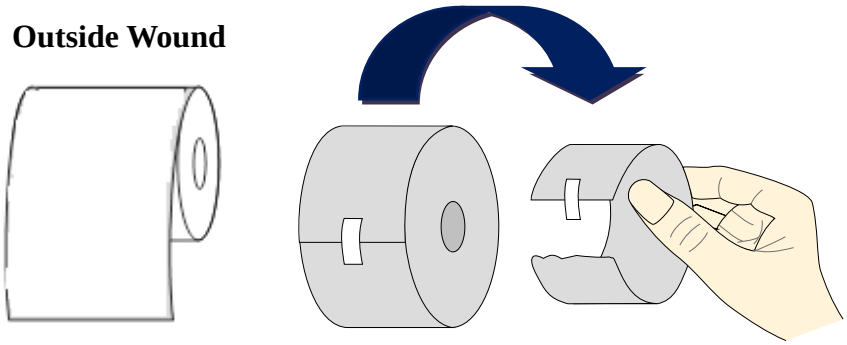
# 2.3 Load media

There are various types and sizes for the media roll. Load the applicable media to satisfy your need.

## 2.3.1 Prepare media

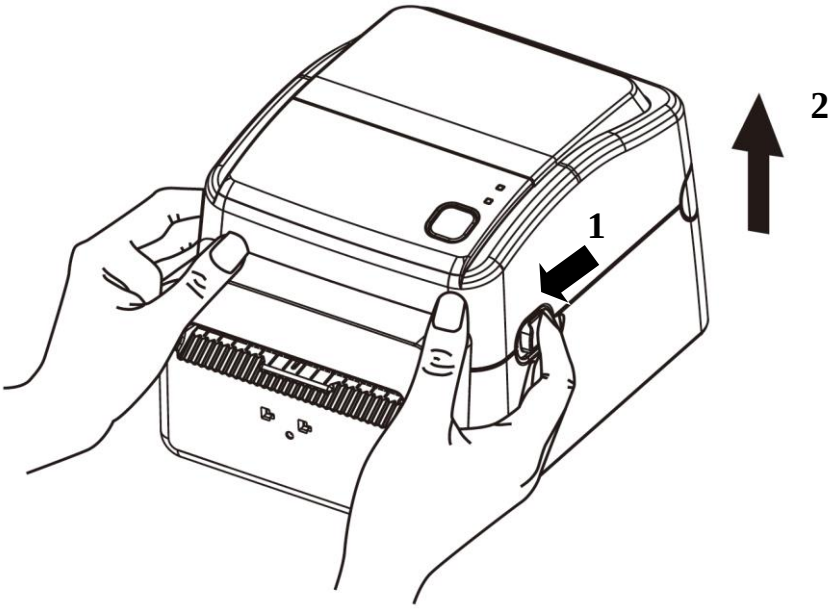
Load the outside wound media roll into the printer. In case the media roll is dirty during shipping, handling or storage, remove the outside length of the media. It helps avoid dragging adhesive and dirty media between the printhead and platen roller.

**Outside Wound**

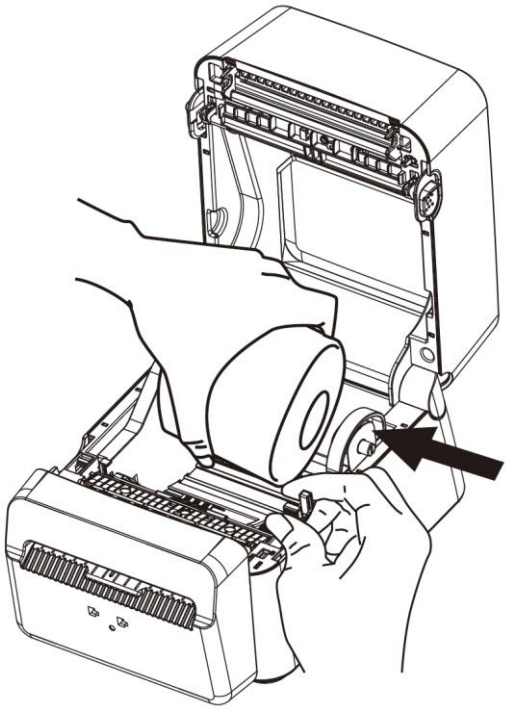


## 2.3.2 Place a media roll

1. Open the top cover of the printer.

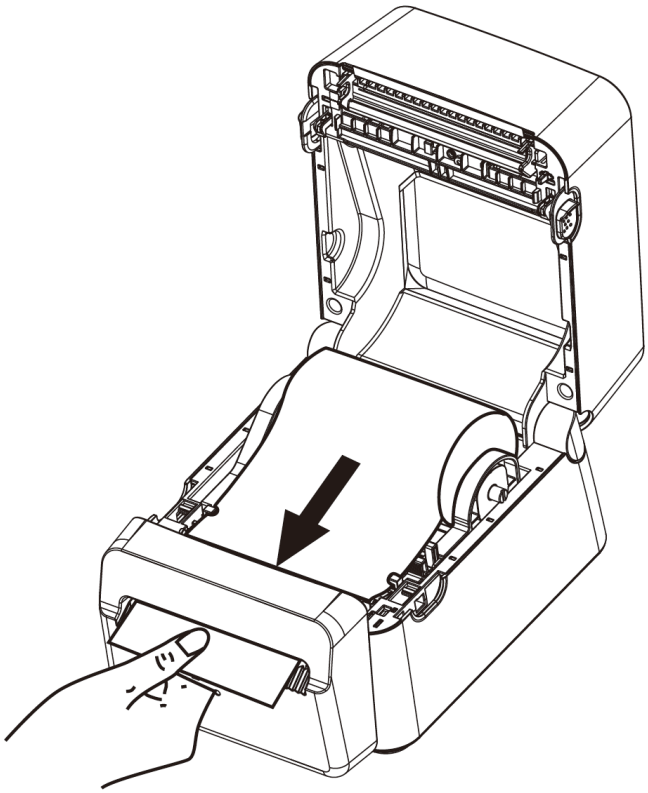



2. Place the 1.5” media roll between the holders. Make sure the print side is up, and the media roll is clamped tightly by the holders.

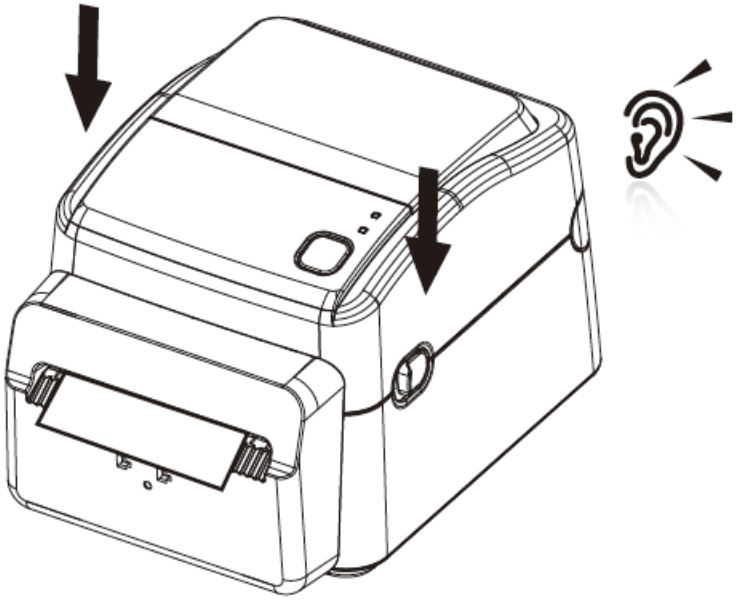


3. Pull the media until it reaches out of the printer. Thread the media under the media guides.

   **Caution** Do not ship or carry the printer while it holds a label roll.

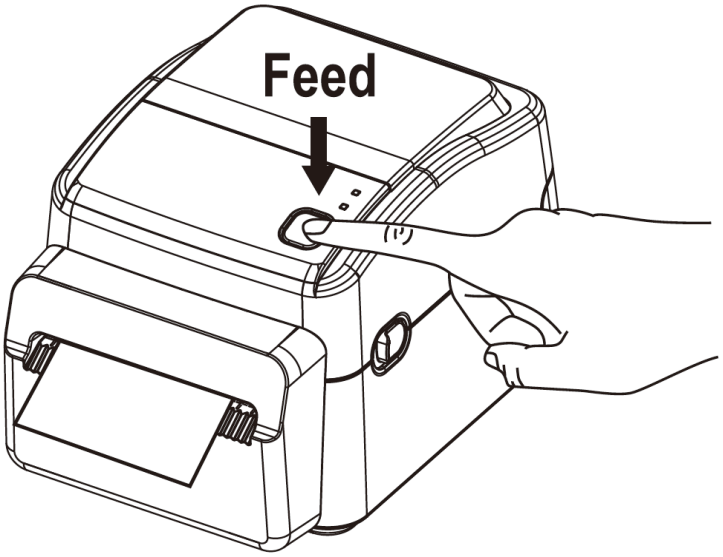


4. Close the top cover.



## 2.3.3 Test media feed

Turn on the printer, and press the **FEED** button to feed a label.

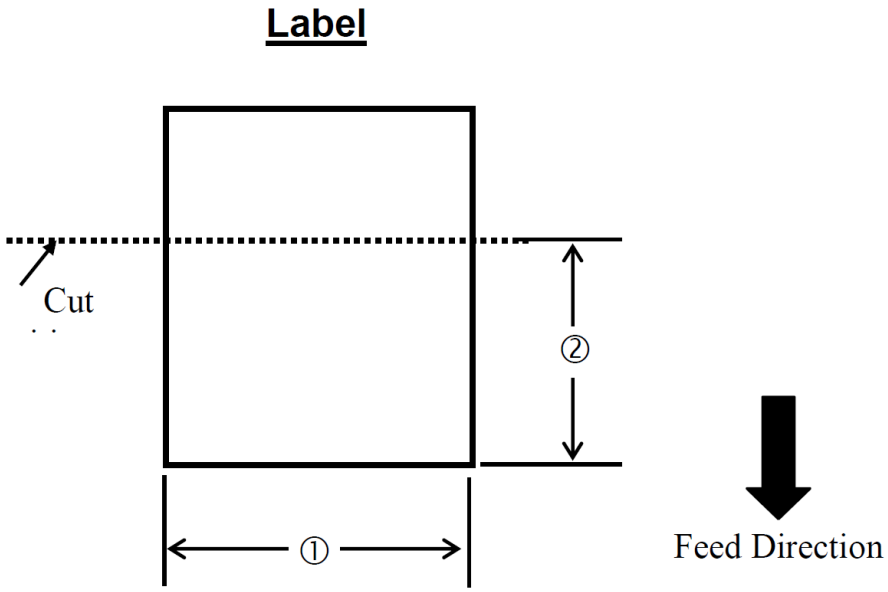



After the label is fed or printed, the printer's cutter automatically cuts the paper. Take out the cut paper before the printer makes the next label paper print. If you do not use the printer for a long period of time, remove the paper roll to avoid paper jam from the sticking feature of the paper.

# 2.4 Media types / Linerless label

The D4-280plus is a printer exclusively for linerless paper roll. Before loading the media in the printer, please make sure that you use the media in correct size and shape. Refer to the information on the size and shape of the media that can be used on this printer, as shown below.

The table below shows the size and shape of the media that can be used on this printer.




| Item | Cut Mode |
|---|---|
| Label width | 25.4mm to 118mm |
| Cut length | 25.4mm to 152.4mm (1.0” to 6”) |
| Thickness | 0.06mm to 0.19mm (0.0024” to 0.0075”) |
| Max. outer roll diameter | Ø127mm (5”) |
| Roll direction | Outside wound |
| Inner core diameter | 38.1mm (1.5”), 40mm also available |

**NOTES:**

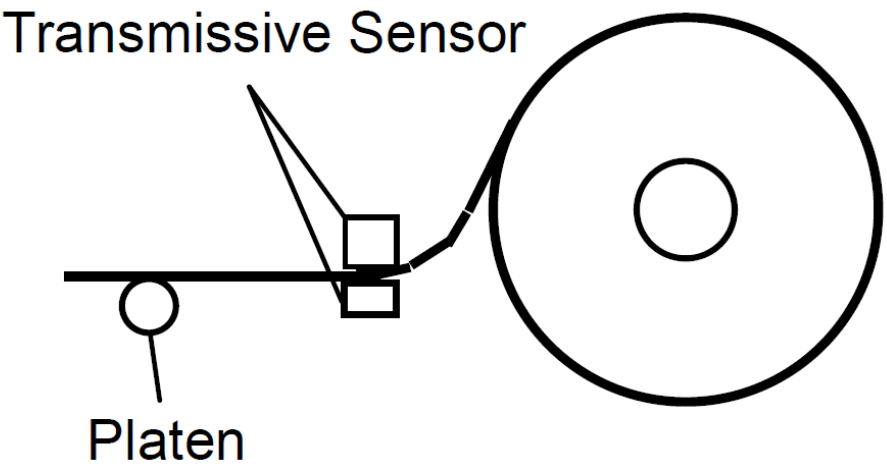
Near the end of the label, label jam may occur because the label around the paper core will curl sharply.

# 2.5 Media sensing

D4-280plus printers offer transmissive sensor. It is used for detecting specific media type.

## 2.5.1 Paper-end sensor (transmissive sensor)

The transmissive sensor is fixed and placed near the center of the printhead.




Make sure that the print side faces up. Cut the leading edge of the media straight with scissors.

# 3. Printer operation

This chapter provides information about printer operation.

## 3.1 Media Sensor Calibration

To make sure the printer is operating properly before connecting it to a computer, perform a media
calibration and print a self-test/configuration label. The printer is provided with a transmissive sensor. Please follow the steps below.

1. After making sure the media is loaded correctly and the printer cover is closed properly, turn the printer switch to the **OFF** position.
2. Press and hold the **FEED** button and turn the printer switch to the **ON** position.
3. The two LED lamps show amber color for a few seconds, and after a short period, they turn green, and the printer enters the system mode. When LED2 turns red and LED1 turns green, release the **FEED** button immediately.
4. Press the **FEED** button and the configuration page will be printed.
5. Press the **FEED** button again to make the printer return to normal mode. Alternatively, power off the printer and then on again to make the printer return to normal mode.

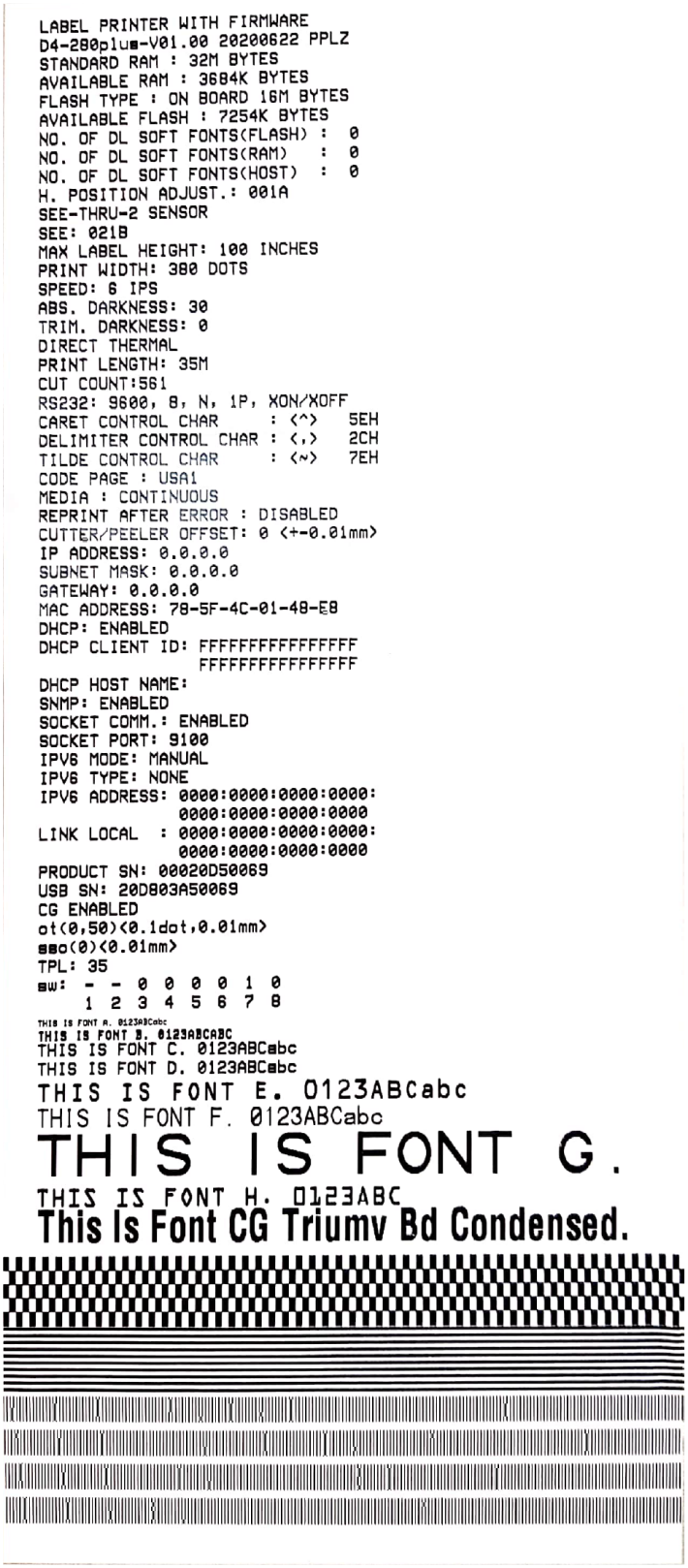
## 3.2 Self test

The printer can run a self test to print a configuration label, which helps you understand current settings of the printer.

1. Turn off the printer.
2. Press and hold the **FEED** button, and turn on the printer.
3. Both status lights glow solid amber for a few seconds. Next, they turn to green shortly, and then turn to other colors. When LED 2 turns to green and LED 1 turns to amber, release the **FEED** button.
4. Press the **FEED** button to print a configuration label.

5. Press the **FEED** button again to make the printer go back to the normal mode. Alternatively, power off the printer and then power it on to make the printer go back to the normal mode.

Your configuration label should look like this:



**1. Version Information (*D4-280plus-V01.00 20200622*)**

The firmware version and its build date.

**2. Standard RAM**

Display SDRAM size.

**3. Available RAM**

RAM is able to be used.

**4. Flash Type**

The flash memory type and size.

**5. Available Flash**

Flash is able to be used.

**6. No of DL soft fonts (FLASH)**

The number of fonts is downloaded in Flash.

**7. No of DL soft fonts (RAM)**

The number of fonts is downloaded in RAM.

**8. No of DL soft fonts (HOST)**

The number of fonts is downloaded in USB HOST.

**9. H. Position Adjust**

Move the print position horizontally.

**10. Sensor Type (*SEE-THRU-2 SENSOR*)**

Two see-thru sensors

**11. Max Label Height**

The max label length you can print at a time. For 200 dpi models, it is 100 inches; for 300 dpi models, it is 50 inches.

**12. Print Width**

Display the print width in dots.

**13. Speed**

Printing speed unit is inch per second (ips).

**14. Darkness**

Display the current darkness.

**15. Print Method**

It is direct thermal printing.

**16. Print Length**

Display total print length.

**17. Cut Count**

It counts the times the cutter cuts.

**18. RS232 Protocol**

It lists RS-232C settings in the following order: baud rate, data length, parity check, stop bit and flow control.

**19. Code page**

The character set table.

**20. Media**

The media type in use.

**21. Cutter/Peeler Offset**

Move the cutting line or the peeling position forward or backward. The value in the angle brackets is the offset unit.

**22. IP Address**

Display printer current IP address in. The default value is “192.168.1.1”.

**23. Subnet Mask**

Display printer subnet mask. The default value is “255.255.255.0.”

**24. Gateway**

Display printer gateway. The default value is “0.0.0.0.”

**25. MAC Address**

The unique address assigned to the printer that connects to the internet.

**26. DHCP**

When DHCP is enabled, it assigns a dynamic IP address to the printer automatically.

**27. DHCP Client ID**

It is an arbitrary value sent to the DHCP server to reserve an IP address for the printer.

**28. DHCP Host Name**

It is the name of a DHCP client. The host name allows up to 32 alphanumeric characters.

**29. SNMP**

When it is enabled, the host gets or sets parameters registered as SNMP entities.

**30. Socket Communication**

When it is enabled, the host communicates with the printer via the socket.

**31. Socket Port**

Display printer port number.

**32. IPv6 Mode**

It determines how you get the IPv6 address of your printer. There are three modes: MANUAL, DHCPv6 or AUTO.

**33. IPv6 Type**

It is the IPv6 address type of your printer. There are four types: NONE, NORMAL, EUI and ANY.

**34. IPv6 Address**

Display printer current IPv6 address.

**35. Link Local**

The IPv6 address that used in a network segment. It is allocated automatically.

**36. Product SN**

Display printer serial number.

**37. USB SN**

Display printer USB host serial number.

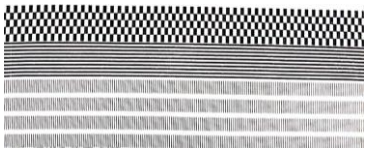
**38. CG Enabled**

Printer is able to use True Type font.

**41-49. Font Image**

You can use them as the reference to check your label font.

**50-55. TPH Test Pattern**



You can use them to check broken pins on the printhead.

# 3.3 Reset your printer

By resetting your printer, you can return your printer to the state it was in when you receive it. This can help you solve some problems caused by settings changed during the printing.

Do the following to reset your printer:

1. Turn off the printer.
2. Press and hold the **FEED** button, and turn on the printer.
3. Both status lights glow solid amber for a few seconds. Next, they turn to green shortly, and then turn to other colors. When both lights turn to red, release the **FEED** button immediately.
4. Press and hold the **FEED** button for 3 seconds and release it. Both status lights blink red three times, and turn to solid amber for a few seconds. After the printer is reset, LED 2 goes out while LED 1 turns to solid green.

**Important** In step 4, if you do not hold the **FEED** button long enough, LED 2 will blink amber three times while LED 1 goes out. It means the printer is not reset.

# 3.4 Communications

## 3.4.1 Interfaces and Requirements

This printer comes with USB type A and type B interfaces, a nine-pin Electronics Industries Association (EIA) RS-232 serial data interface and an Ethernet module.

### ■ USB Interface Requirements

The Universal Serial Bus (USB) interface is compatible with your existing PC hardware. The USB's "plug and play" design makes installation easy. Multiple printers can share a single USB port/hub. The different usage of type A and B as below.

| | |
|---|---|
| USB type A | USB Flash drive, USB keyboard or USB Scanner. |
| USB type B | PC to set printer. |

### ■ Serial (RS-232) Port

The required cable must have a nine-pin "D" type male connector on one end, which is plugged into serial port located on the back of the printer. The other end of the cable connects to a serial port on the host computer. For technical and pin-out information, please refer to the RS-232C section in this manual.

## ■ Ethernet Module Status Indicators

The indicators with two different colors help users understand status of Ethernet:

| LED Status | Description | |
|---|---|---|
| **Both Off** | No Ethernet link detected. | |
| **Blinking** | The printer waits for printer ready.<br>It will take about few seconds to be ready. | |
| **Green** | Speed LED | On: 100 Mbps link<br>Off: 10 Mbps link |
| **Amber** | Link/Activity LED | On: link up<br>Off: link down<br>Blinking: activity |

# 3.5 Driver installation

The bundled printer driver can be applied to all applications under Windows Vista/ Windows 7/ Windows 8/ Windows 10, supporting 32-bit/ 64-bit operation systems. With this driver you can operate any popular Windows software applications including Argox Bartender UL label editing software or MS Word, etc., to print to this printer.

We strongly recommend that you use the Seagull Driver Wizard instead of the Microsoft Windows Add Printer Wizard when installing and updating your Drivers by Seagull.

(Even though the "Add Printer Wizard" is from Microsoft, it too easily performs a number of tasks incorrectly when updating existing drivers. It also badly handles the situation where a printer driver is already in use by a Windows application.)

Drivers can be downloaded from Argox website

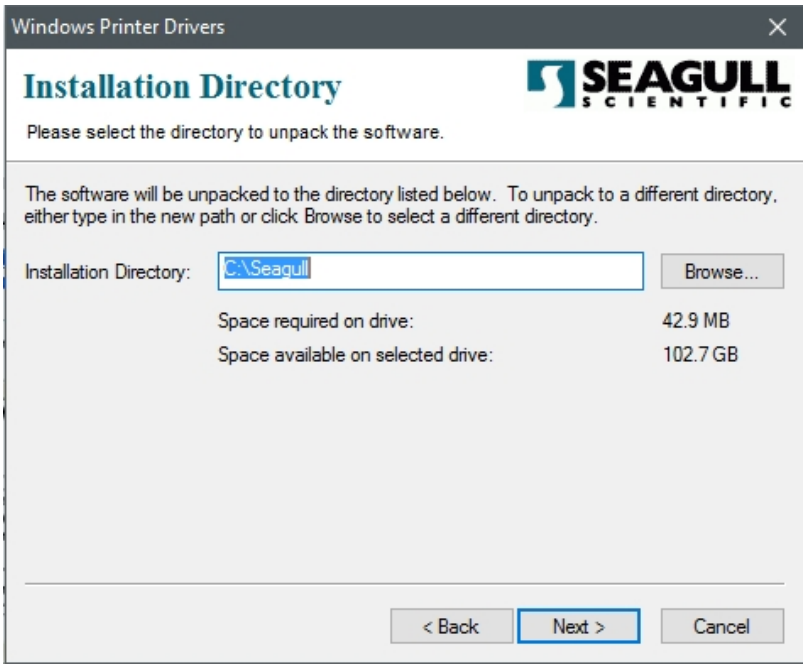
### 3.5.1 Installing a Plug and Play printer driver (for USB only)

1. Turn off the printer. Plug the power cable into the power socket on the wall, and then connect the other end of the cable to printer's power socket. Connect the USB cable to the USB port on the printer and on the PC.

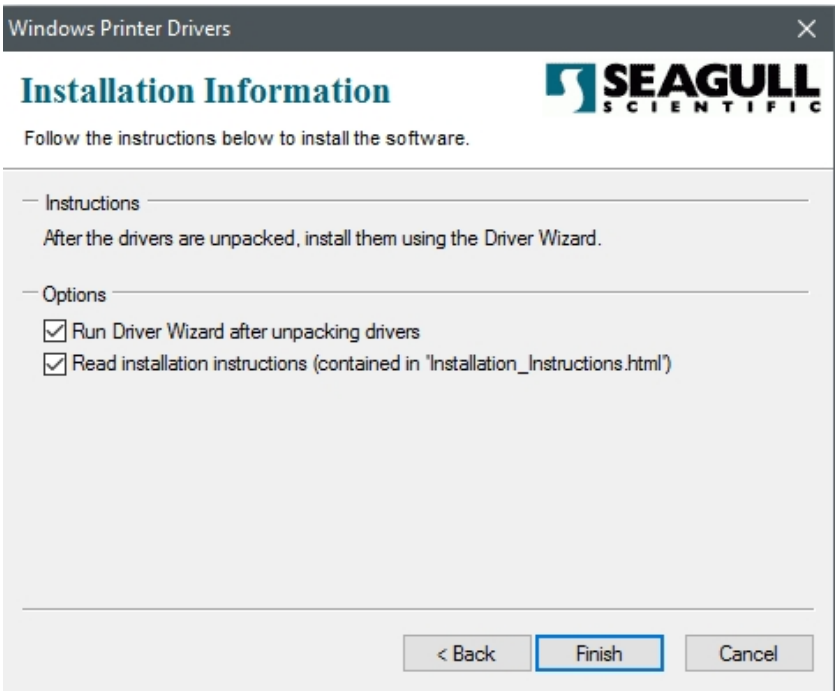
2. Turn on the printer. If the printer supports Plug-and-Play and you have successfully connected it using a USB cable, then the Windows Add Hardware Wizard will automatically detect the printer and display a dialog that allows you to install a driver. Click Cancel and do not install the driver using this wizard.

3. Run the driver from Argox website. On the prompt, Windows Printer Driver, select “I accept…” and click "Next".

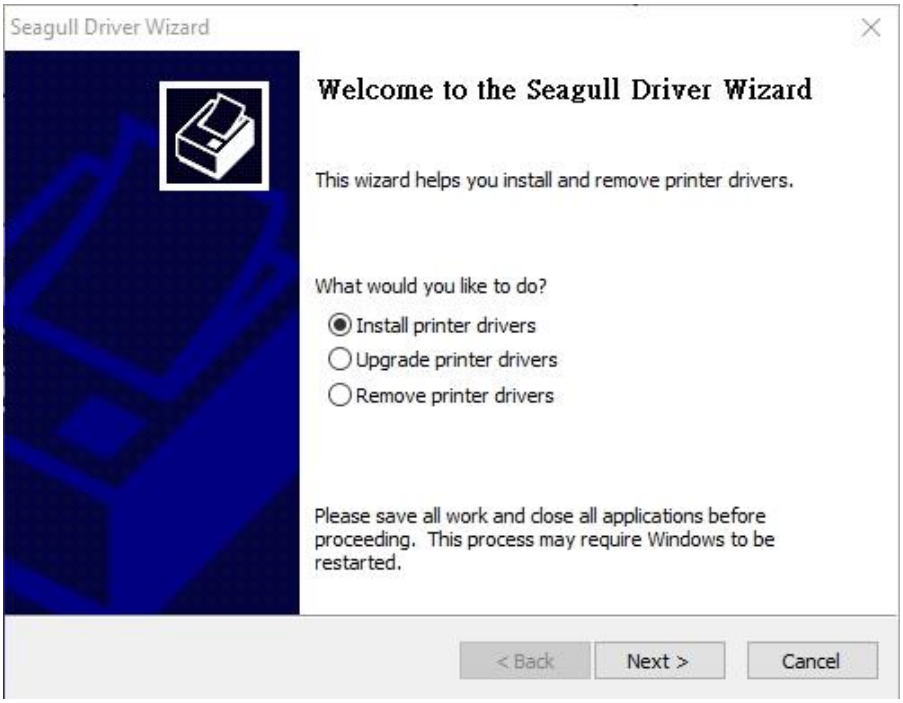
4. Assign the directory to keep Seagull driver, (for example: C:\Seagull) and click "Next".



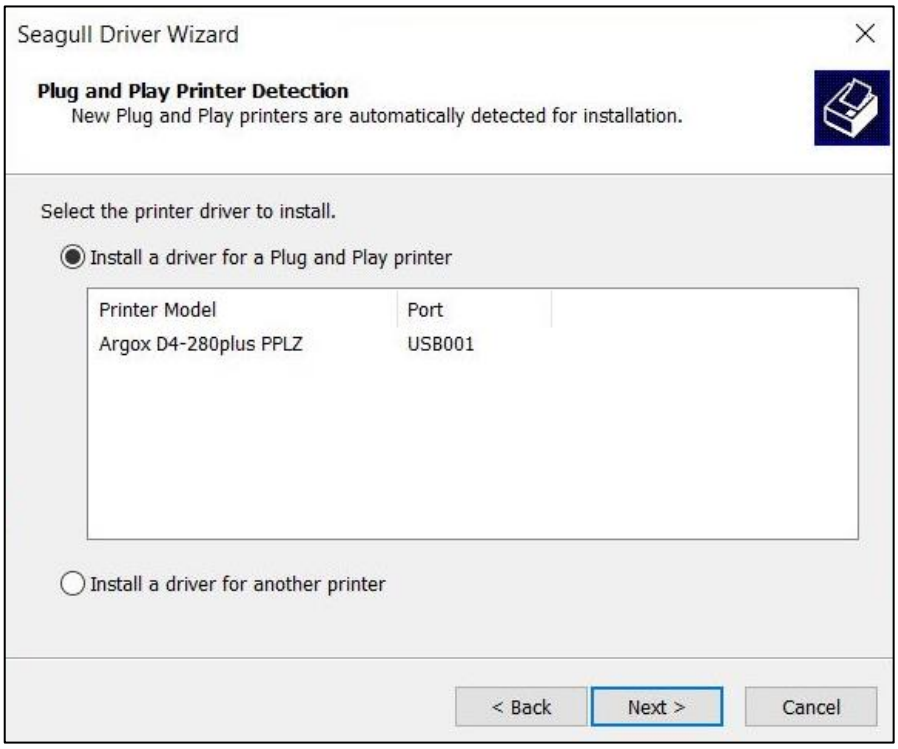

5. Click "Finish".



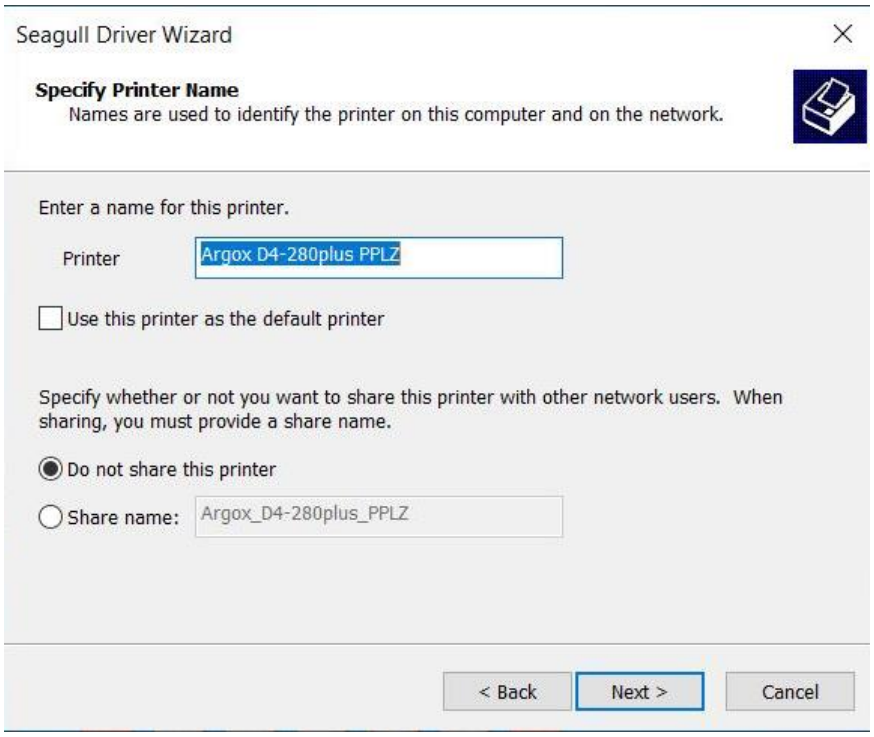
6. Select Install printer drivers and Click "Next"



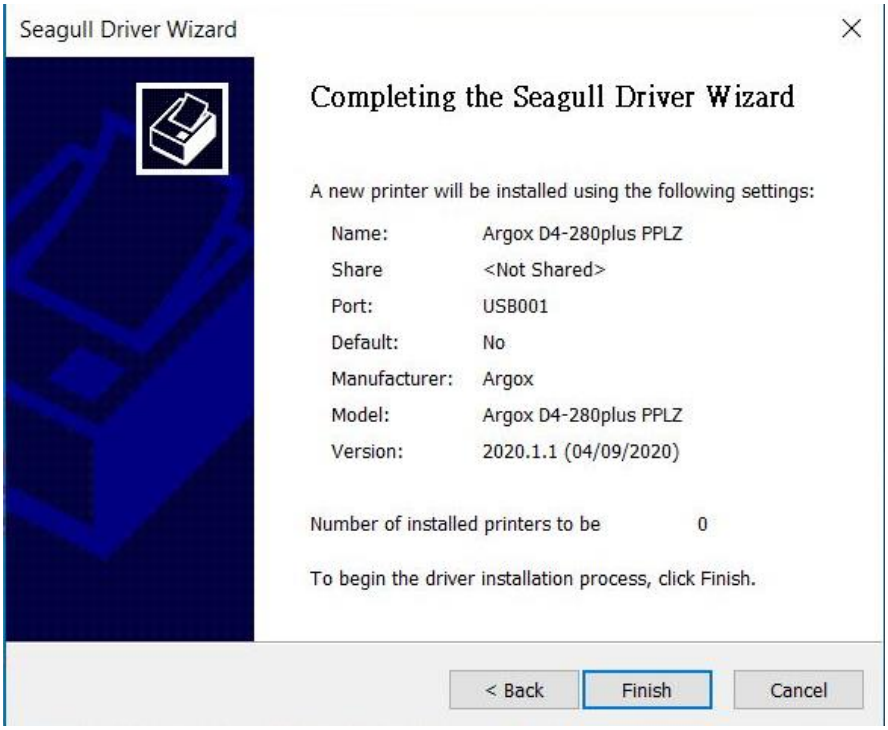

7. On the Seagull Driver Wizard prompt, select the first radio button to “Install a driver for a Plug and Play printer” Then click “Next.”



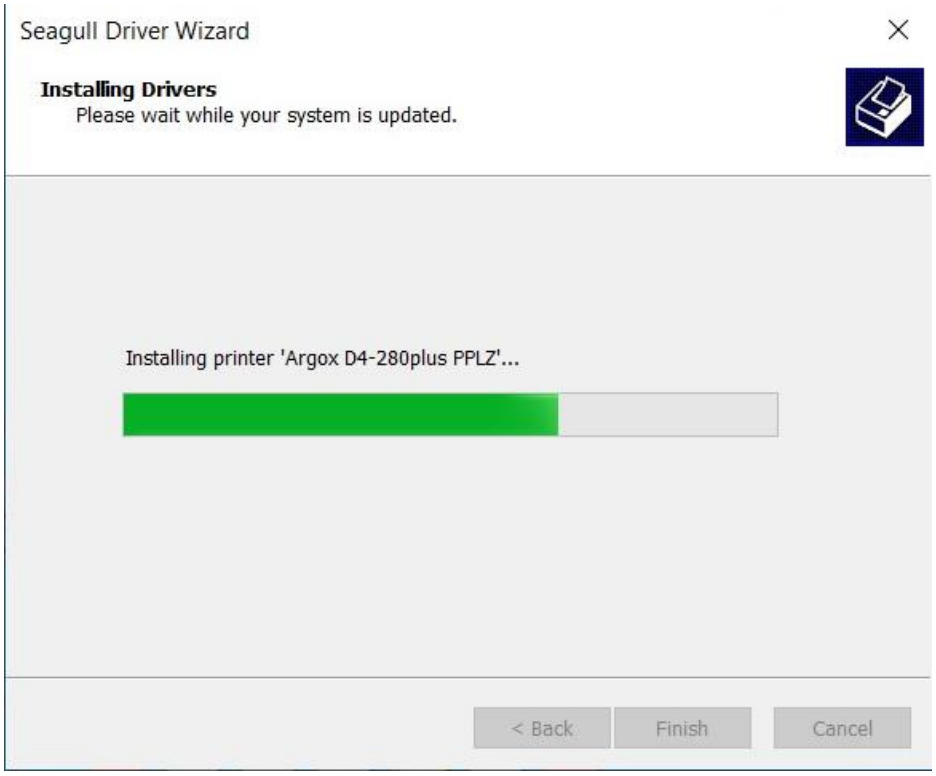
8. Enter Printer name (i.e. Argox D4-280plus PPLZ) and select "do not share this printer", and click "Next"



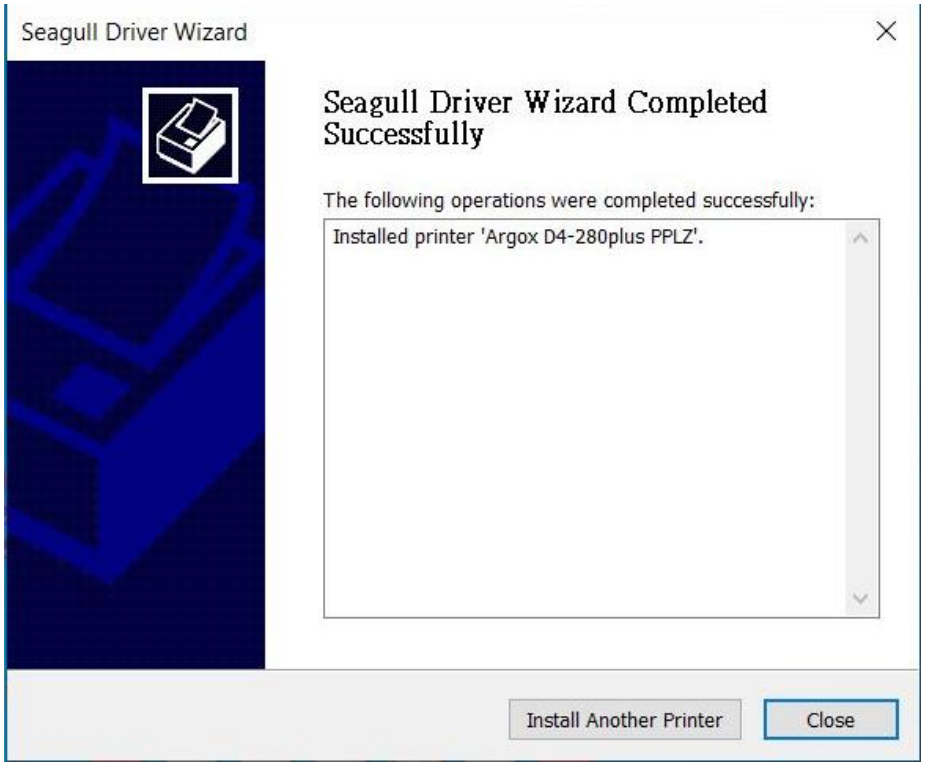

9. Check all the data on the showing screen, if it is correct, click "Finish".



10. After the related files have been copied to your system, click "Finish".



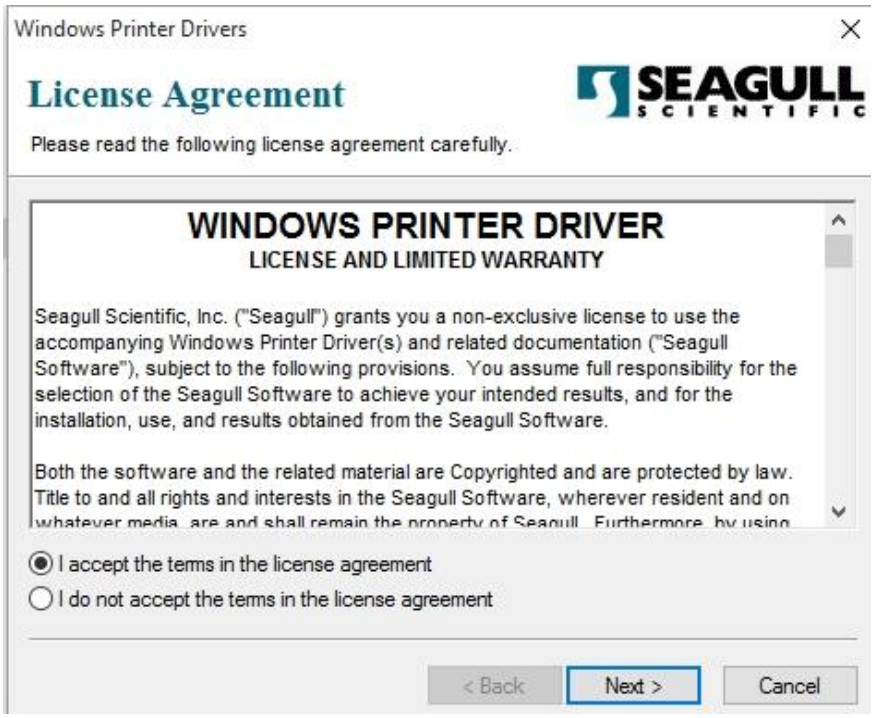

11. After driver installation is complete, click "Close". The driver should now be installed.



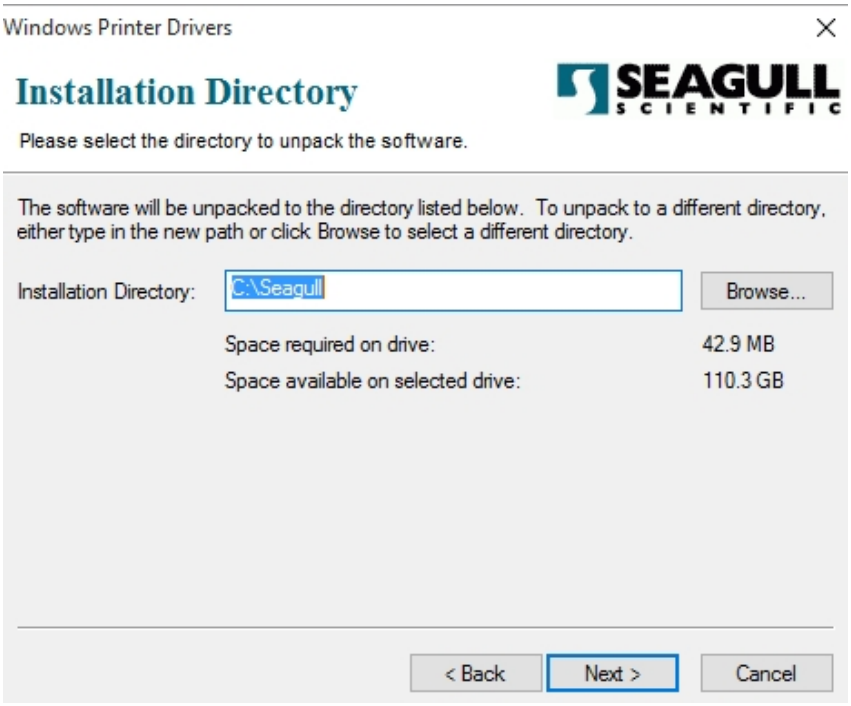
### 3.5.2 Installing a Printer Driver (for other interfaces except USB)

1. Turn off the printer. Plug the power cable into the power socket on the wall, and then connect the other end of the cable to printer's power socket. Connect the Parallel cable, Serial cable, or Ethernet cable to the proper port on the printer and on your computer for installing a printer driver for other interfaces except USB.

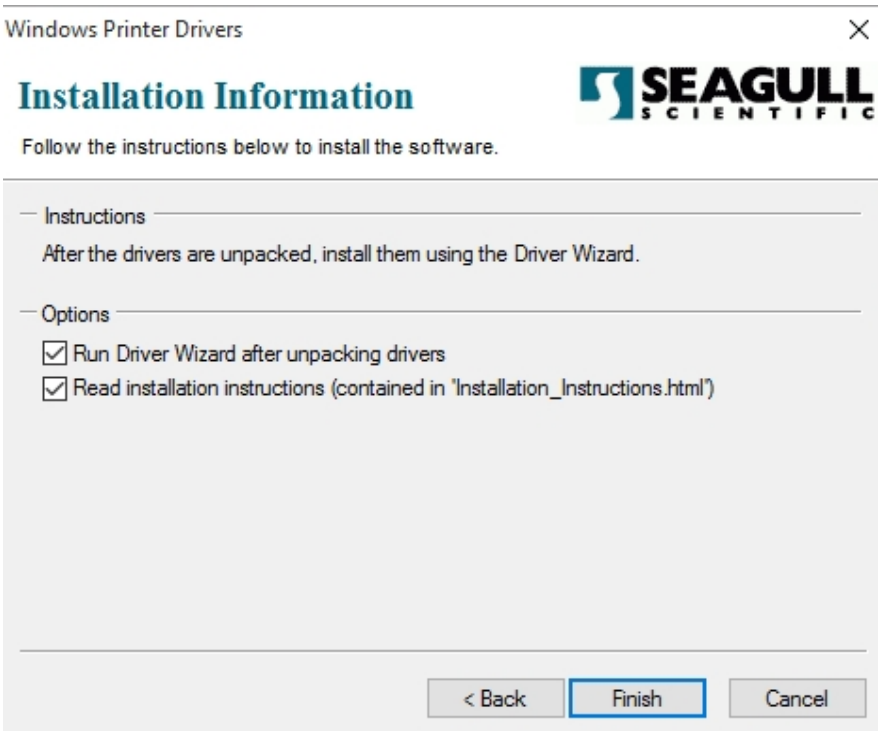
2. Run the driver from Argox website. On the prompt, Windows Printer Driver, select “I accept…”and click "Next".



3. Assign the directory to keep Seagull driver, (for example: C:\Seagull) and click "Next".

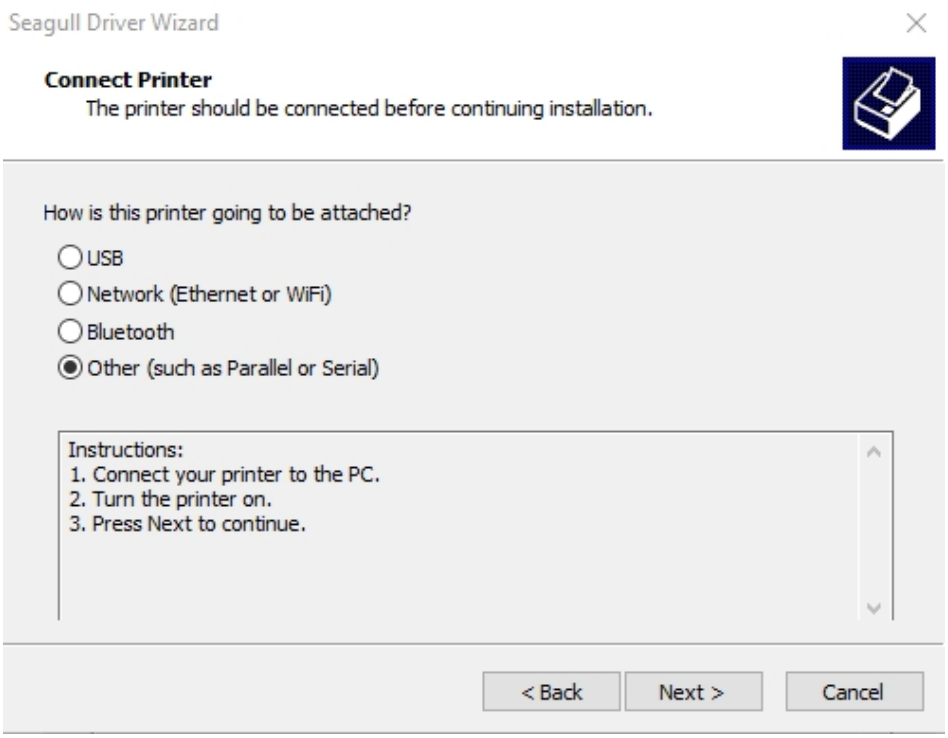



4. Click "Finish".

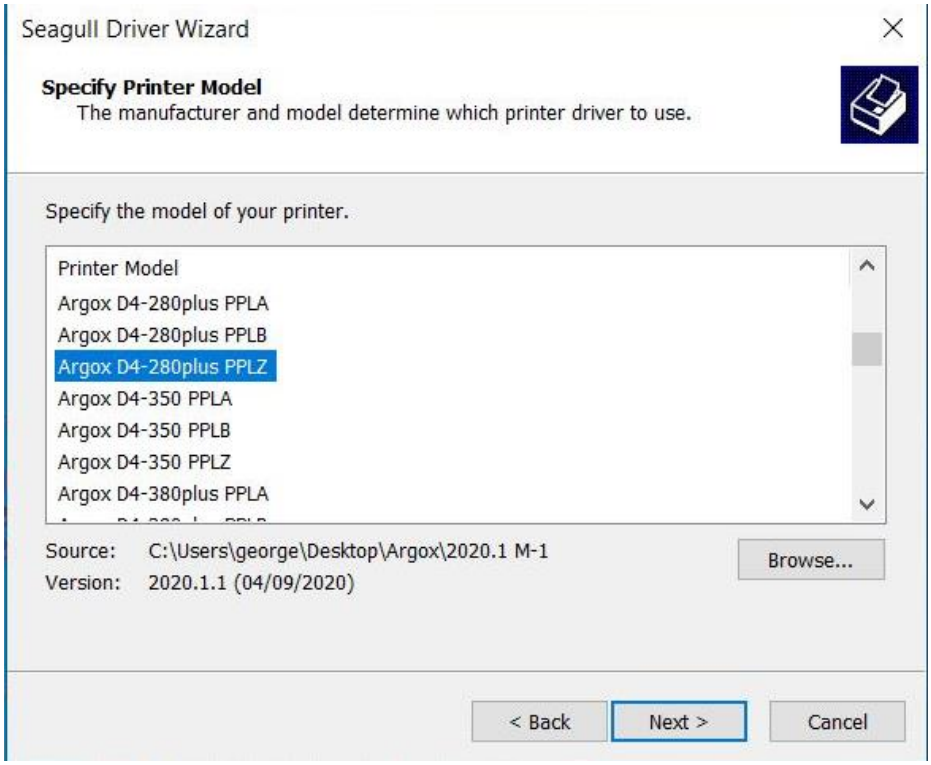


5. Select Install printer drivers and Click "Next"

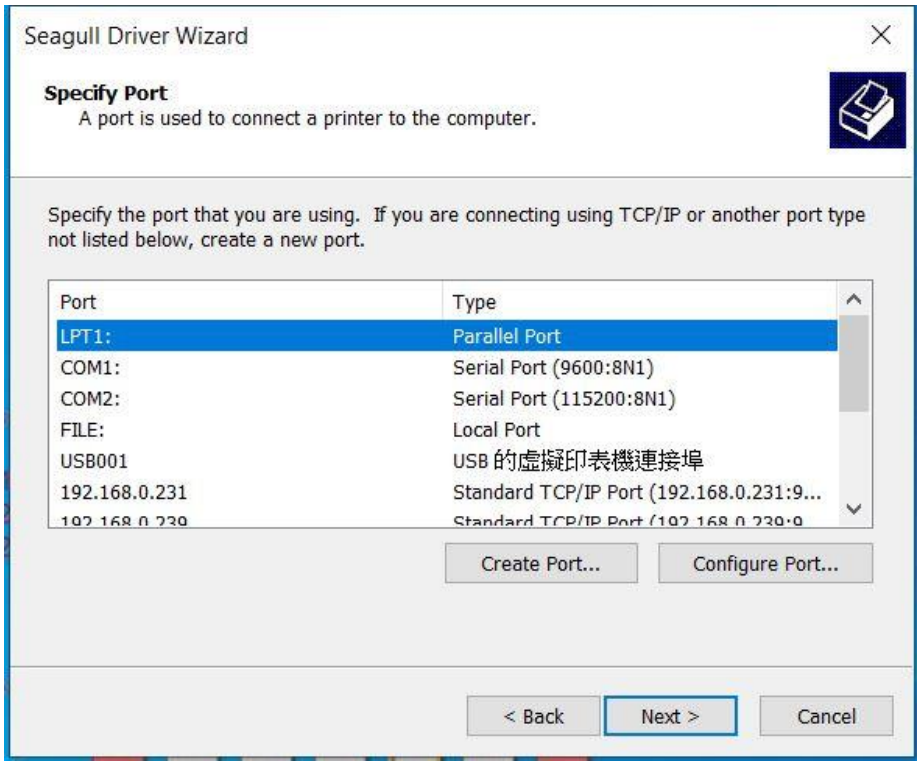
6. Make sure printer is connected to PC, select “Other” and click “Next”:



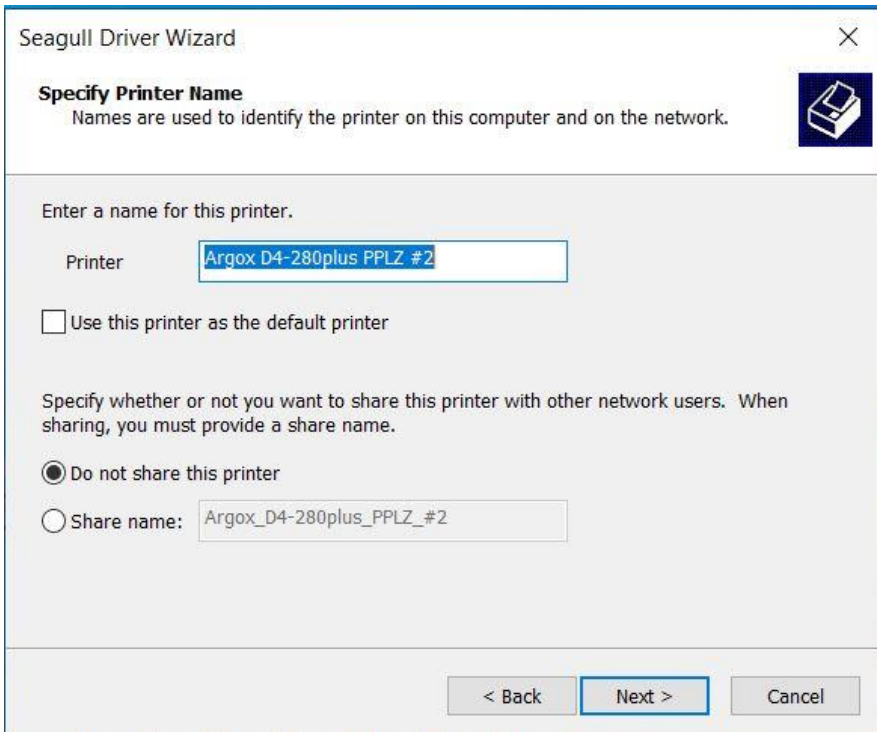
7. Select model & emulation - the following examples are based on model D4-280plus PPLZ:



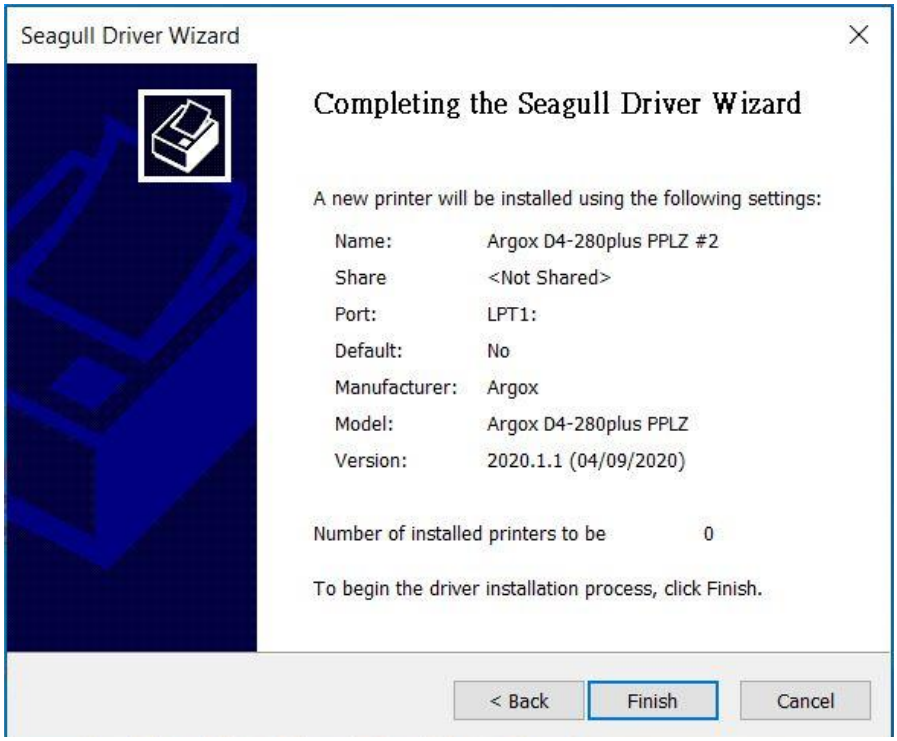

8. Select the port of the printer and click "Next".



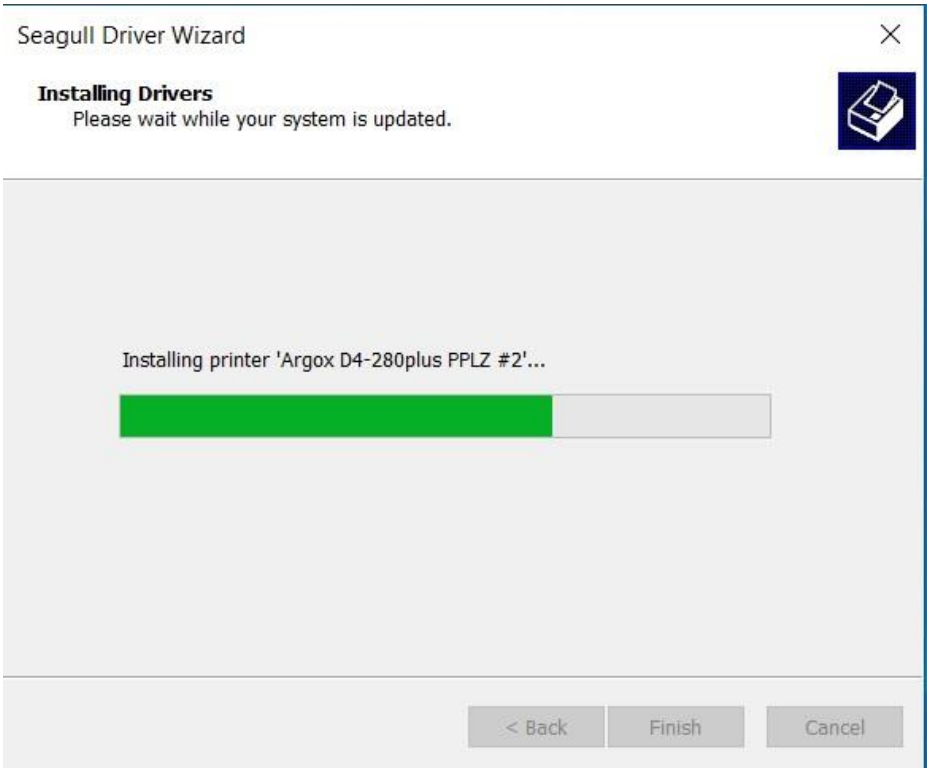
9. Enter Printer name (i.e. Argox D4-280plus PPLZ) and select "do not share this printer", and click "Next".



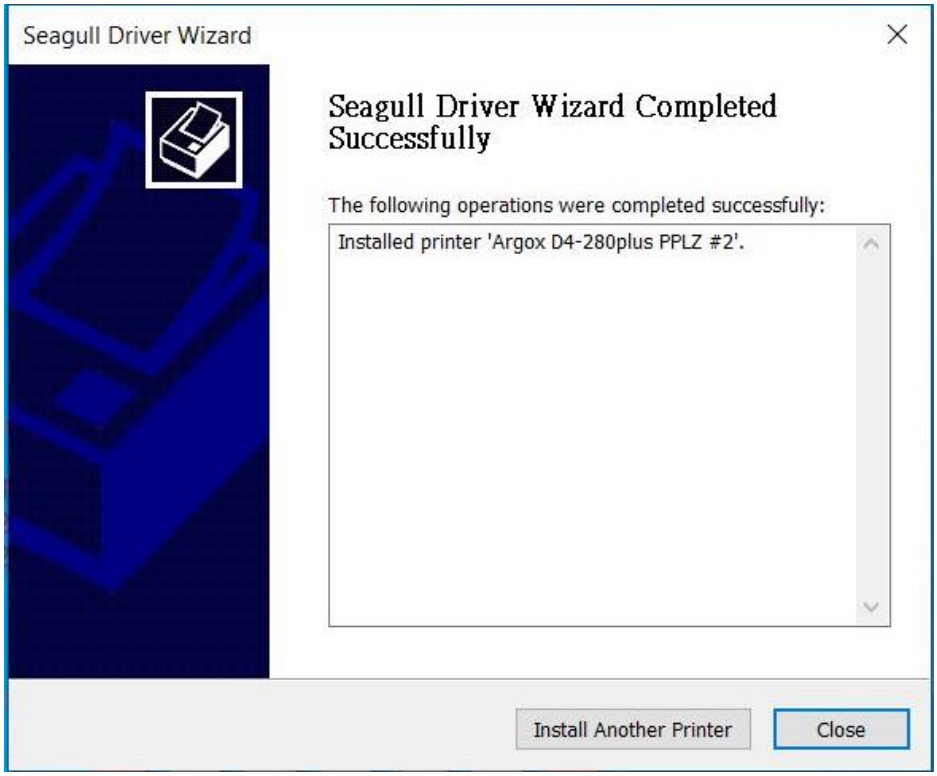

10. Check all the data on the showing screen, if it is correct, click "Finish".



11. After the related files have been copied to your system, click "Finish".




12. After driver installation is complete, click "Close". The driver should now be installed.



# 4. Configuring Your LAN Printer by Web Setting Tool

Before doing settings for your printer, be sure that you have a LAN cable. The cable is connected to the LAN connector of your printer. The LAN connector is an 8-PIN RJ45 type modular connector. Please use the LAN cable of CAT 5 of a proper length to connect the LAN connector on the printer to a LAN hub as appropriate.

The default static IP address of the printer is 0.0.0.0 and the default listen port is 9100. For the first time, to configure your printer through the web setting tool, you must still follow the step-by-step instructions below.

## 4.1 Attaching the power cord

1. Make sure the printer power switch is set to the **OFF** position.
2. Insert the power supply's connector into the printer power jack.
3. Insert the AC power cord into the power supply.
   **Important:** ***Use only the power supply listed in the user instructions.***
4. Plug the other end of the AC power cord into the wall socket.

***Do not plug the AC power cord with wet hands or operate the printer and the power supply in an area where they may get wet. Serious injury may result from these actions!***

## 4.2 Connecting your LAN printer to a LAN hub

Use a LAN cable of CAT 5 of a proper length to connect the LAN connector on the printer to a LAN hub to which your desktop or laptop PC as a host terminal is also connected.

# 4.3 Getting the IP address of your LAN printer

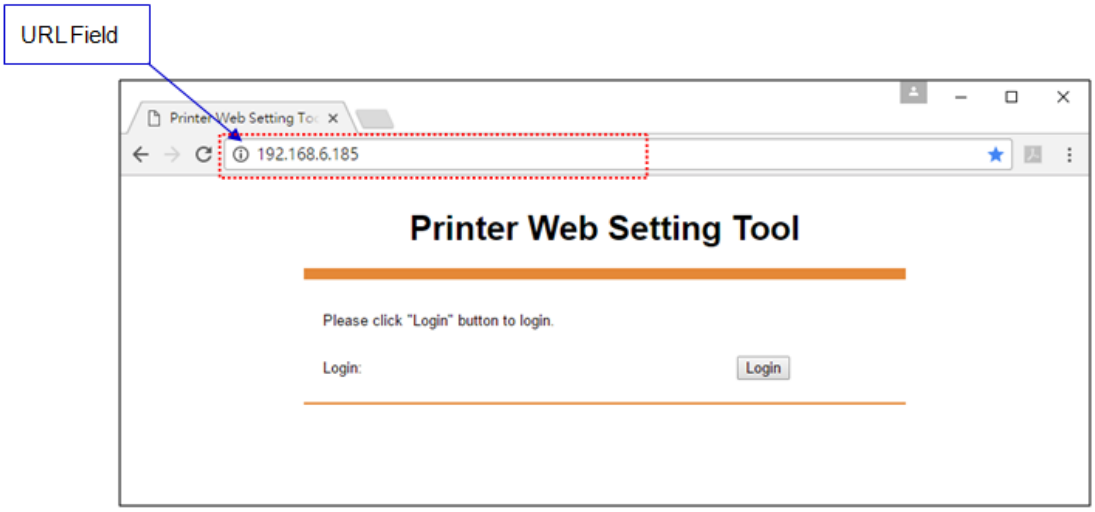
You can have the printer run a self test to print a configuration label, which helps you get the IP address of your printer connected to the LAN hub.

1. Turn off the printer.
2. Press and hold the **FEED** button, and turn on the printer.
3. Both status lights glow solid amber for a few seconds. Next, they turn to green shortly, and then turn to other colors. When LED 2 turns to green and LED 1 turns to amber, release the **FEED** button.
4. Press the **FEED** button to print a configuration label.
5. Get the IP address of the printer from the printed configuration label.

# 4.4 Logging in to the web setting tool

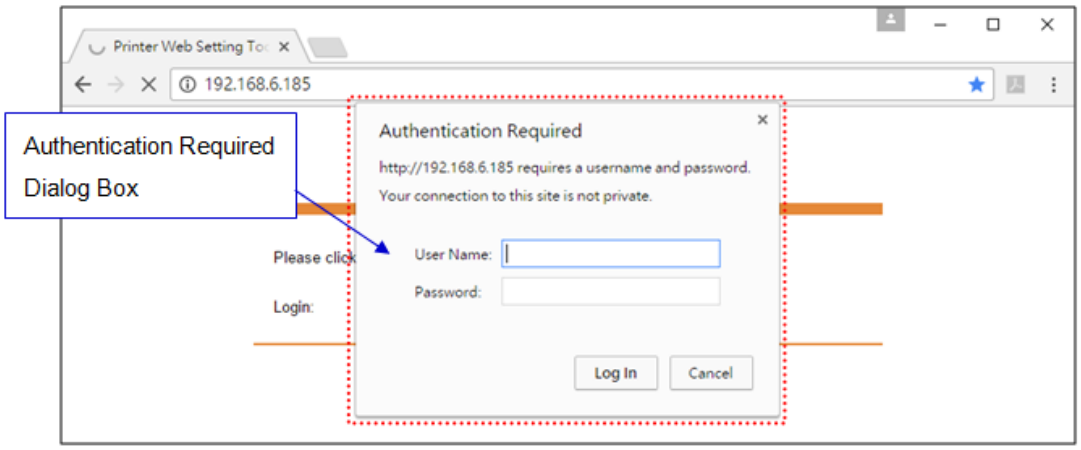
The Web Setting Tool is a build-in setting tool in firmware for ARGOX serial printers. User can connect to the supported ARGOX serial printers with browsers to get or set the printer settings, update firmware, download font, etc.

After obtaining the IP address of the LAN printer from the printed configuration label, you can connect to the printer with the supported browsers by input the IP address of the printer, *for example, 192.168.6.185*, in the URL field and connect to it.



When the connection is successful, the Login page will be displayed. Input the user name and password to log in to the web setting tool. The default user name and the default password are given below:

Default user name: admin
Default password: admin




The default password can be changed in the "Device Setting \ Change Login Password" webpage.

This web setting tool can be used to manage multiple label printers in the same local area network segment under the Windows operating system as long as there is no conflicting IP address in the network. You can also check each of the MAC addresses listed in this tool against the MAC address label you can find on each of the printers.

The label printer that is connected through TCP/IP in the way like a directly connected local printer can be used with a random PC connected in the same local area network segment. So, through the tool, all commands applicable to the LAN mode can work on the printer in the same way, as the printer must be configured upon the TCP/IP communication protocol with the IP address of the printer.

When doing settings through a tablet PC or Smart Phone for the printer working in infra mode, please set the same network segment of the host terminal to that of the printer, for example, 192.168.6.XXX (1~254). The Wi-Fi mode for the printer is infra mode that can be searched by the wireless device manager of the host terminal.

# 5. Maintenance

This chapter describes routine cleaning procedure.

## 5.1 Cleaning

To maintain print quality and extend the life of the printer, you need to service the printer regularly. It is strongly recommended that the printer be serviced each time a new paper roll is replaced and at the end of the day.

**Caution**

Always turn off the printer before cleaning. Do not allow any hard objects to touch the print head or platen, as this may cause damage to them. Do not use any volatile solvents including thinner and benzene, as this may cause discoloration of the cover, print failure, or breakdown of the printer. Do not touch the print head element with bare hands, as the print head element may be easily damaged.

### 5.1.1 Printhead

It is essential to keep printhead clean if you want the best print quality. We strongly recommend that you clean the printhead when you load a new media roll. If the printer is operated in critical environment, or the print quality declines, you need to clean the printhead more frequently.

Keep in mind these things before you clean:

- Keep the water away in case of corrosion on heating elements.
- If you just finish printing, wait until the printhead cools down.
- Do not touch the printhead with bare hands or hard objects.

Cleaning steps:

1. Prepare a thermal head cleaner.
2. Gently clean the printhead in one direction. That is, clean it only from left to right or vice versa.

**Important** Printhead warranty becomes void if printhead's serial number is removed, altered, defected, or made illegible, under every circumstance.

## 5.1.2 Media housing

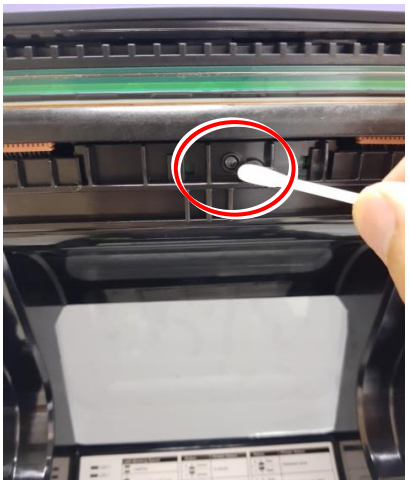
Use a soft cloth to clean the dust, dirt or debris built up on the **Media Roll Holders**, **Media Guides** and media path.

1. Moisten a soft cloth with ethyl alcohol.
2. Wipe the **Media Roll Holders** to clean dust.
3. Wipe the **Media Guides** to clean dust and dirt.
4. Wipe the media path to clean paper debris.

## 5.1.3 Sensor

Media sensors may not be able to detect the media correctly if it becomes dirty.

1. Moisten a soft cloth or a cotton swab with absolute ethyl alcohol.
2. Gently brush sensors to remove the dust away.
3. Use a dry cloth to clean the residue.



## 5.1.4 Platen roller

The platen roller is also important for print quality. Dirty platen roller may damage the printhead. Clean the platen roller right away if the adhesive, dirt or dust accumulates on it.

1. Moisten a soft cloth with absolute ethyl alcohol.
2. Gently wipe the platen roller to remove the dust and adhesive.

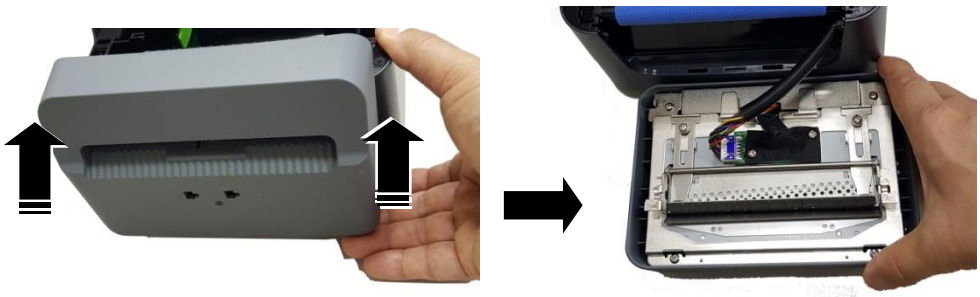
## 5.1.5 Cutter

Clean the cutter every one label roll or at the end of day.

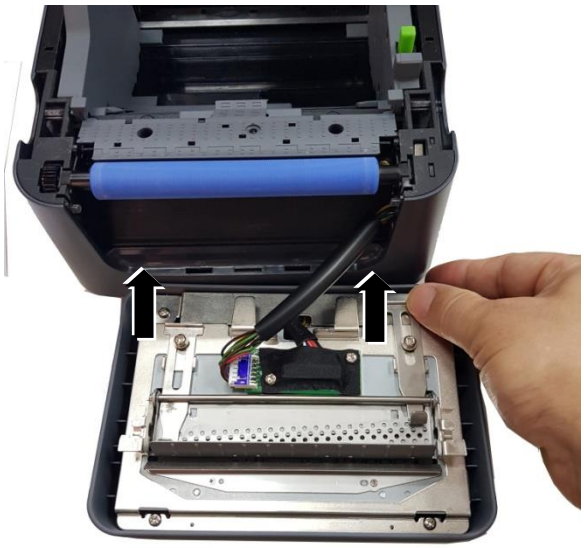
1. Turn the power off.
2. Wipe Cutter Outlet and Cutter Tray with a soft cloth moistened with absolute ethyl alcohol.

3. Detach the Cutter Tray from the Cutter Block.

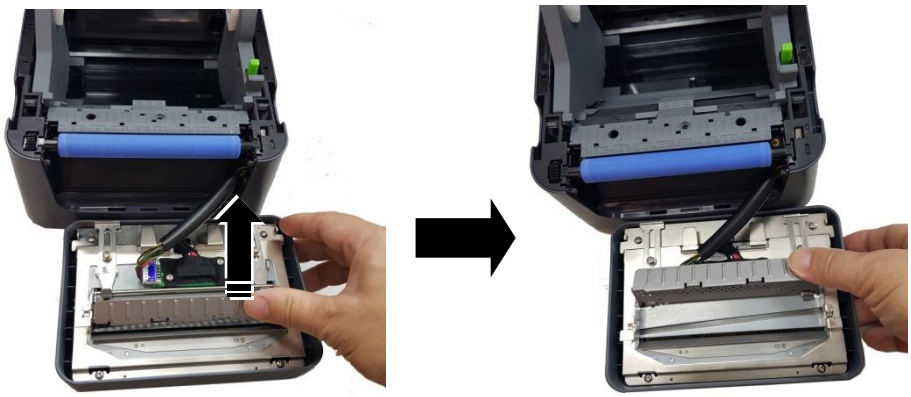
4. Then remove the Cutter Block from the printer by lifting it.



5. Slide two levers as indicated by the arrows.

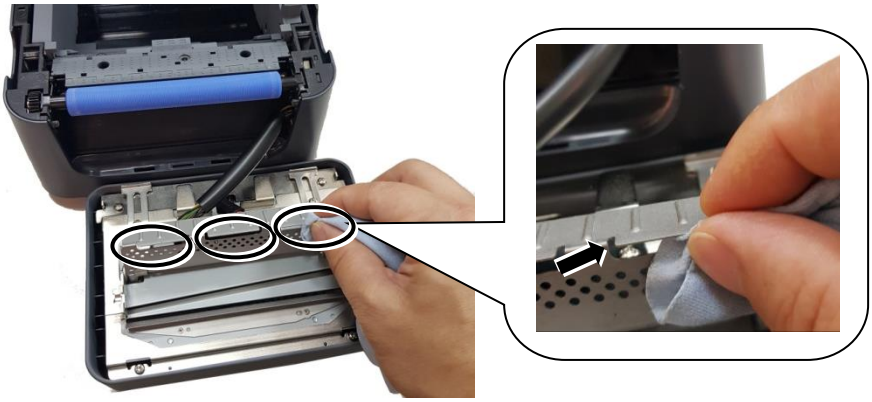


6. Open the Paper Guide for cleaning.

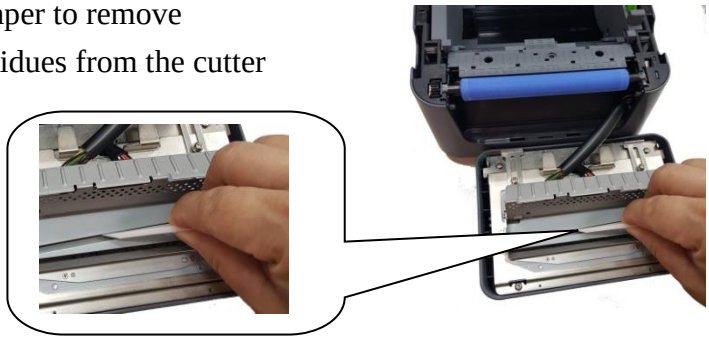


7. Wipe up and down the Paper Guide with a soft cloth moistened with absolute ethyl alcohol.

8. Wipe the residue away from the 3 protruding portions of the Paper Guide with a soft cloth moistened with absolute ethyl alcohol.

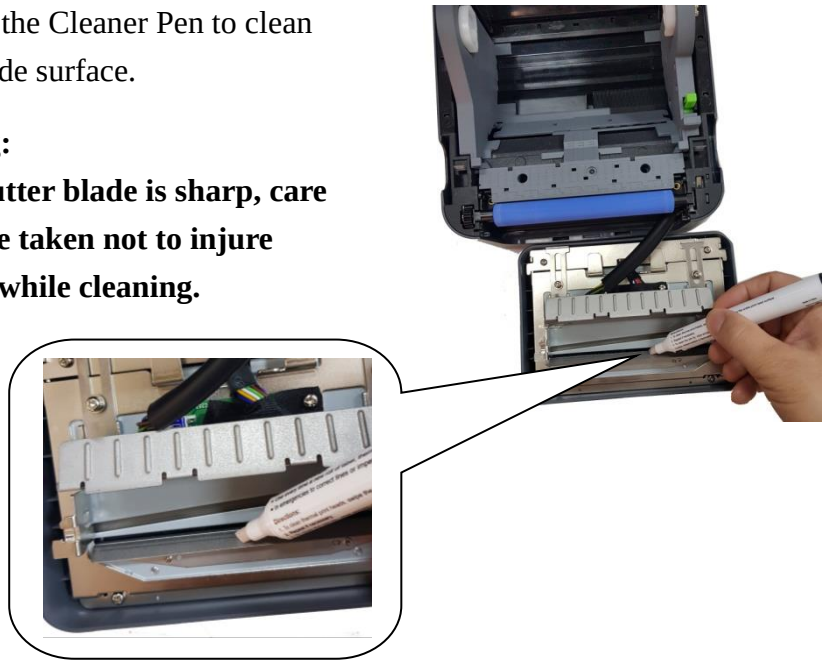


9. Use the Scraper to remove adhesive residues from the cutter blade.

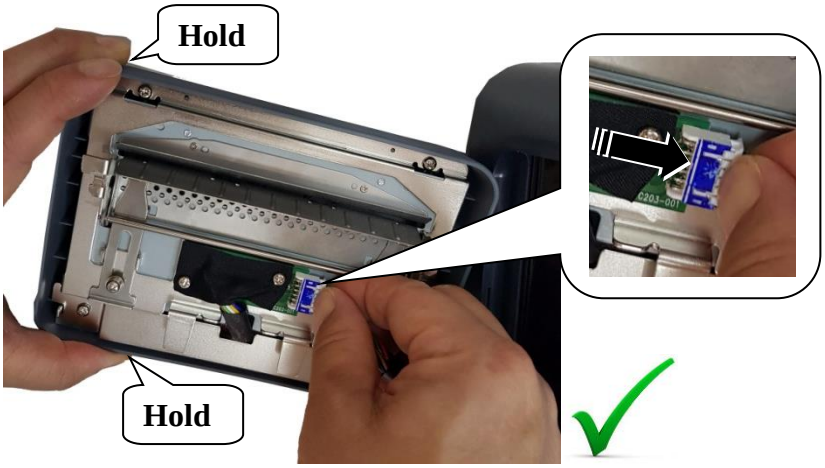


10. Use the Cleaner Pen to clean the blade surface.

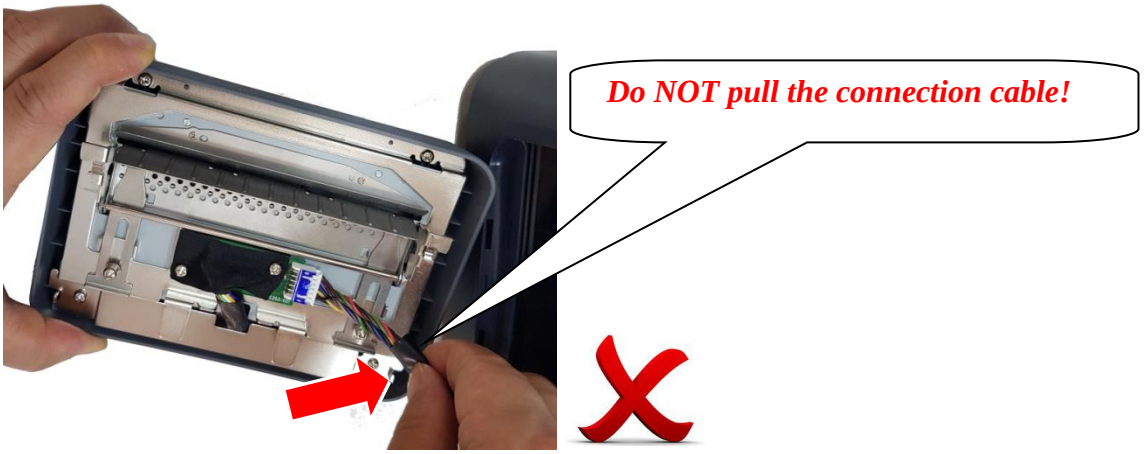
**Warning:**
**As the cutter blade is sharp, care should be taken not to injure yourself while cleaning.**



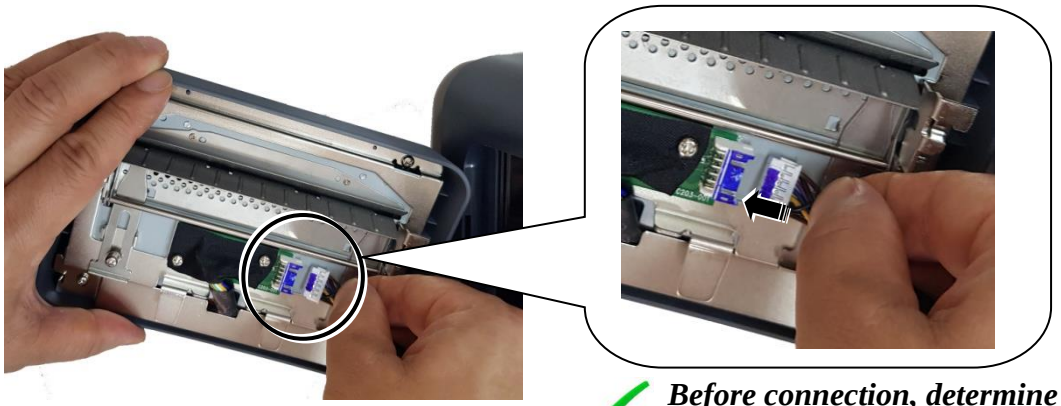
Note: To make it easier to clean the cutter module, you can remove the cutter module from the printer. To remove the cutter module, just pull the connector of connection cable of the printer out of the socket on the circuit board of the cutter module.



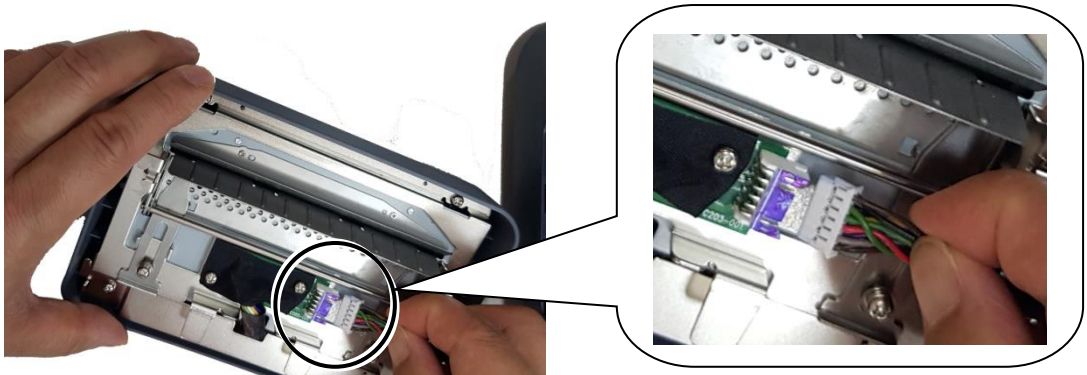

***Pull out the connector of the cable with fingers.***



After finishing the cleaning work, remember to connect the cable of the printer back to the socket on the circuit board of the cutter module.



***Before connection, determine that the blue portions of the connector and socket are on the same side.***



***It is wrong that the blue portions of the connector and socket are on the opposite side.***

# 6. Troubleshooting

This chapter provides the information about printer problems and solutions.

## 6.1 Printer issues

### The printer won't turn on

- Did you attach the AC power cord?
- Make sure the power supply's connector is inserted into the printer power jack.
- Check the power connection from the wall socket to the printer. Test the power cord and the socket with other electrical devices.
- Disconnect the printer from the wall socket, and connect it again.

### The printer turns itself off

- Turn on the printer again.
- Make sure the power supply's connector and the power cord are properly plugged.
- Make sure the power supply and the power cord are not damaged.
- Use the applicable power supply.
- If the printer keeps turning itself off, check the socket and make sure it has enough power for the printer.

### The printer does not feed the media out

- The media is not loaded correctly. See Section 2.3, "Loading Media" to reload the media.
- If there is a paper jam, clear it.

# 6.2 Media issues

### The media is out

- Load a new media roll.

### The paper is jammed

- Open the printer and clear the jammed paper.
- Make sure the paper is held properly by the **Media Guides**.

### The printing position is not correct

- Did you use the correct media type for printing?
- The media is not loaded correctly. See Section 2.3, “Loading Media” to reload the media.
- The media sensor needs to be calibrated. See Section 3.1, “Media Sensor Calibration” to calibrate the sensor.
- The media sensor is dirty. Clean the media sensor.

### Nothing is printed

- The media is not loaded correctly. See Section 2.3, “Loading Media” to reload the media.
- The print data might not be sent successfully. Make sure the interface is set correctly in the printer driver, and send the print data again.

### The print quality is poor

- The printhead is dirty. Clean the printhead.
- The platen roller is dirty. Clean the platen roller.
- Adjust the print darkness, or lower the print speed.
- The media is incompatible for the printer. Use ARGOX-approved media roll instead.

# 6.3 Other issues

### There are broken lines in the printed label

- The printhead is dirty. Clean the printhead.

### An error occurred when writing data to the USB memory

- Did you insert the USB drive?
- Make sure the USB drive is plugged tightly into the port.
- The USB drive might be broken. Replace it with another one.

### The printer is unable to save files due to insufficient USB memory

- Delete the files on your USB drive to free some space, or replace your USB drive with an empty one.

### The printhead temperature is extremely high

- The printhead temperature is controlled by the printer. If it is extremely high, the printer will stop printing automatically, until the printhead is cool down. After that, the printer will resume printing automatically, if there is any unfinished print job.

### The printhead is broken

- Contact your local dealer for assistance.

# 7. Specifications

This chapter provides specifications for the printer. Specifications are subject to change without notice.

## 7.1 Printer

| Model | D4-280plus |
|---|---|
| **Print method** | Direct Thermal |
| **Resolution** | 203 dpi (8 dots/mm) |
| **Media Alignment** | Centered |
| **Operation Mode** | Cutter mode |
| **Sensor** | Paper-End Sensor (Transmissive Sensor), Head Open Sensor, and Taken-off Sensor |
| **Print Speed** | 2, 3, 4, 5, 6 inches/sec<br>(50.8, 76.2, 101.6, 127, 152.4 mm/sec) |
| **Print Darkness** | Darkness level – PPLZ: SD 0 ~ 30<br>Default – PPLZ: SD 16 |
| **Printable Area** | Length: 152.4mm / Width: 25.4mm ~ 118mm (+1.0mm/-1.5mm) |
| **Print Ratio** | Average print ratio within 15 % or less<br>(whole print layout area)<br>Full width with 1 mm pitch is required |
| **Interface** | USB (Type A and Type B), RS-232C, Ethernet |
| **Optional Interface** | Wireless LAN, Bluetooth 2.1 |
| **Programming Language** | PPLA+PPLB+PPLZ |
| **On-Board Memory** | Standard Memory (Flash ROM): 16 MB<br>User Memory: 8 MB<br>Standard Memory (SDRAM): 32 MB |
| **External Memory** | USB: Max 16 GB |
| **Panel** | 2 LED, 1 Button |
| **LED** | 1st LED: Red and Green (Various Combinations: Amber)<br>2nd LED: Red and Green (Various Combinations: Amber) |
| **Agency Listing** | CE / FCC |

# 7.2 Media

| Properties | Description |
|---|---|
| **Media Size** | Length: 25.4mm ~ 152.4mm<br>Width: 25.4mm ~ 118mm<br>Thickness: 0.09mm +/-10 $\mu$ m<br>Max Roll Diameter Size: 127 mm (5 inches) on a 38.1mm (1.5”) ID core, 40mm ID core also available |

# 7.3 Fonts, Barcodes, and Graphics Specification

The specifications of fonts, bar codes and graphics depends on the printer emulation. The emulations PPLA, PPLB, and PPLZ are printer programming languages, through which the host can communicate with your printer.

## Printer Programming Language PPLA

| Programming Language | PPLA |
|---|---|
| Internal fonts | 9 fonts with different point size<br>6 fonts with ASD smooth font.<br>Courier font with different symbol sets. |
| Symbol sets (Code pages) | Courier font symbol set: Roman-8, ECMA-94, PC, PC-A, PC-B, Legal, and PC437 (Greek), Russian. |
| Soft fonts | Downloadable soft fonts by Print Tool |
| Font size | 1x1 to 24x24 times |
| Character rotation | 0, 90, 180, 270 degree, 4 direction rotation |
| Graphics | PCX, BMP, IMG, GDI and HEX format files |
| 1D Barcodes | Code 39, UPC-A, UPC-E, Code 128 subset A/B/C, EAN-13, EAN-8, HBIC, Codabar, Plessey, UPC2, UPC5, Code 93, Postnet, UCC/EAN-128,, UCC/EAN-128 K-MART, UCC/EAN-128 Random weight,Telepen, FIM,Interleaved 2 of 5 (Standard/with modulo 10 checksum / with human readable check digit/ with modulo 10 checksum & shipping bearer bars), GS1 Data bar (RSS) |
| 2D Barcodes | MaxiCode, PDF417, Data Matrix (ECC 200 only), QR code, Composite Codes, Aztec |

# Printer Programming Language PPLB

| Programming Language | PPLB |
|---|---|
| Internal fonts | 5 fonts with different point size |
| Symbol sets (Code pages) | 8 bits code page : 437, 850, 852, 860, 863, 865, 857, 861, 862, 855, 866, 737, 851, 869, 1252, 1250, 1251, 1253, 1254, 1255<br>7 bits code page: USA, BRITISH, GERMAN, FRENCH, DANISH, ITALIAN, SPANISH, SWEDISH and SWISS |
| Soft fonts | Downloadable soft fonts by Print Tool |
| Font size | 1x1 to 24x24 times |
| Character rotation | 0, 90, 180, 270 degree, 4 direction rotation |
| Graphics | PCX , Binary Raster, BMP and GDI |
| 1D Barcodes | Code 39, UPC-A, UPC-E, Matrix 2 of 5, UPC-Interleaved 2 of 5, Code 39 with check sum digit, Code 93, EAN-13, EAN-8 (Standard, 2 /5digit add-on), Codabar, Postnet, Code128 subset A/B/C, Code 128 UCC (shipping container code), Code 128 auto, UCC/EAN code 128 (GS1-128), Interleave 2 of 5, Interleaved 2 of 5 with check sum,Interleaved 2 of 5 with human readable check digit,German Postcode, Matrix 2 of 5, UPC Interleaved 2 of 5, EAN-13 2/5 digit add-on, UPCA 2/5 digit add-on, UPCE 2/5 digit add-on, GS1 Data bar (RSS) |
| 2D Barcodes | MaxiCode, PDF417, Data Matrix (ECC 200 only), QR code, Composite Codes, Aztec |

# Printer Programming Language PPLZ

| Programming Language | PPLZ |
|---|---|
| Internal fonts | 8 (A~H) fonts with different point size.<br>8 AGFA fonts: 7 (P~V) fonts with fixed different point size (not scalable).<br>1 (0) font with scaling point size. |
| Symbol sets (Code pages) | USA1, USA2, UK, HOLLAND, DENMARK/NORWAY, SWEDEN/FINLAND, GERMAN, FRANCE1, FRANCE2, ITALY, SPAIN, MISC, JAPAN, IBM850, Multibyte Asian Encodings, UTF-8, UTF-16 Big-Endian, UTF-16 Little-Endian, Code page 1250, 1251, ,1252, 1253, 1254 |
| Soft fonts | Downloadable soft fonts by Print Tool |
| Font size | 1x1 to 10x10 |
| Character rotation | 0, 90, 180, 270 degree, 4 direction rotation |
| Graphics | GRF, Hex and GDI |
| 1D Barcodes | Code39, UPC-A, UPC-E, Postnet, Code128 subset A/B/C, Interleave 2 of 5, Interleaved 2 of 5 with check sum, Interleaved 2 of 5 with human readable check digit, Code 93, Code 39 with check sum digit, MSI,EAN-8, Codabar, Code 11, EAN-13, Plessey, GS1 Data bar (RSS), Industrial 2 of 5, Standard 2 of 5, Logmars |
| 2D Barcodes | MaxiCode, PDF417, Data Matrix (ECC 200 only), QR code, Composite Codes, Aztec |

# 7.4 Wireless LAN (Option)

| | Properties | Wireless LAN I/F | | |
|---|---|---|---|---|
| **Hardware** | Protocol | IEEE 802.11 b/g/n | | |
| | Enabled Device | WIRELESS PRINTER | | |
| | Operating Temperature | -20°C ~ +85°C | | |
| | Destination | USA | Europe | |
| | Frequency (Center Channel) | 2412 ~ 2462 MHz | 2412 ~ 2472 MHz | |
| | Channel | 1 ~ 11 ch | 1 ~ 13 ch | |
| | Spacing | 5 MHz | | |
| | Transmission Speed/ Modulation | IEEE 802.11b | Transmission Method | Conforming to IEEE 802.11b DSSS method |
| | | | Channel | Depending on the country |
| | | | Data Transmission Speed/Modulation | 11/5.5 Mbps: CCK<br>2 Mbps: DQPSK<br>1 Mbps: DBPSK |
| | | IEEE 802.11g | Transmission Method | Conforming to IEEE 802.11g OFDM method<br>DSSS method |
| | | | Channel | Depending on the country |
| | | | Data Transmission Speed/Modulation | 54/48 Mbps: 64 QAM<br>36/24 Mbps: 16 QAM<br>18/12 Mbps: QPSK<br>9/6 Mbps: BPSK |
| | | IEEE 802.11n | Transmission Method | Conforming to IEEE802.11n OFDM method |
| | | | Channel | (US)1-11ch<br>(JP/DE)1-13ch |
| | | | Data Transmission Speed/Modulation | 20MHz : 6.5M / 7.2M / 13M / 14.4M / 19.5M / 21.7M / 26M /28.9M / 39M / 43.3M / 52M / 57.8M / 58.5M / 65M / 72.2M(Auto-sensing) |

| Properties | | | Wireless LAN I/F |
|---|---|---|---|
| | Antenna | | External antenna |
| | Aerial power | | 802.11b Max +15 dBm |
| | | | 802.11g Max +17 dBm |
| | | | 802.11n Max +17 dBm |
| **Software** | Connection mode | | Infrastructure, Adhoc |
| | Default IP Address | | 192.168.1.1 |
| | Default Subnet Mask | | 255.255.0.0 |
| | Default ESSID | | WIRELESS PRINTER |
| | Security | | IEEE 802.11i |
| | | Cryptography | WEP 128 bit, TKIP (WPA), AES (WPA2) |
| | | Authorization | Open Key (for WEP), PSK |
| | Protocol (*) | | TCP/IP, Socket, DHCP |
| | Wireless LAN Parameter Setting and Status Monitor | | Parameter Setting: Command (PC Setting Tool) |

# 7.5 Bluetooth (Optional)

| Properties | Bluetooth I/F |
|---|---|
| Standard | Bluetooth 2.1 |
| Enable Device | BT PRINTER |
| Operating Temperature | 41°F (5°C) ~ 104°F (40°C) |
| Storage Temperature | -4°F (-20°C) ~ 140°F (60°C) |
| Operating Humidity | 25 ~ 85 % Non-condensing R.H |
| Storage Humidity | 10 ~ 90 % Non-condensing R.H |
| Connection Form | Only one-to-one connection is supported. |
| Support Profile | Serial Port Profile (SPP)<br>PIN code is supported. |
| Class of Radio Transmission | CLASS 2 |
| Transmission Method | Bi-directional (Half-duplex) |
| Flow Control | Credit based flow control |
| Operating Mode | Slave Mode |
| Transmission Distance | 10 m without obstacles *2 (360 degrees) |
| SR Mode in Page/Inquiry Scanning | R1 Scan Interval 1.28 sec.<br>Scan Window 22.5 msec. |
| RF Frequency Range | 2402 ~ 2480 MHz |
| Nominal Output Power | +4 dBm (2.51 mW) MAX |
| Communications | Support BT 2.1 on Android connectivity |

## 7.6 Ethernet

| Properties | Description |
|---|---|
| **Port** | RJ-45 |
| **Speed** | 10Base-T/100Base-T (Auto Detecting) |
| **Protocol** | ARP, IP, ICMP, UDP, TCP, HTTP, DHCP, Socket, LPR, IPv4, SNMPv2 |
| **Mode** | TCP Server/Client, UDP Client |
| **Technology** | HP Auto-MDIX, Auto-Negotiation |

## 7.7 Electrical and operating environment

| Properties | Range |
|---|---|
| **Power Supply** | Voltage: AC 100 V ~ 240 V ± 10 % (full range)<br>Frequency: 50 Hz - 60 Hz ± 5 % |
| **Power Consumption** | 60W |
| **Temperature** | Operating: 5 °C ~ 35 °C<br>Storage: -20 °C ~ 60 °C |
| **Humidity** | Operating: 35 %RH ~ 75 %RH (non-condensing)<br>Storage: 10 %RH ~ 90 %RH (non-condensing) |

## 7.8 Physical dimension

| Dimension | Size and Weight |
|---|---|
| **Size** | W 183.92 ±0.5mm x D 271.16 ±0.5mm x H 166.7±0.5mm |
| **Weight** | Approx. 2.29kg ± 3% |

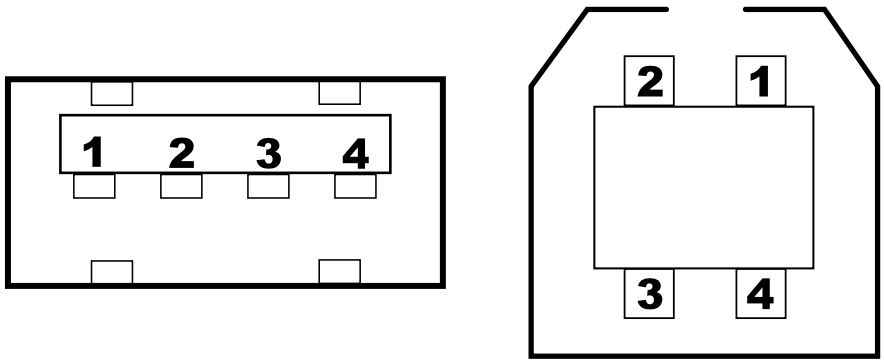
# 7.9 Interfaces

This section provides information about IO port specifications for the printer.

## 7.9.1 USB

There are two common USB connectors. Typically, type A is found on hosts and hubs; type B is found on devices and hubs. The figure below shows their pinouts.

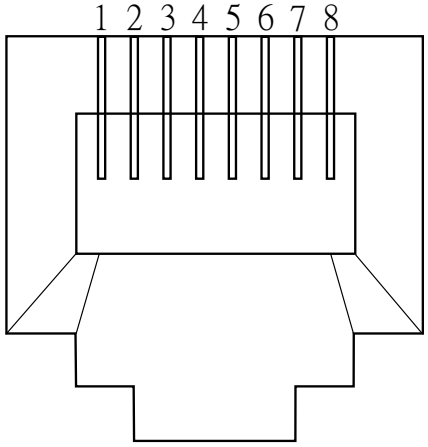
| Type A | Type B |
|---|---|




| Pin | Signal | Description |
|---|---|---|
| **1** | VBUS | +5V |
| **2** | D- | Differential data signaling pair - |
| **3** | D+ | Differential data signaling pair + |
| **4** | Ground | Ground |

## 7.9.2 Ethernet

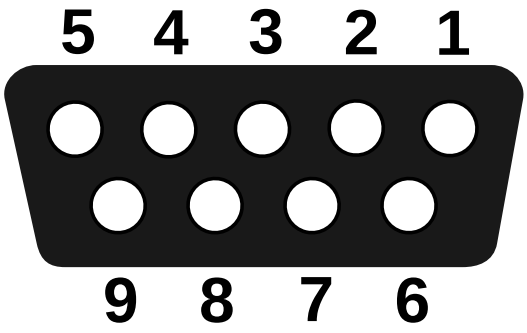
The Ethernet uses RJ-45 cable, which is 8P8C (8-Position 8-Contact). The figure below shows its pinout.




| Pin | Signal |
|---|---|
| 1 | Transmit+ |
| 2 | Transmit- |
| 3 | Receive+ |
| 4 | Reserved |
| 5 | Reserved |
| 6 | Receive- |
| 7 | Reserved |
| 8 | Reserved |

### 7.9.3 RS-232C

The RS-232C on the printer is DB9 female. It transmits data bit by bit in asynchronous start-stop mode. The figure below shows its pinout.




| Pin | Signal | Description |
|---|---|---|
| **1** | NA | No Function |
| **2** | TxD | Transmit |
| **3** | RxD | Receive |
| **4** | NA | No Function |
| **5** | GND | Ground |
| **6** | NA | No Function |
| **7** | CTS | Clear to Send |
| **8** | RTS | Request to Send |
| **9** | NC | No Connection |

| Host (DB9) | | | | Printer (DB9) | |
|---|---|---|---|---|---|
| **Signal** | **Description** | **Pin** | **Pin** | **Description** | **Signal** |
| CD | Carrier Detect | 1 | 1 | No Function | NC |
| RxD | Receive | 2 | 2 | Transmit | RxD |
| TxD | Transmit | 3 | 3 | Receive | TxD |
| DTR | Data Terminal Ready | 4 | 4 | No Function | NC |
| GND | Ground | 5 | 5 | Ground | GND |
| DSR | Data Set Ready | 6 | 6 | No Function | NC |
| RTS | Request to Send | 7 | 7 | Clear to Send | RTS |
| CTS | Clear to Send | 8 | 8 | Request to Send | CTS |
| CI | | 9 | 9 | No Function | NC |