# I4 Series Printer

# User Manual
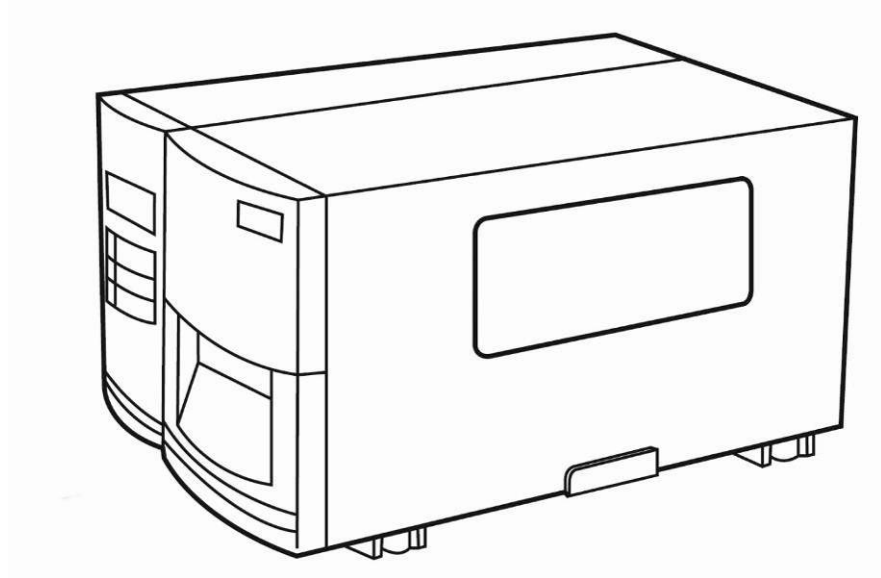
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# FCC Compliance Statement

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 in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and the receiver.

Connect the equipment into a different outlet on a different circuit.

Consult the dealer or an experience Radio/TV technician for help.

This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to insure compliance. The user is cautioned that any changes or modifications not expressly approved by Argox Information Co., Ltd. could void the user's authority to operate the equipment.

This is a Grade A product. In living environment, the product may cause interference to radio communications. In this case, the user is encouraged to try to correct the interference by effective measures.

## Caution

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

# Contents

# 1  Introduction

Thank you for purchasing an Argox I4 Series industrial barcode printer. This manual provides information about how to set up and operate your printer, load media, ribbon and solve common problems. Illustrations are provided to help you quickly become familiar with the printer.

## 1.1  Features

- **Fast Print Speed**

  Max. 8 IPS, fastest print speed in its class.

- **Communication**

  Standard: Ethernet, dual USB hosts, USB device, and RS-232.

  Option: Wi-Fi, GPIO, Parallel, and Buzzer

- **Online management**

  Web management and SNMP v2 support

- **Duel USB host function**

  Stand-alone mode of scanner/ keyboard multiple data entry devices

- **New media calibration**

  Intelli mode & Auto-feed mode & Smart mode

# 1.2  Unpacking

Make sure all of the following items are included in your package.
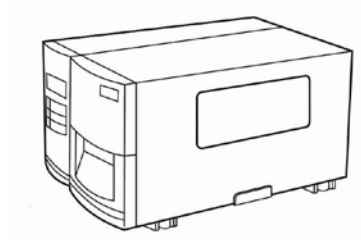
Printer
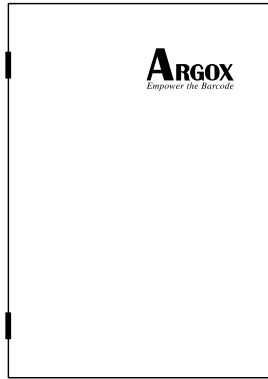
Quick Installation Guide
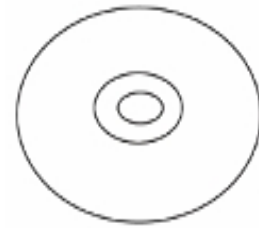
DVD
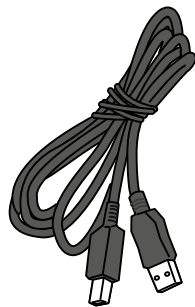
USB Cable

AC Power Cord
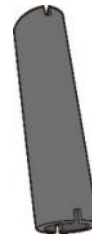
1" ID Core for Ribbon

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



Control panel

Top Access Door

Front Access Door

# 1.3.2 Back view

## Standard



Ethernet
USB Type A
USB Type B
RS232 Serial
Power switch
AC power connector

## Optional



WIFI
Parallel port
GPIO
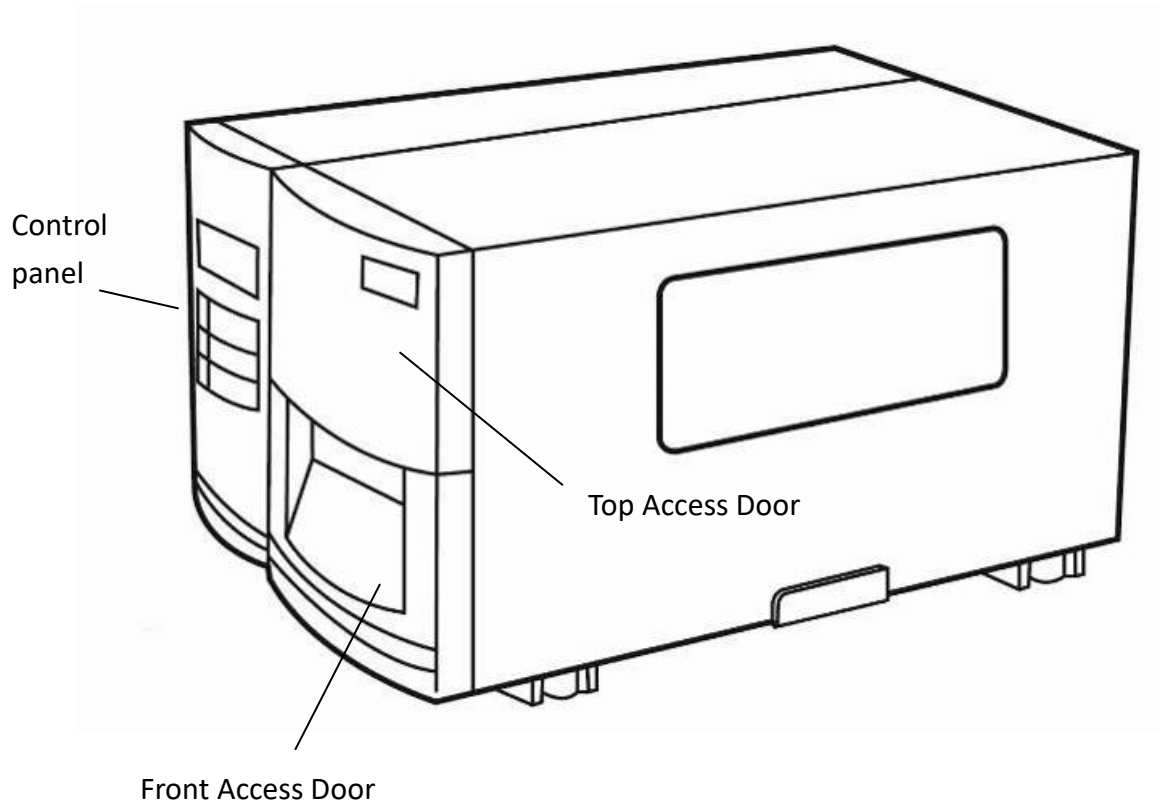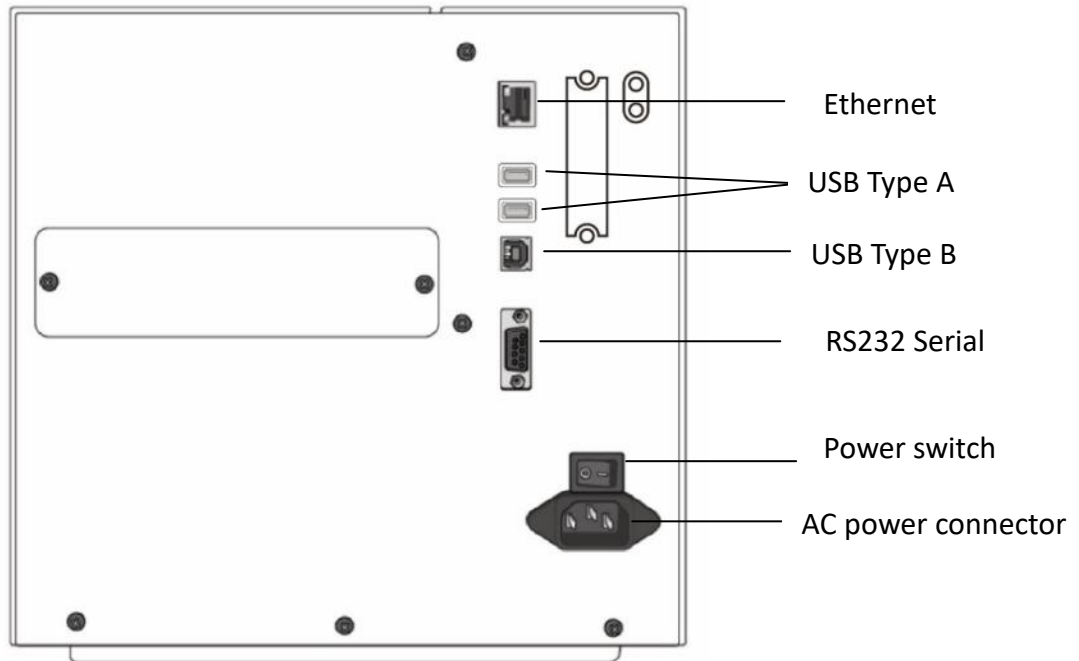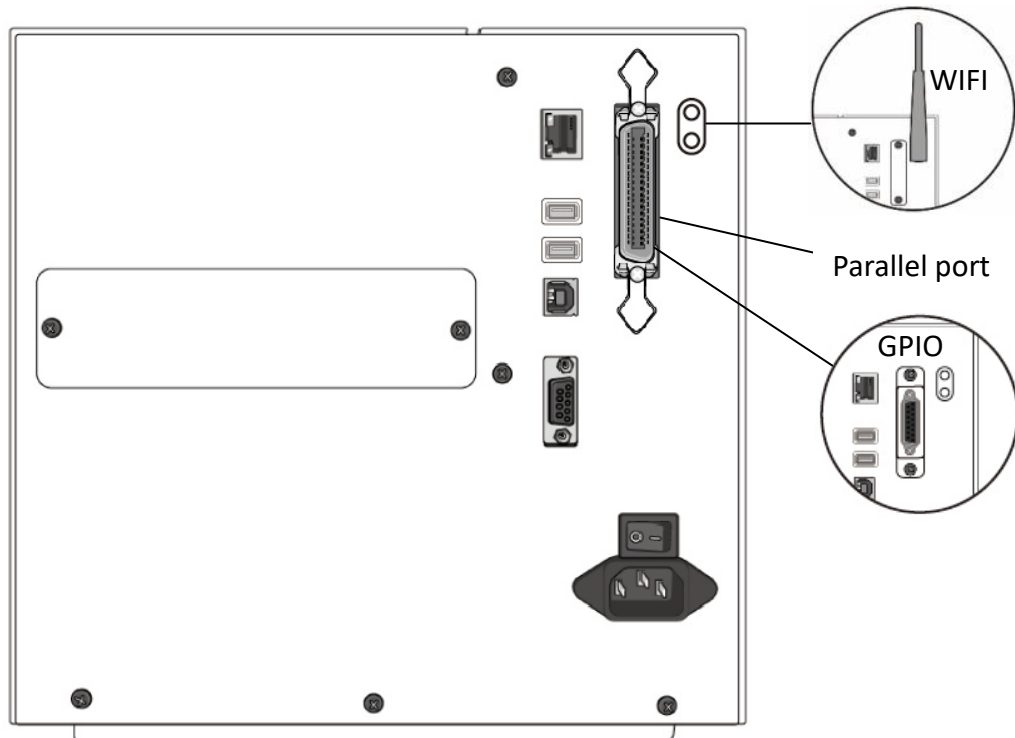
# 1.3.3 Interior view

**Internal Parts and Features**

Ribbon Pick-up Spindle          Ribbon Supply Spindle

Media Supply Spindle

Feed Slot

Bracket

**Open Bracket**

Head Latch

Thermal Print

Paper Sensor

Paper Roller
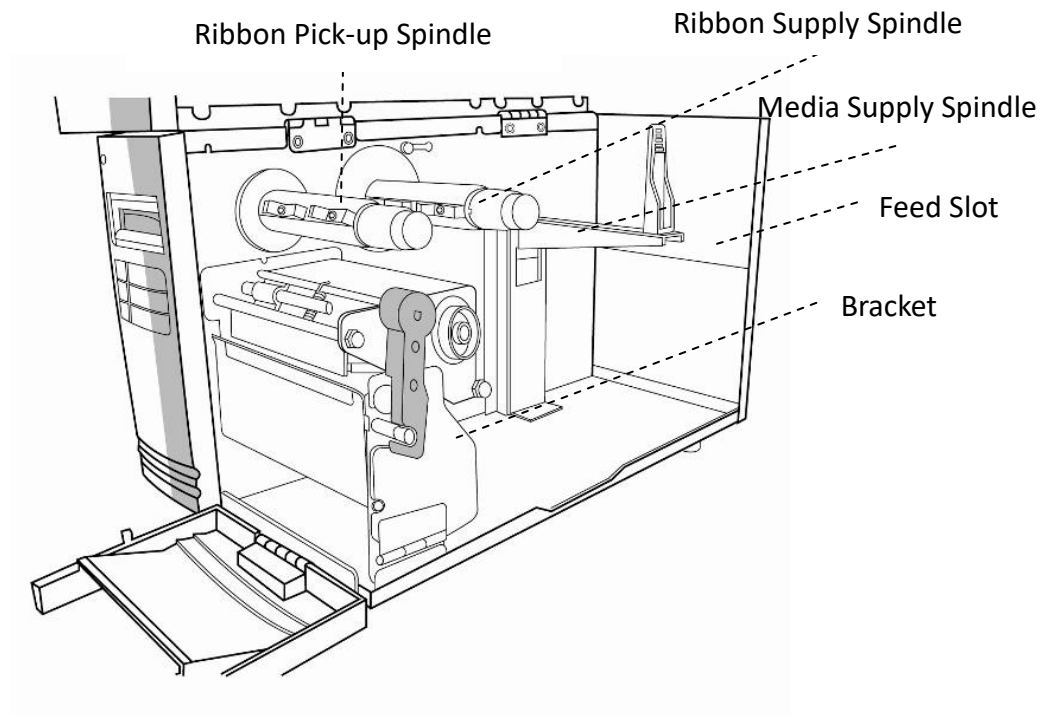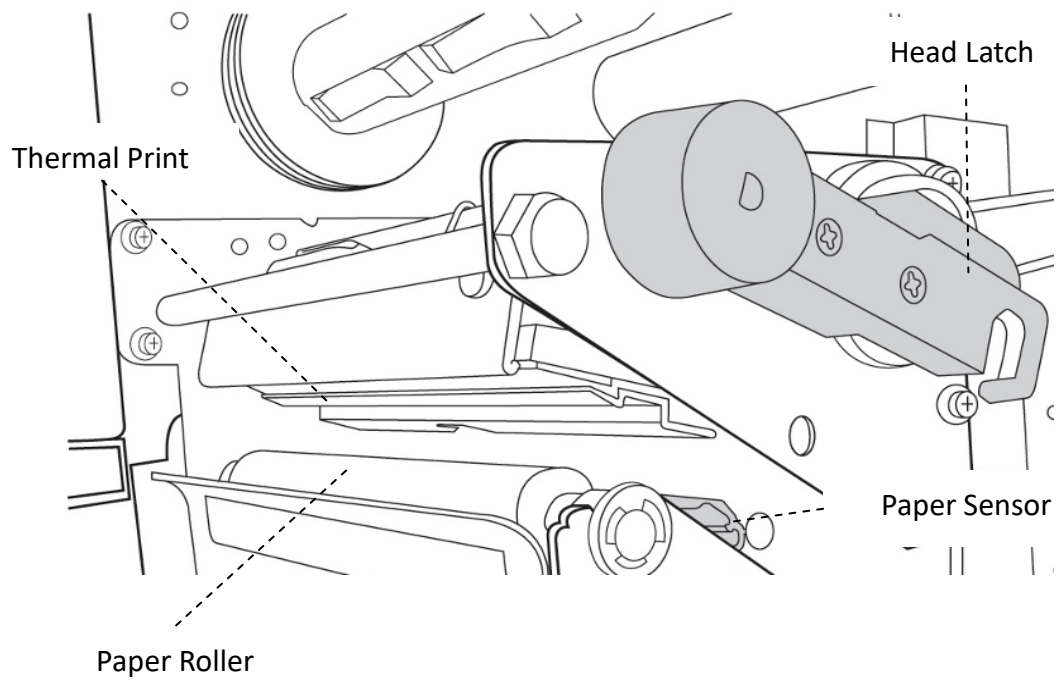
# 1.4  Printer control panel

There are three lights on the front panel - READY, MEDIA and RIBBON. These indicators display operation status of the printer. Three Buttons – FEED, PAUSE, CANCEL can control printer simple function.

## 1.4.1  Status lights

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

| LCD Display | READY | MEDIA | RIBBON | Description |
|---|---|---|---|---|
| READY | ON | ON | ON | In the ready mode |
| PRINT HEAD HEAT | ON | Blinking | ON | Print head needs to cool down. |
| COMMAND ERROR | ON | Blinking | Blinking | A command error was found while checking the command sequence. |
| EEPROM ERROR | ON | Blinking | Blinking | An EEPROM for back-up cannot be read/written properly. |
| MEMORY ERROR | ON | Blinking | Blinking | • An error has occurred in writing data into USB memory or flash memory. <br> • An erase error has occurred in formatting USB memory or flash memory. <br> • Saving failed because of the insufficient capacity of USB memory or flash memory. <br> • Firmware update has error. |
| CANCEL ... | Blinking | ON | ON | Press CANCEL KEY to interrupt and delete a print task |

| LCD Display | READY | MEDIA | RIBBON | Description |
|---|---|---|---|---|
| CLEAR FLASH | Blinking | ON | ON | Clear flash memory. |
| CUTTER FAILED | Blinking | ON | ON | Cutter has failed, or there is paper jam inside the cutter. |
| MEMORY FULL | Blinking | ON | ON | Printer buffer is full caused by the loaded soft fonts, graphics or forms. |
| MEMORY INITIALIZED | Blinking | ON | ON | USB Memory is being initialized. |
| PAUSE | Blinking | ON | ON | Printer is in PAUSE status. Media sensor cannot index label gaps |
| PRINTHEAD BROKEN | Blinking | ON | ON | Head broken error |
| PRINT HEAD OPEN | Blinking | ON | ON | Head latch is not closed. |
| RESET | Blinking | ON | ON | Press CANCEL KEY + POWER ON to reset NVR table. |
| SERIAL IO ERROR | Blinking | ON | ON | The format or baud rate of the RS232 communication is inconsistent between the printer and host. |
| SELF TEST ... | Blinking | ON | ON | Press FEED KEY + POWER ON to print the self-test label. |
| UPGRADING FW. | Blinking | ON | ON | Printer is receiving data |
| RIBBON OUT | Blinking | ON | Blinking | Ribbon is not installed or end-of-ribbon occurred. |
| CALIBRATION . .. | Blinking | Blinking | ON | Press PAUSE KEY + POWER ON to calibrate media. |

| LCD Display | READY | MEDIA | RIBBON | Description |
|---|---|---|---|---|
| **MEDIA OUT** | **Blinking** | **Blinking** | **ON** | Media is not installed or used up. Printer fails to detect the media gap. The media sensor is out of range during calibration. The label has run out. The last label has been issued normally and the label has run out. |
| **PAPER JAM** | **Blinking** | **Blinking** | **ON** | A paper jam occurred during paper feed. |

## 1.4.2   Buttons

There are three buttons, each with two basic functions.

| Button | Function 1 | Function 2 |
|---|---|---|
| FEED | • Feed a label | |
| PAUSE | • Pause printing | • Press again to resume printing |
| CANCEL | • Interrupt and delete a print task | • Force printer to continue after an error is solved. |

# 2  Get started

This chapter describes how to set up your printer.

## 2.1  Attach the power cord

1. Make sure the power switch is set to the **OFF** position.
2. Place the printer within cable distance of the host and printer (USB or Serial cable.)
3. Isolate the power cord from other electrical cables.
4. Plug the other end of the AC power cord into the wall socket.
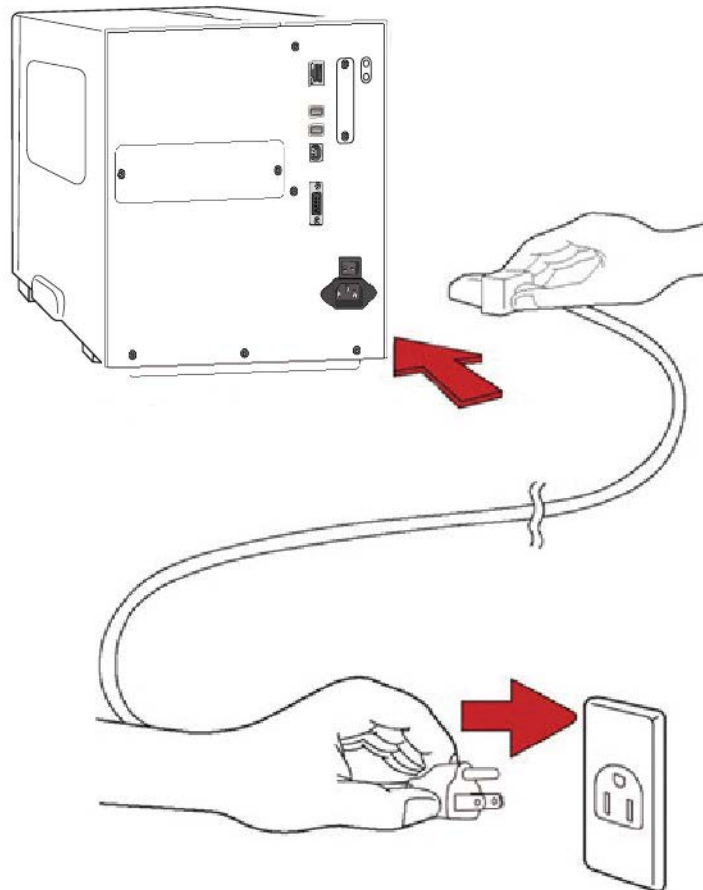


> ⚠️ **Warning**    Do not plug the AC power cord with wet hands, or operate the printer and the power supply in an area where they may get wet. Serious injury may result from these actions!

# 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.
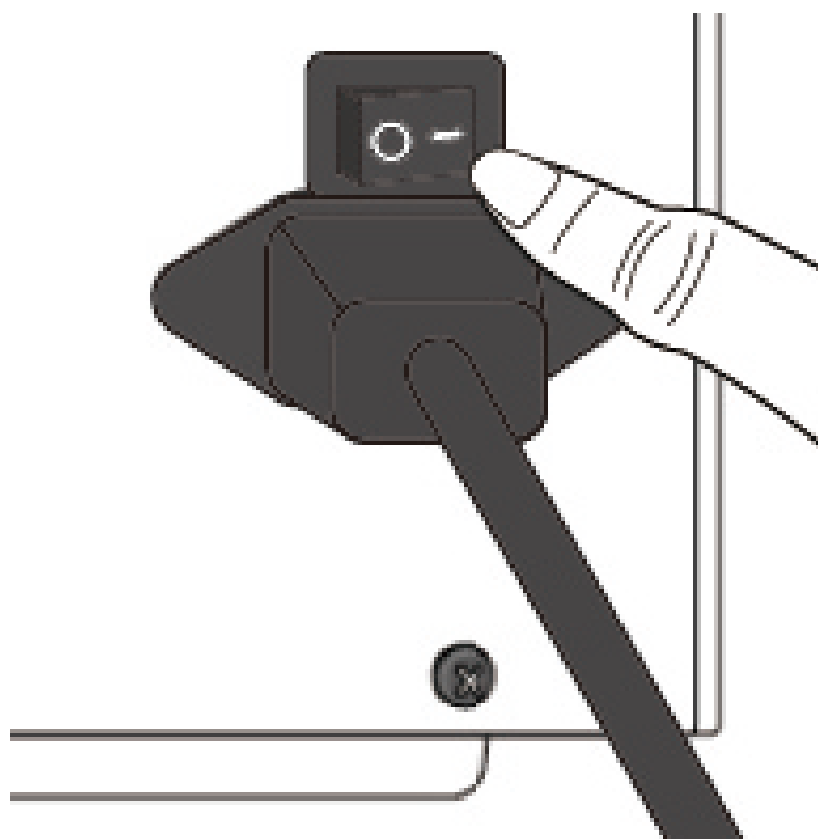
2. READY、MEDIA and RIBBON LED   are solid green. Then READY LED turn off few second while LCD screen shows firmware version. LCD screen will show Ready to print and READY LED will back to solid green.

## 2.2.2   Turn off your printer

1.  Make sure READY、MEDIA、RIBBON are 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.
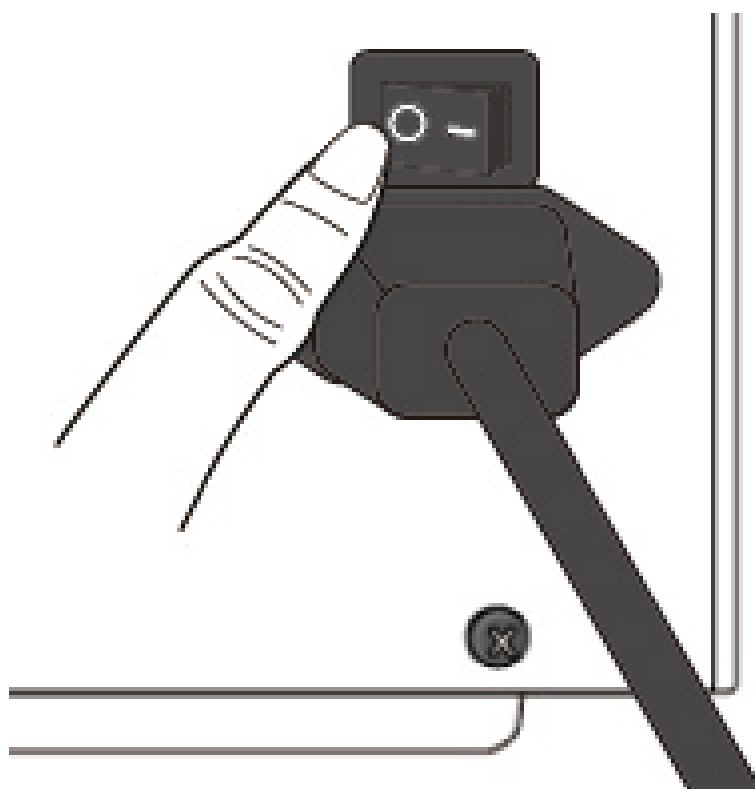


| ⚠️ | **Caution**   Do not turn off your printer during data transmission. |
|----|----|

# 2.3  Load media

The I4 Series printers offer three different loading modes: standard, peel-off, or with a cutter.

- **Standard mode** allows you to collect each label freely.
- **Peel-off mode** peels backing material away from the label as it prints. After the label is removed, the next label prints.
- **Cutter mode** automatically cuts the label after it prints. There are rotate cutter and guillotine cutter types to cut media.

> **Important**    The first time to use peel-off mode and cutter mode. Make sure to enable the PEELER INSTALLED or CUTTER INSTALLED setting in front panel. For more information about panel setting, go to CH 3.1.1 LCD Function Setting Procedure.



Thermal Transfer Media Loading Instructions
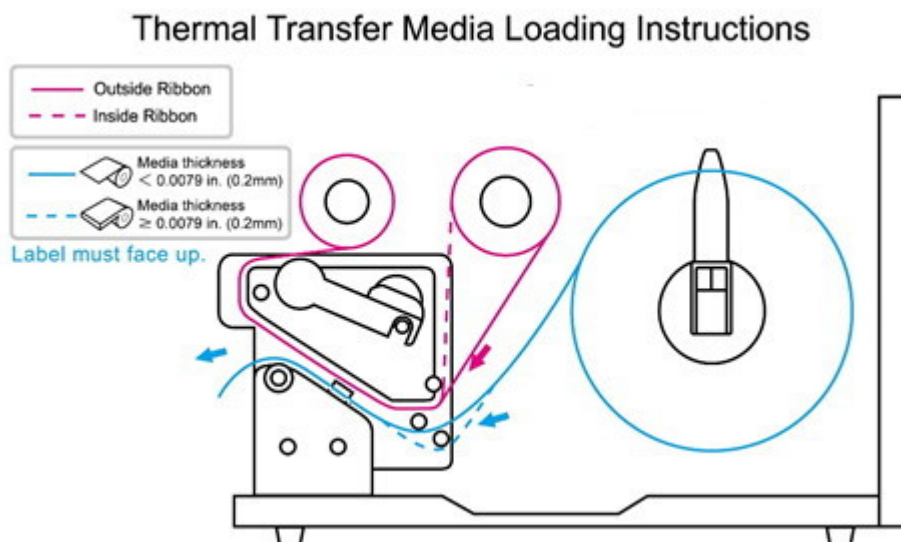
# 2.3.1   Prepare media

The inside wound and outside wound media roll can be loaded into the printer the same way. 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.
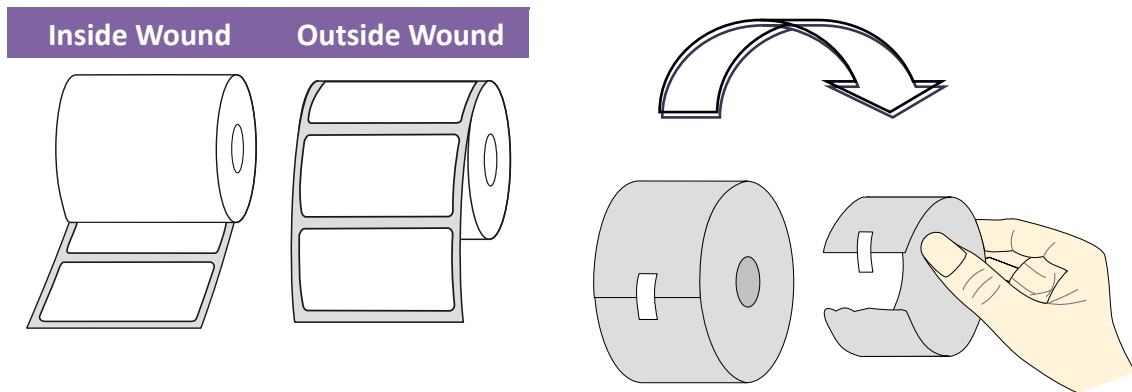
## 2.3.2   Placing media roll

## Load Media In Standard Mode

1    Lift the top cover and front access door to expose the media compartment.
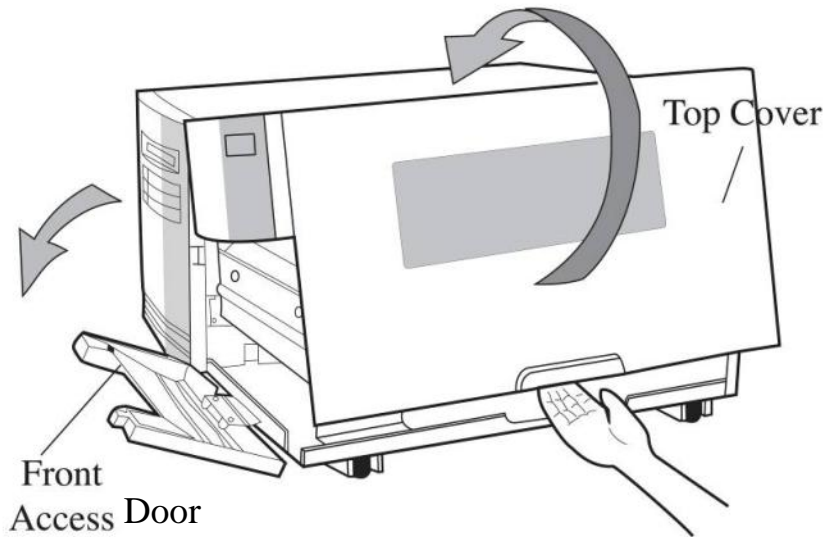


2    Insert the media roll into the media supply spindle and move the media guide to

the inside.

3.  Turn the head latch counter-clockwise and open the bracket. Turn the outside media guide counter-clockwise for media insert.
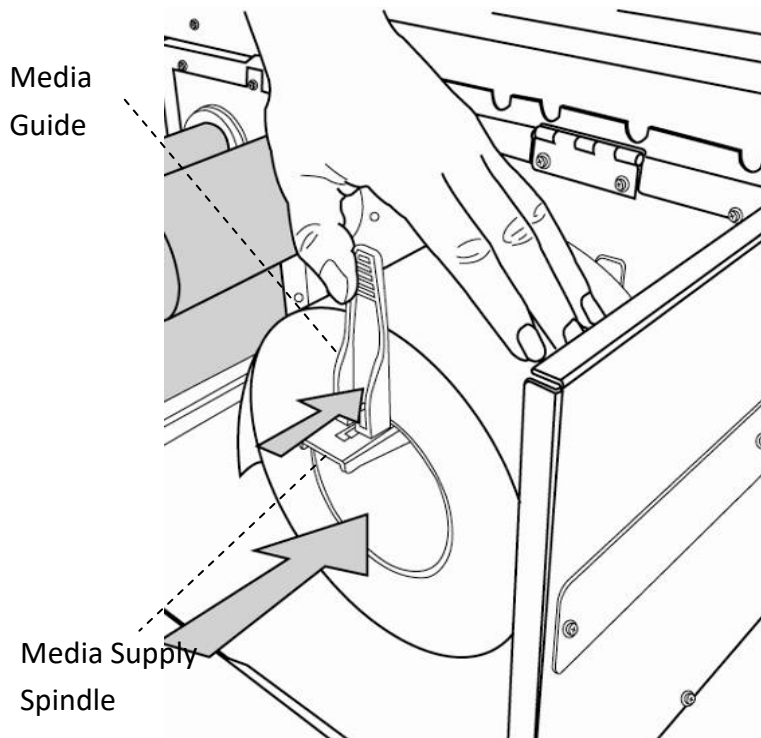
Head Latch

Outside Media Guide
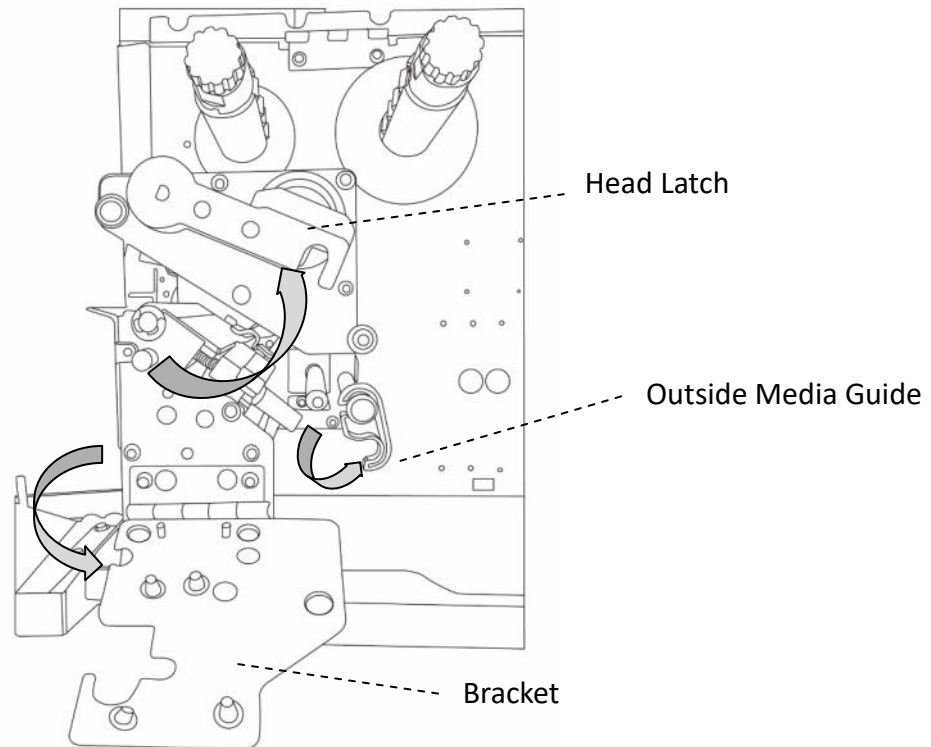
Bracket

4.  Lead the media through the print head module, under the paper sensor guide and over the roller.

Paper Sensor
Guide Module

Print Head
Module

Roller

5.  Return the outside media guide, close the bracket, and hook the head latch.



Head Latch

Outside Media Guide

Bracket
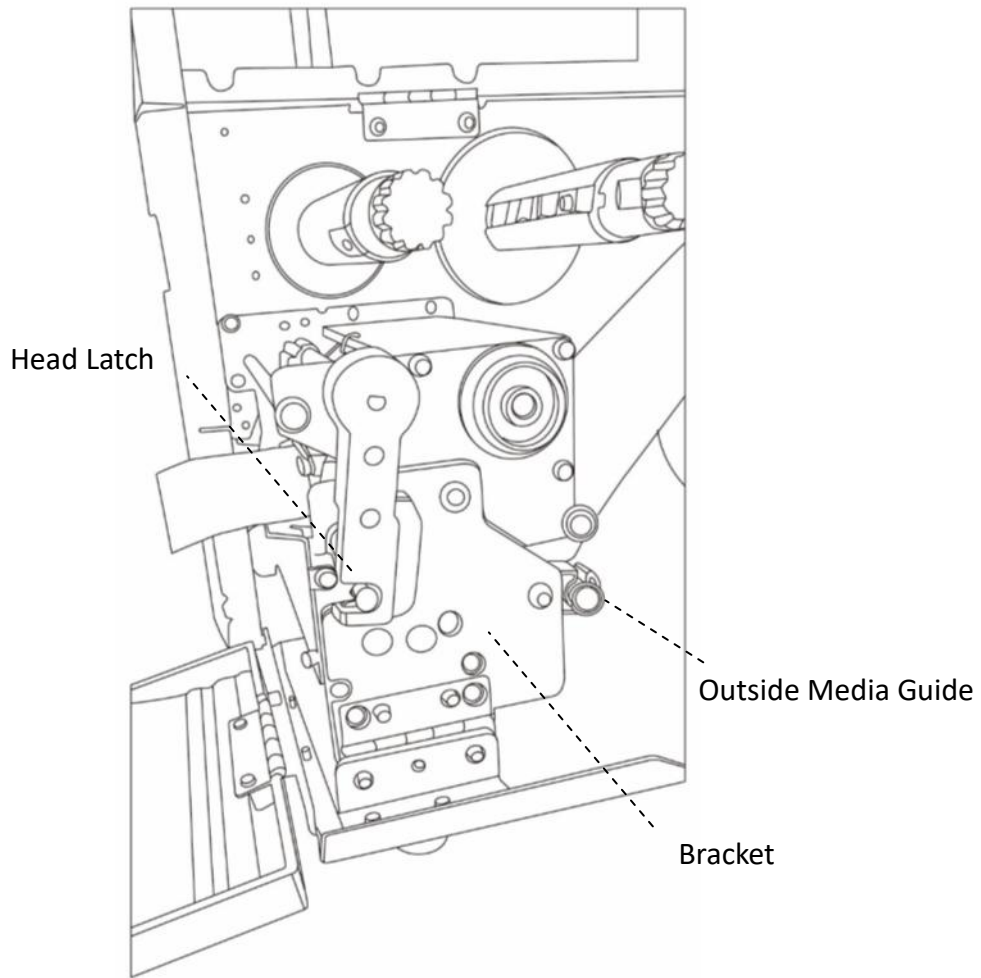
6.  Close the front access door and the top cover.
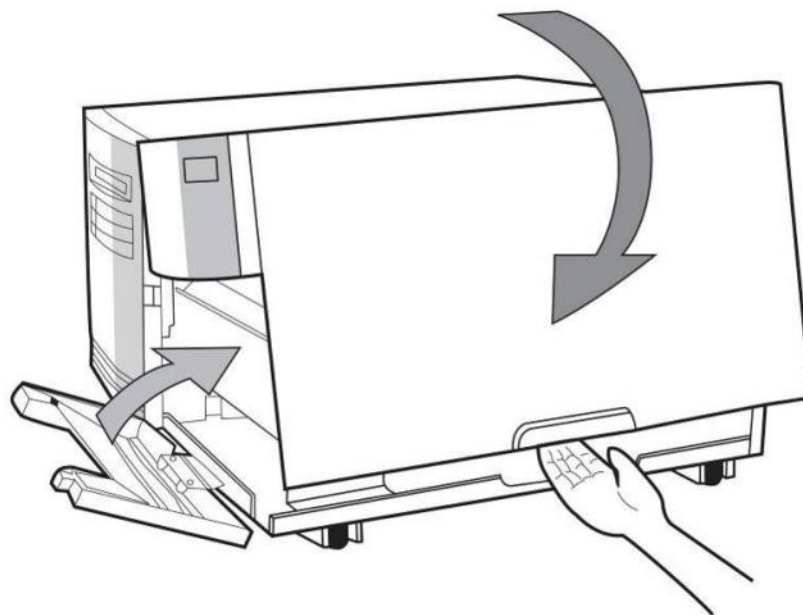
7.   Press the FEED button if the printer is already on.
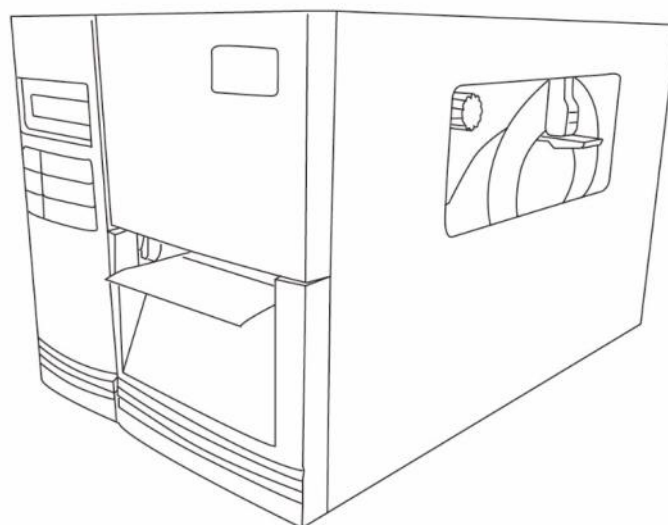
**Important**

After the media is loaded, please perform media calibration to calibrate

the label sensor before printing.

**Note**     Make sure the die-cut media's label length is at least 25mm or
longer, for direct thermal printing in tear-off mode with perforation.

## Load Media In Peel Off Mode

Steps 1 to 3 are the similar with "Standard Mode".

1. Lift the top cover and front access door to expose the media compartment.
2. Insert the media roll into the media supply spindle and move the media guide to the inside.
3. Turn the head latch counter-clockwise and open the bracket. Turn the outside media guide counter-clockwise for media insert.
4. From the leading end of the media roll remove enough labels to expose 6-inches of backing paper.
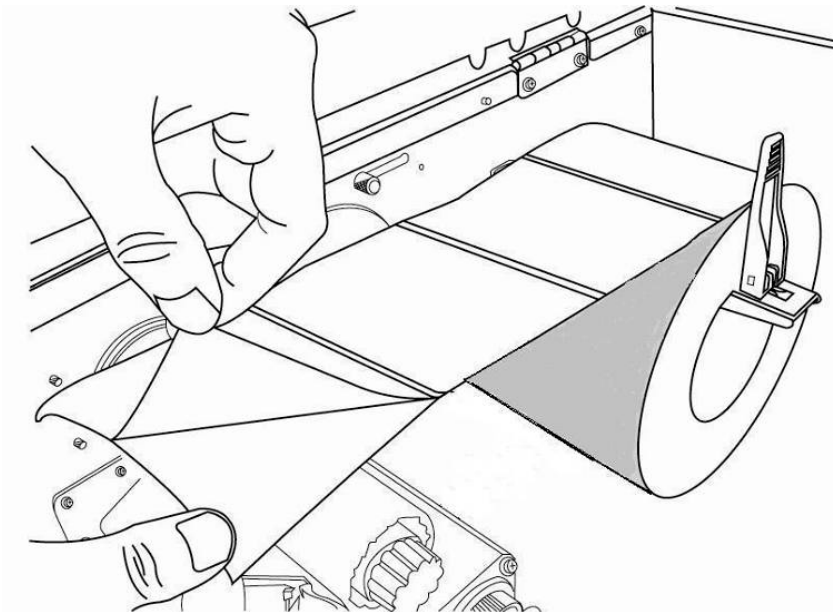


5. Lead the media backing paper through the print head module.
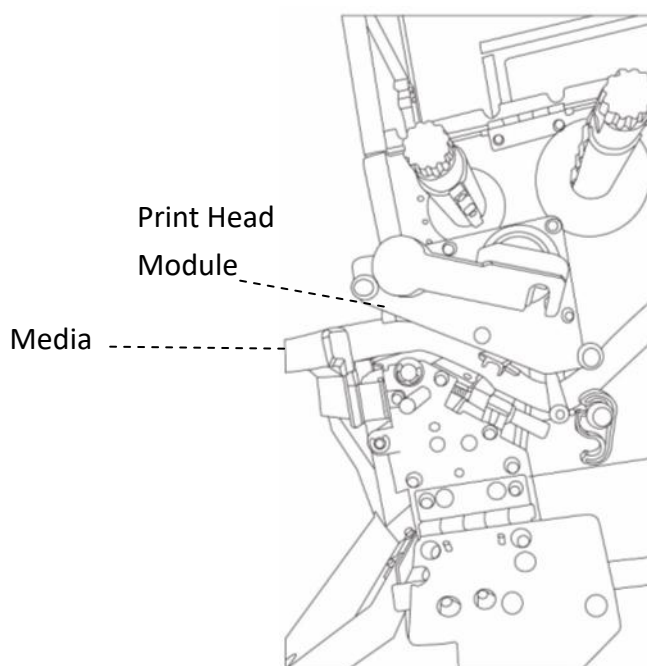
6.   Push down the peel-off mechanism release lever and lead the media under the peeler module.

Dispenser Module

Peel Lever
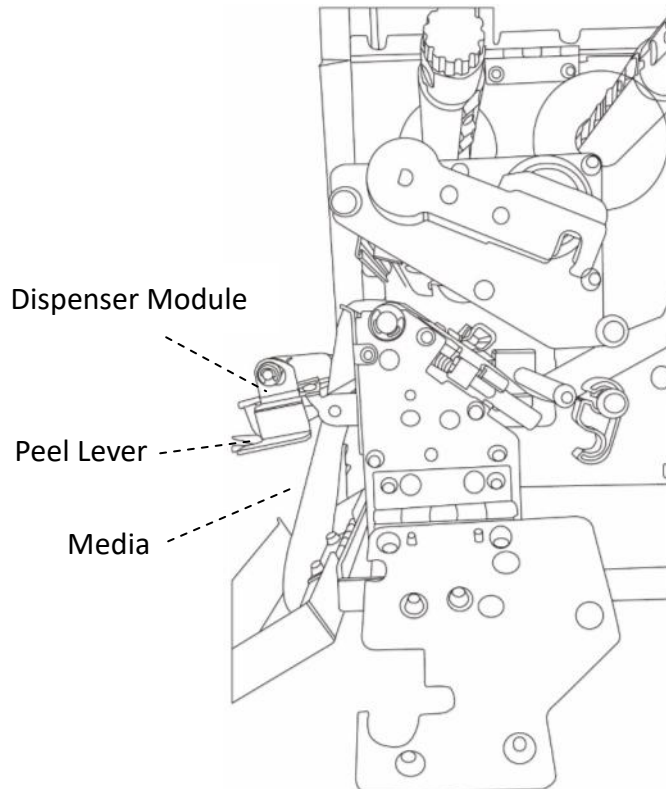
Media

7.   Return the outside media guide, close the bracket, and hook the head latch. Close the peeler module using the peel-off mechanism release lever.

Peel Lever

Dispenser Module
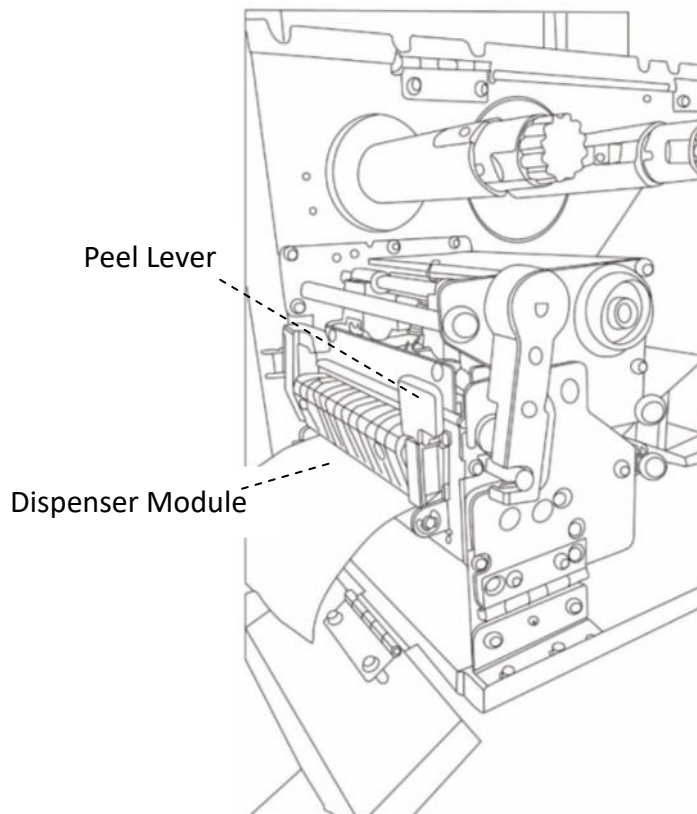
8.   Close the top access door and turn on the printer or press the FEED button if the
     printer is already on.
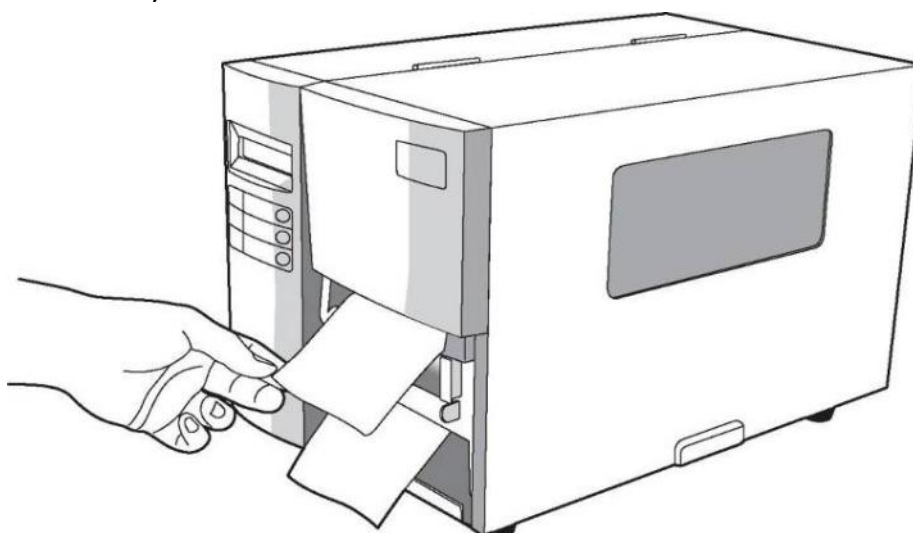


> **Important**
>
> After the media is loaded, please perform media calibration to calibrate
>
> the label sensor before printing.

# Load Media In Rotary Cutter Mode

Steps 1 to 3 are the similar with "Standard Mode".

1.   Lift the top cover to expose the media compartment.

2.   Insert the media roll into the media supply spindle and move the media guide to the inside.

3.   Turn the head latch counter-clockwise and open the bracket. Turn on the outside media guide.

4.   Insert the media into the print head module and under the paper sensor guide over the roller.
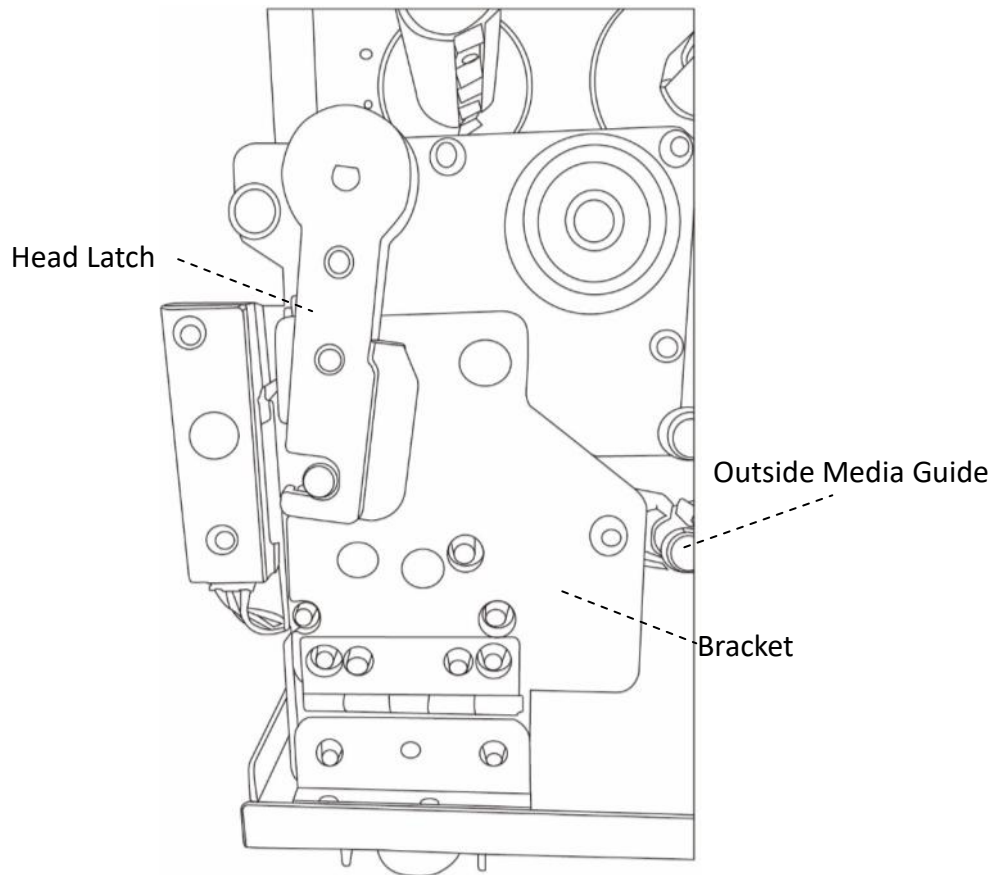
5. Return the outside media guide, close the bracket, and hook the head latch.



Head Latch

Outside Media Guide

Bracket

6. Close the top access door and turn on the printer or press the FEED button if the printer is already on. The printer will then feed the labels through the cutter automatically.



***Important***

After the media is loaded, please perform media calibration to calibrate the label sensor before printing.

# Load Media In Guillotine Cutter Mode

Steps 1 to 3 are the similar with "Standard Mode".

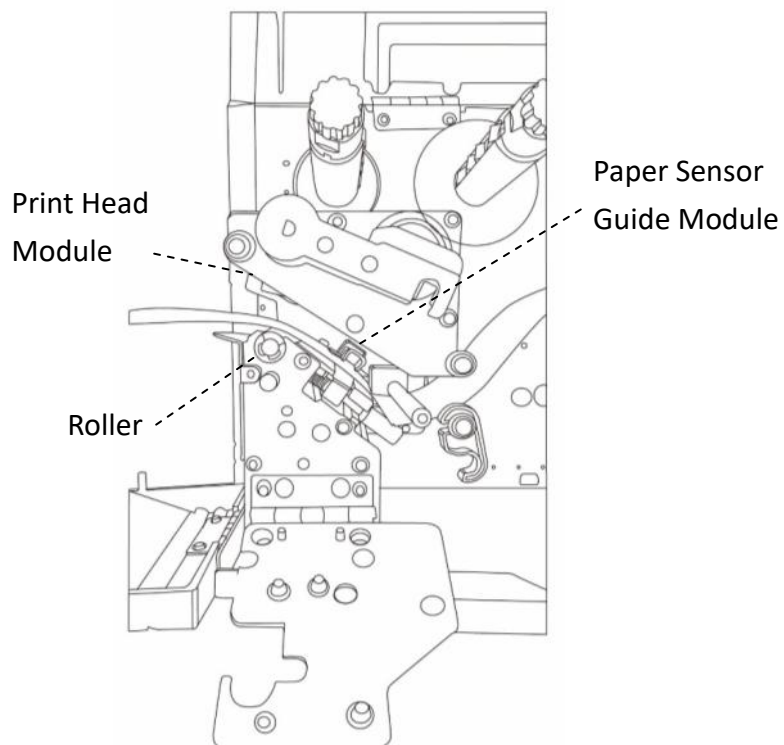1.   Lift the top cover to expose the media compartment.

2.   Insert the media roll into the media supply spindle and move the media guide to the inside.

3.   Turn the head latch counter-clockwise and open the bracket. Turn on the outside media guide.

4.   Insert the media into the print head module and under the paper sensor guide. Push down mechanism release lever from Guillotine Cutter and lead media through Guillotine Cutter.
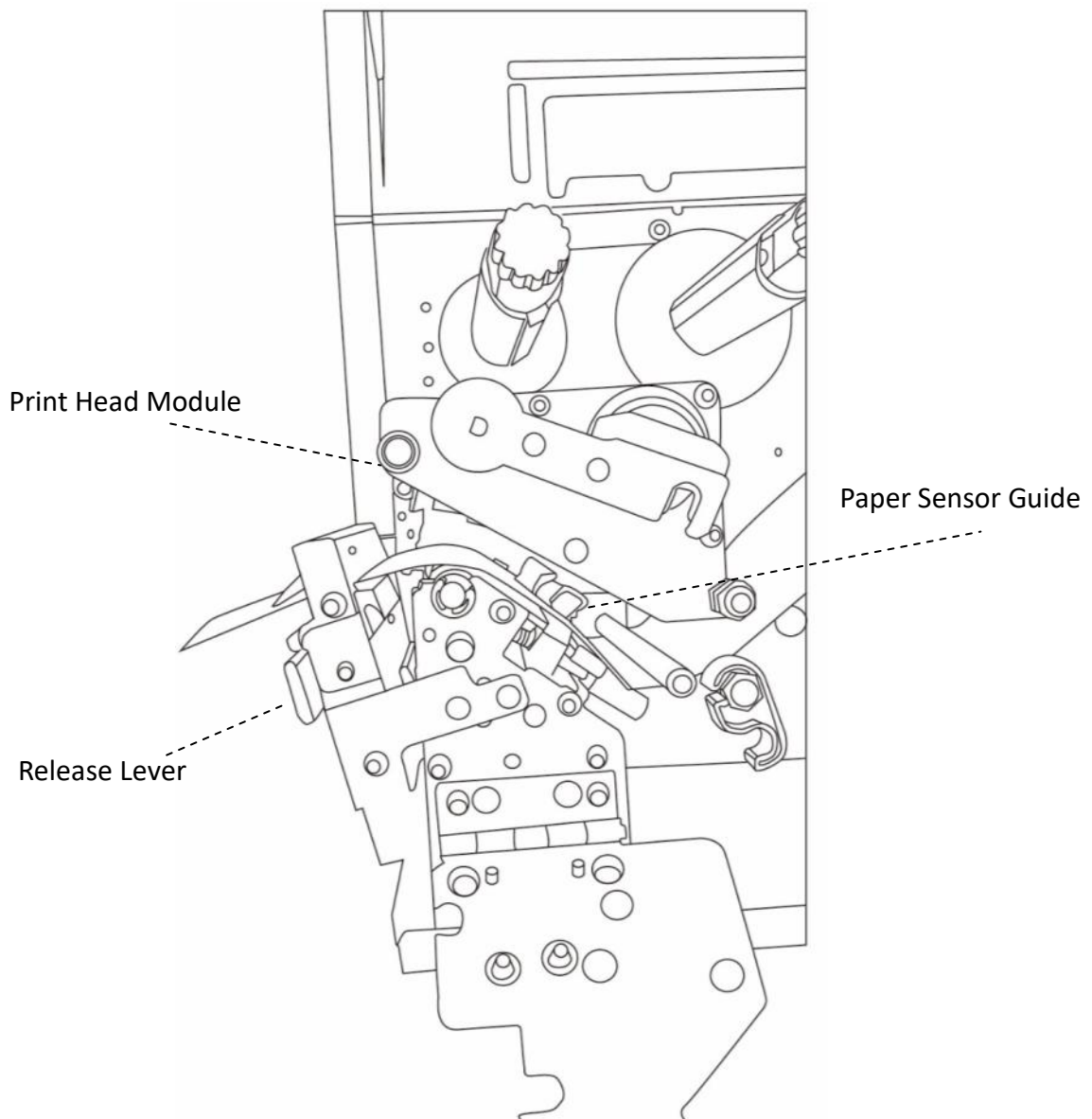
5.   Push back Guillotine Cutter and return the outside media guide, close the bracket, and hook the head latch.
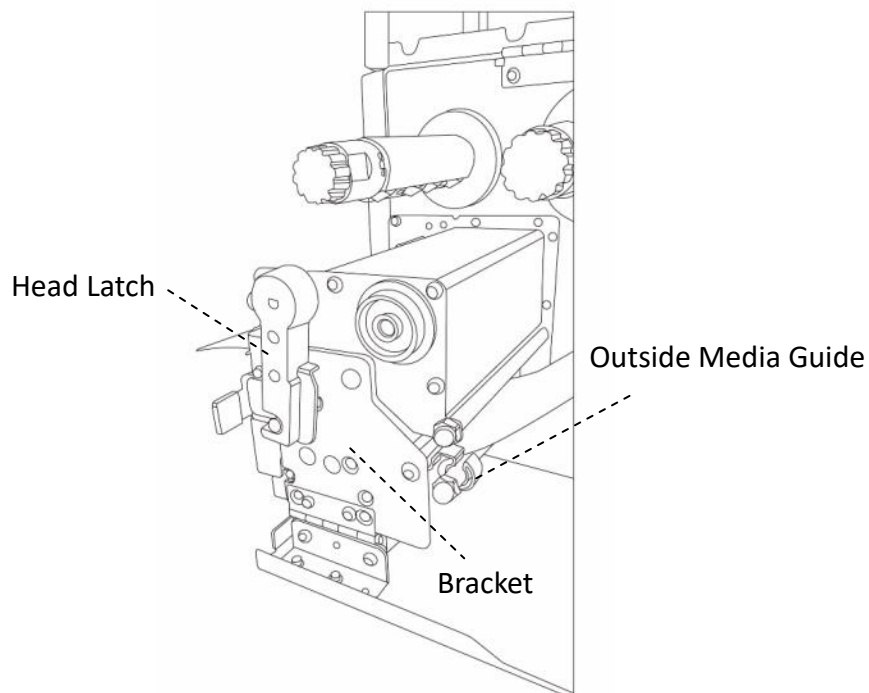


6.   Close the top access door and turn on the printer or press the FEED button if the printer is already on. The printer will then feed the labels through the cutter automatically.



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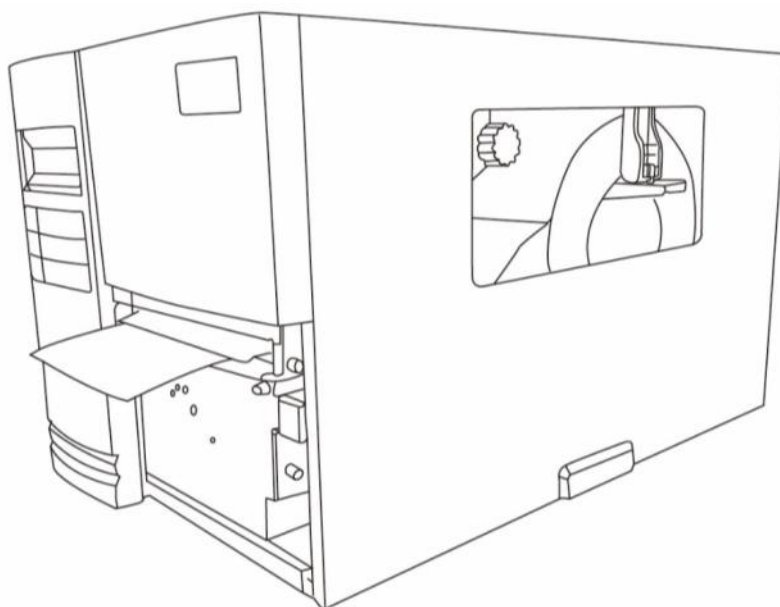
**Important**
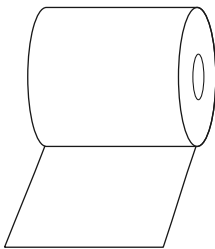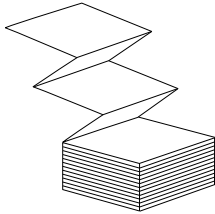
After the media is loaded, please perform media calibration to calibrate the label sensor before printing.

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## 2.3.3   Media types

Your printer supports various media types, including non-continuous media, continuous media, and fanfold media. The following table provides details about them.

| Media Type | Looks Like | Description |
| --- | --- | --- |
| **Non-Continuous Media** |  | Non-continuous media is the typical media for bar code printing. Labels and tags are made of various materials, such as paper, fabric or cardstock, and are separated by gaps, holes, notches or black marks. Many labels are self-adhesive with liners, while some are linerless.  |

| Media Type | Looks Like | Description |
|---|---|---|
| **Continuous Media** | | Continuous media does not have gaps, holes, notches or black marks. It allows you to print data anywhere on the media. A cutter may be used for splitting labels. Mostly it is used for direct thermal printing. |
| **Fanfold Media** | | Fanfold media is in continuous form, but it can be used as non-continuous media, because its labels are separated by folds. Some fanfold media also has black marks or liners. |
| **Tag Media** | | Tag media is usually made from a heavy paper, with center hole to index. It does not have adhesive or a liner, and it is typically perforated between tags. The media may also have black marks or other separations. |

# 2.4 Load Ribbon

The following steps only apply to thermal transfer printing mode.

Direct thermal does not need ribbon to be installed.


I4 Series printers apply to both Inside wound ribbon and Outside wound ribbon.

Printers can switch automatically.

> **Note**
> -   Media and ribbon types should be matched to provide with optimal print results.
>
> -   Always use ribbon that is wider than the media to protect the print head from wear.

## 2.4.1   Placing Ribbon Roll

1. Lift the top cover and front access door to expose the media compartment.
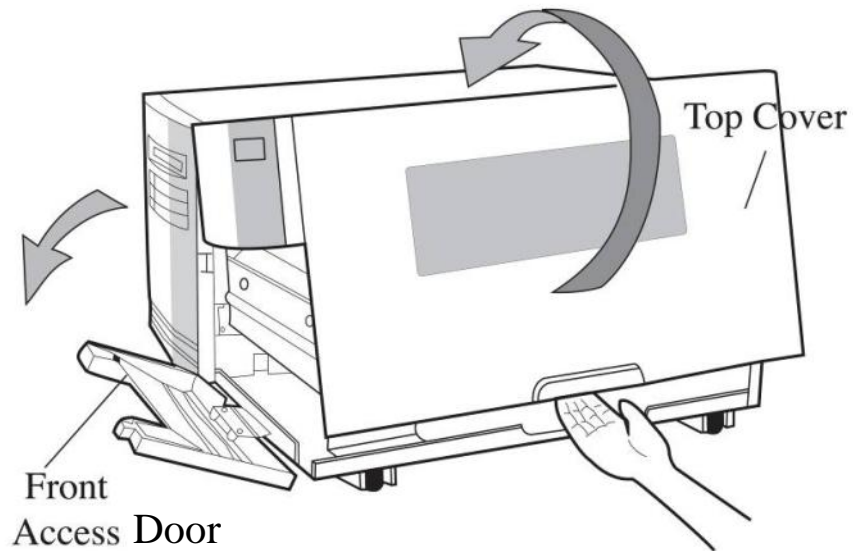


2. Turn the head latch counter-clockwise and open the bracket.
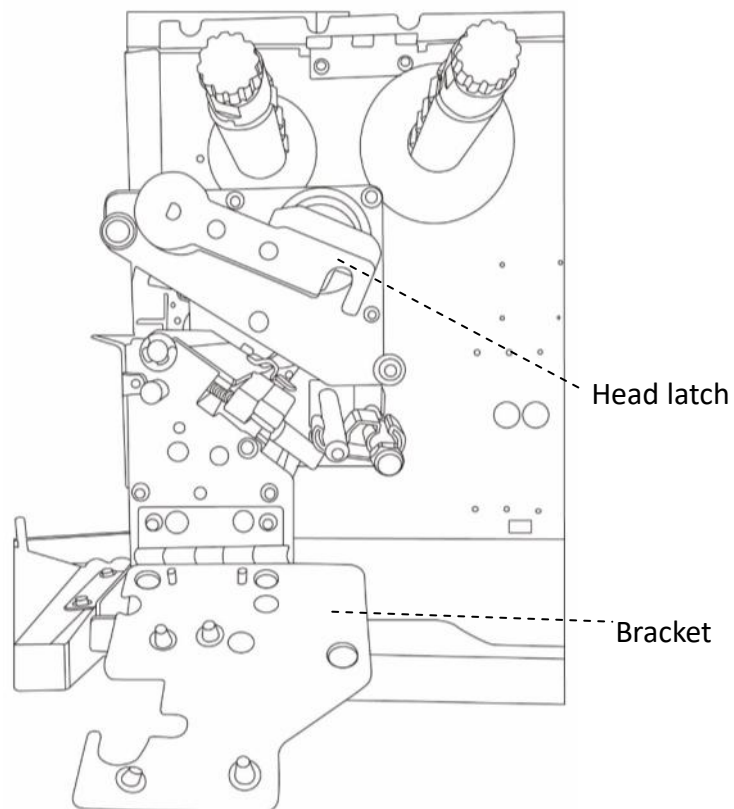
3.  Unwrap the ribbon and separate the ribbon roll from the bare core. Insert the ribbon roll onto the ribbon supply spindle.

Ribbon Supply Spindle
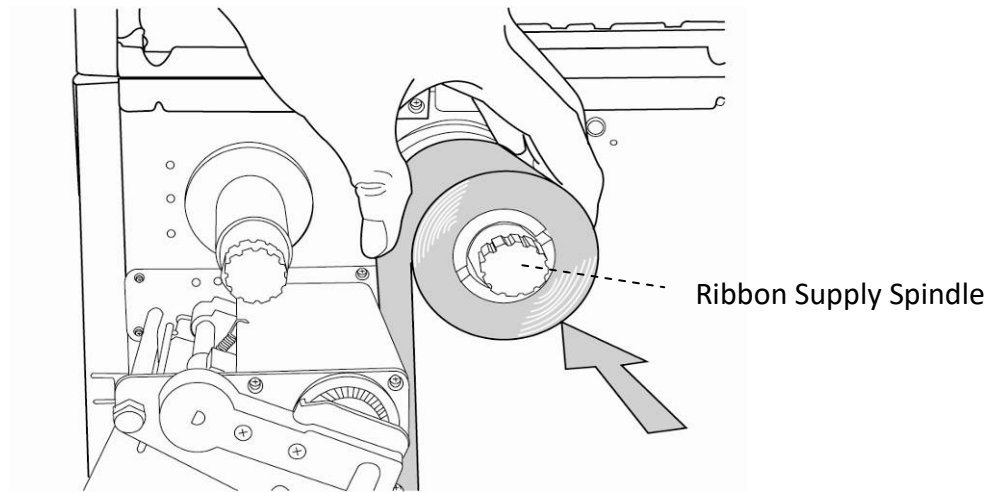
4.  Lead the ribbon through the print head module. Attach the edge of the ribbon onto the bare core and wind it a bit onto the core. Make sure the coating side of the ribbon is face down.

Bare Core

Print Head Module
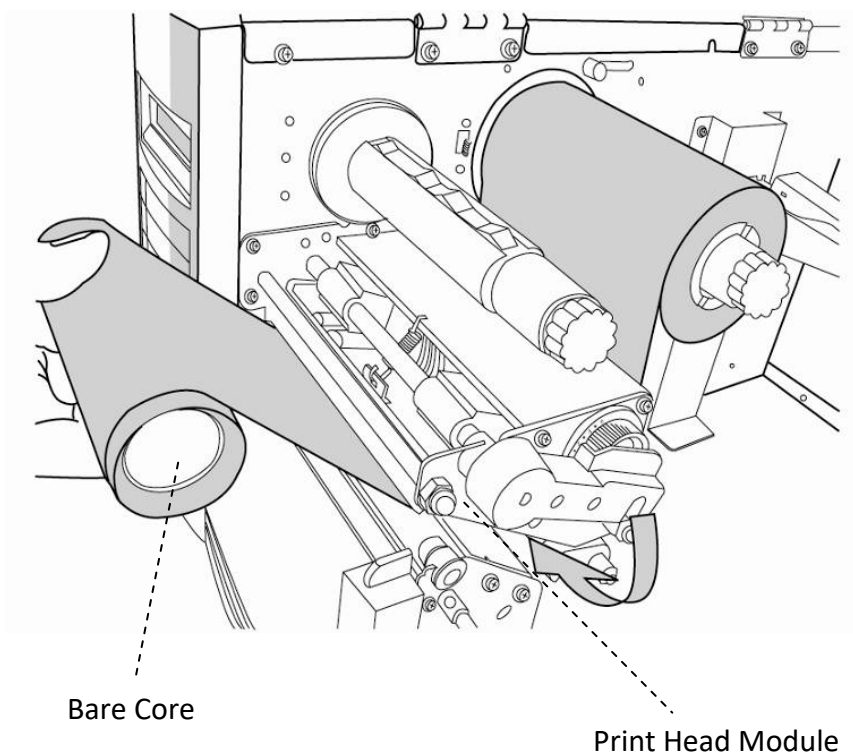
5. Insert the core onto the ribbon pick-up spindle. Turn the pick-up spindle to ensure the ribbon is tightly wound.

Ribbon Pick-up spindle
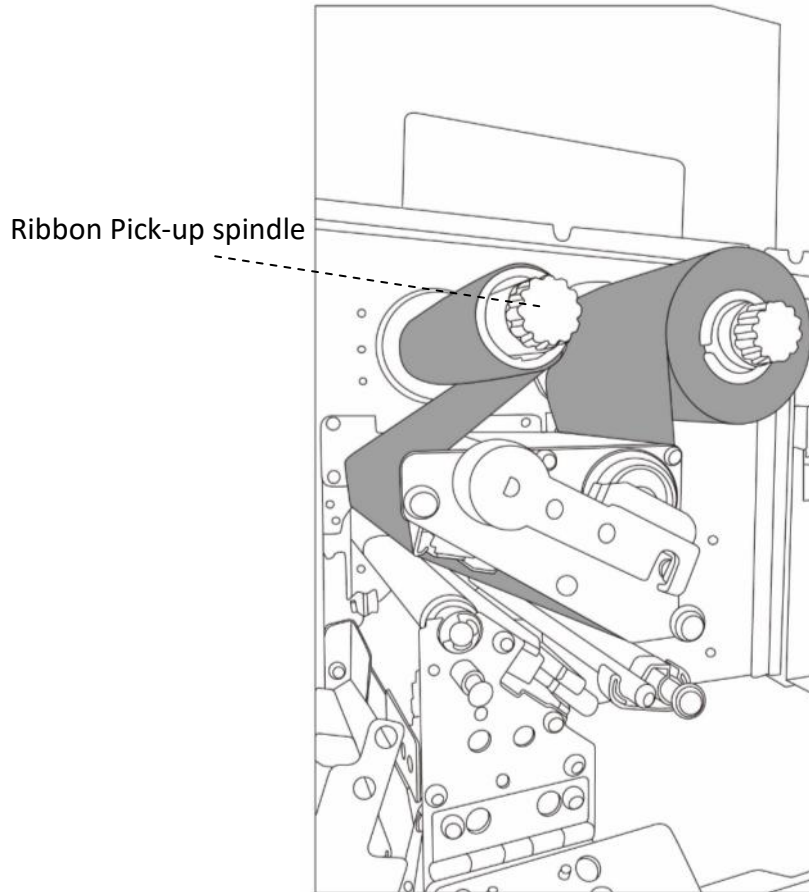
6. Close the top cover and the front access door and turn on the printer.
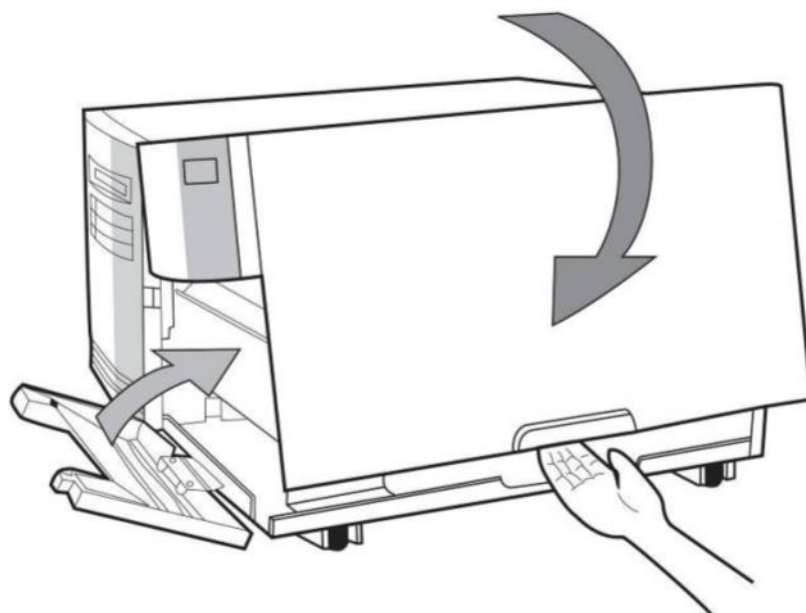
# 3  Printer operation

This chapter provides more specific information about printer operation.

## 3.1 Front Panel

Change settings via buttons on panel:

| Buttons | Function |
|---|---|
| PAUSE+CANCEL | Press to enter setting mode.<br><br>Press again to exit setting mode and return to normal mode. |
| FEED | Press to show next parameter. |
| PAUSE | Press to show next setting item. |
| CANCEL | Selects and saves a parameter to permanent FLASH memory. Unless changed via panel or command the parameter is saved even if you restart the printer. |

⚠ **Warning**    *Do not change settings during printing or sending printing data.*

# 3.1.1   LCD Function Setting Procedure

The following procedure is an example of setting procedure to direct thermal printing mode:

READY (203, AUTO)

Press both **PAUSE + CANCEL** buttons.
Then release the buttons to enter settings.

PRINT MODE
THERM. TRANSFER*

Function which has "*" sign is current setting.

Keep press **FEED** button until LCD prompts the function setting needed.

PRINT MODE
DIRECT THERMAL

Press **CANCEL** button to store the setting.

PRINT MODE
DIRECT THERMAL*

Press **PAUSE** button to continue the other settings.

**Note**   Press both **PAUSE + CANCEL** buttons anytime in the panel setting and then release them to exit from settings.

READY (203, AUTO)

Now printer is in normal printing

Press **PAUSE + CANCEL over 5 seconds** to set different languages.

| Item | Range | Factory Default |
|---|---|---|
| LANGUAGE | ENGLISH, FRENCH, GERMAN, ITALIAN, SPANISH, PORTUGUESE, | ENGLISH |

Press **PAUSE + CANCEL** less than 1 second to set printer function.

| NO. | Item | Range | Factory Default | Remarks |
|---|---|---|---|---|
| 1 | PRINT MODE | THERM. TRANSFER DIRECT THERMAL | THERM. TRANSFER | (Restart printer after change setting) |
| 2 | CALIBRATION MODE | INTELLI PRINT SMART PRINT | INTELLI PRINT | INTELLI PRINT : Just install labels, latch print module, press FEED button once, and then the printer will feed 1-2 labels to detect next gap / black mark before printing.<br>SMART PRINT : Print from the first label immediately according to label length setting. Make sure to carefully align label bottom edge at the tear-off position before printing.<br>(Restart printer after change setting) |
| 3 | CONTROL CODE SET | STANDARD ALTERNATIVE 1 ALTERNATIVE 2 | STANDARD | Available only in PPLA printer language.<br>(Restart printer after change setting) |
| 4 | CUT PEEL OFFSET | -015 ~ 015 mm | 000 mm | To adjust cut and peel positions. |

| 5 | TPH VER OFFSET | -009~009 mm | 000 mm | To adjust offset of vertical print position. |
|---|---|---|---|---|
| 6 | RECOVER PRINT | ENABLE, DISABLE | ENABLE | Will not reprint after recovering from media-out or ribbon-out errors. |
| 7 | CUTTER INSTALLED | NO YES | NO | (Restart printer after change setting) |
| 8 | PEELER INSTALLED | NO YES | NO | |
| 9 | STANDLONE FORM FONT | NO YES | NO | Available only in PPLB printer language. (Restart printer after change setting) |
| 10 | WIN. CON. LEN. | 0 ~ 254 mm | 000 mm | Available only in Windows with bundled printer driver and for continuous media. |
| 11 | SPEED | 2 ~ 8 IPS(I4-250) 2 ~ 6 IPS(I4-350) | 6 IPS(I4-250) 5 IPS(I4-350) | |
| 12 | COUNTING | DOWN UP | DOWN | |
| 13 | MEDIASENSER TYPE | SEE-THROUGH REFLECTIVE | SEE-THROUGH | To select for different media types. After changing sensor setting, make sure to calibrate before printing. (Restart printer after change setting) |
| 14 | BACK FEED | DISABLE ENABLE | ENABLE | Available only in PPLA and PPLB printer languages. Once "ENABLE" is selected, printer enters BACK DISTANCE setting. |
| 15 | BACK DISTANCE | 10~40 mm | 22 mm | Available only when BACK FEED is enabled. |
| 16 | BASE DARKNESS | -28~28 | 0 | |
| 17 | DARKNESS | 0~30 | 16 | To select darkness. |

| 18 | BAUD RATE | 2400/ 4800 / 9600 / 19200 / 38400 / 57600 / 115200 | 9600 | Should be as same as setting of host. (Restart printer after change setting) |
|----|-----------|---------------------------------------------------|------|-------------------------------------------------------------------------------|
| 19 | PARITY (RS232) | NONE ODD EVEN | NONE | Should be as same as setting of host. (Restart printer after change setting) |
| 20 | LENGTH (RS232) | 8 DATA BITS 7 DATA BITS | 8 DATA BITS | Should be as same as setting of host. (Restart printer after change setting) |
| 21 | CLEAR FLASH | NO YES | NO | When "YES" is selected, all the label forms, soft fonts, and graphics stored will be deleted. (Restart printer after change setting) |
| 22 | SETTING PRIORITY | COMMAND/ LCD PANEL | COMMAND | Choosing priority of LCD settings. It decides which setting method - by command or by LCD panel, is prior. |
| 23 | EMULATION | AUTO PPLA PPLB PPLZ | AUTO | (Restart printer after change setting) |
| 24 | BUZZER | DISABLE ENABLE | ENABLE | |
| 25 | STANDBY | DISABLE 1 MINUTE 2 MINUTES 5 MINUTES 10 MINUTES 20 MINUTES 30 MINUTES | DISABLE | |

| 26 | LOAD DEFAULTS | LAST SAVED<br><br>FACTORY<br><br>NETWORK | LAST SAVED | LAST SAVED:<br><br>NO.1~15, NO.17, NO.22, NO.24~25 and language will be loaded.<br><br>FACTORY:<br><br>NO.1, NO6, NO9, NO11, NO14~15, NO17, NO.27~30 will be loaded.<br><br>NETWORK:<br><br>NO. 27~30 will be loaded.<br><br>(Restart printer after change setting) |

## Ethernet settings and parameters

| NO. | Item | Range | Factory Default | Remarks |
|---|---|---|---|---|
| 27 | DHCP | DISABLE<br><br>ENABLE | | If printer has been connected to a router, IP address will be assigned automatically by DHCP server after power on.<br><br>If printer is not connected to a router, with DHCP disabled, settings of IP ADDRESS, SUBNET MASK, and DEFAULT GATEWAY settings will be available on LCD.<br><br><br>Every time when DISABLE is changed to be ENABLE, LCD will prompt "ETHERNET CARD UPDATE FINISH…"<br><br>Then please reboot the printer. |
| 28 | IP ADDRESS | xxx.xxx.xxx.xxx | xxx range:0~255<br><br>When DHCP is disabled, default IP address is 192.168.1.100.<br><br>If "_" sign appears, that means that **DHCP** setting is disabled. On the contrary, **DHCP** setting is enabled. |
| 29 | SUBNET MASK | xxx.xxx.xxx.xxx | |
| 30 | DEFAULT GATEWAY | xxx.xxx.xxx.xxx | |
| 31 | MAC ADDRESS | Read only | | 1. *FEED/CONFIG.* :<br>change contents.<br>*(ex. from 000.000.000.000 to 255.255.255.255)*<br><br>2. *PAUSE/CALIBR.* :<br>shift "_"sign position.<br>*(ex. from 255.255.255.255 to 255.255.255.255)*<br><br>3. *CANCEL/RESET.*:<br>Select next function setting. *("_" sign must at the third digit of each parameter, for example, xxx).*<br><br>4.  To change IP ADDRESS or<br>SUBNET MASK, enter DEFAULT GATEWAY setting, press CANCEL button once; LCD will prompt "ETHERNET CARD UPDATE FINISH…"<br><br>Then reboot the printer. |

| | | | |
|---|---|---|---|
| | | | To have more information on Ethernet settings, please refer to Ethernet User's Guide. |

**WiFi module (Option)**

| Item | Range | Remarks |
|---|---|---|
| WIFI SSID | Read only | WIFI module is an option for I4 Series. Connect printer to PC and use print tool to set WIFI module. To have more information, please refer to Print Tool user guide. |
| WIFI IP ADDRESS | Read only | |
| WIFI SUBNET MASK | Read only | |
| WIFI GATEWAY | Read only | |
| WIFI MAC ADDRESS | Read only | |

# 3.2 Printing Media Calibration &

# Configuration

Before calibration, be sure media and ribbon (for thermal transfer printing) have been loaded correctly. The label sensor needs to locate properly to index labels' gaps/ notches/ holes. After the media is loaded, please perform media calibration to calibrate the label sensor in advance. For printer without LCD, please see indicators.

1.  Turn off the printer

2.  Press and hold the **PAUSE** button and turn on the power.

3.  When "CALIBRATION …" is displayed on the LCD, and both READY and MEDIA indicators blink, release the **PAUSE** button.

4.  The printer feeds 1 or 2 blank labels.

5.  When "READY" is displayed, the READY and MEDIA indicators stop blinking but remain illuminated.

# 3.3 Printing a Configuration Report

To perform a self-test and print a configuration report, helping to check printer's print quality and internal settings. Steps as below:

1.  Turn off the printer.

2.  Load media and ribbon.

3.  Press and hold the **FEED** button while turning on the power.

4.  When "SELF-TEST …" is displayed on the LCD, release the **FEED** button.

5.  The printer now prints out a configuration report. (as the sample in next page)
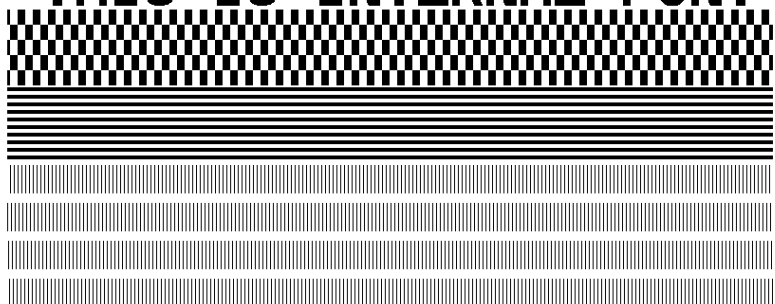    All characters will be printed in 2 columns: the right shows characters
    received from your system, and the left are the corresponding hexadecimal
    values of the characters. It allows users or engineers to verify and debug the
    program.

For printer without LCD, please see indicators.

*Sample of Configuration Report*

■   PPLB

```
LABEL PRINTER WITH FIRMWARE
I4-250-V01.03 20170103 PPLB ——————————————— 1
STANDARD RAM : 32M BYTES ——————————————————— 2
AVAILABLE RAM : 3676K BYTES ————————————————— 3
FLASH TYPE : ON BOARD 16M BYTES————————————— 4
AVAILABLE FLASH : 1118K BYTES ——————————————— 5
NO. OF DL SOFT FONTS(FLASH) :  7 ——————————— 6
NO. OF DL SOFT FONTS(RAM)   :  0 ——————————— 7
NO. OF DL SOFT FONTS(HOST)  :  0 ——————————— 8
H. POSITION ADJUST.: 0000 ——————————————————— 9
SEE-THRU SENSOR ———————————————————————————— 10
REF: 00A3 SEE: 00A2 ———————————————————————— 11
RTC TIME: 1/24/17(13:23:41) ———————————————— 12
MAX LABEL HEIGHT: 100 INCHES ——————————————— 13
PRINT WIDTH: 801 DOTS ——————————————————————— 14
LAB LEN(TOP TO TOP): 79mm ——————————————————— 15
SPEED: 5 IPS ——————————————————————————————— 16
DARKNESS: 8 ————————————————————————————————— 17
THERMAL TRANSFER ——————————————————————————— 18
PRINT LENGTH: 0M ——————————————————————————— 19
CUT COUNT:0 ————————————————————————————————— 20
RS232: 9600, 8, N, 1P, XON/XOFF ——————————— 21
CODE PAGE : English (437) —————————————————— 22
MEDIA : NON-CONTINUOUS ————————————————————— 23
CALIBRATION MODE: INTELLI PRINT ——————————— 24
BACKFEED ENABLED ——————————————————————————— 25
CUTTER DISABLED ———————————————————————————— 26
PEELER DISABLED ———————————————————————————— 27
CUTTER/PEELER OFFSET: 0 <+-0.01mm> ————————— 28
IP ADDRESS: 0.0.0.0 ———————————————————————— 29
SUBNET MASK: 0.0.0.0 ——————————————————————— 30
GATEWAY: 0.0.0.0 ——————————————————————————— 31
MAC ADDRESS: 00-00-00-00-00-00 ————————————— 32
DHCP: ENABLED —————————————————————————————— 33
DHCP CLIENT ID: FFFFFFFFFFFFFFFF ——————————— 34
                FFFFFFFFFFFFFFFF
DHCP HOST NAME: ———————————————————————————— 35
SNMP: DISABLED ————————————————————————————— 36
SOCKET COMM.: ENABLED ——————————————————————— 37
SOCKET PORT: 9100 —————————————————————————— 38
IPV6 MODE: MANUAL—————————————————————————— 39
IPV6 TYPE: NONE ———————————————————————————— 40
IPV6 ADDRESS: 0000:0000:0000:0000: ———————— 41
              0000:0000:0000:0000
LINK LOCAL  : 0000:0000:0000:0000: ———————— 42
              0000:0000:0000:0000
PRODUCT SN: 00000000001 ———————————————————— 43
USB SN: 000000000001 ——————————————————————— 44
ot(0,0)<0.1dot,0.01mm> ————————————————————— 45
rm(0,0)<1+ 0-,0.01mm>—————————————————————— 46
sm(0,0)<1+ 0-,0.01mm>—————————————————————— 47
rv(212,125,87)<0.01v><P> ——————————————————— 48
sv(292,181,110)<0.01v><P> —————————————————— 49
bv(329,9,320)<0.01v><P> ———————————————————— 50
rso(0)<0.01mm> ————————————————————————————— 51
sso(0)<0.01mm> ————————————————————————————— 52
This is internal font 1. 0123456789 ABCabcXyz —— 53
This is internal font 2. 0123456789 ABCabcXyz —— 54
This is internal font 3. 0123456789 ABCabcXyz —— 55
This is internal font 4. 0123456789 ABCXYZ —— 56
```

THIS IS INTERNAL FONT——— 57


— 58

— 59

— 60

— 61

— 62

— 63

**1. Version Information**

The firmware version and its build date.

**2. Standard RAM**

Total 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**

The media sensor type such as reflective sensor.

**11. Label-less Calibration Value**

Check if a label-less calibration has been performed on the printer. If not,
the value is 0000.

**12. RTC Time**

The date and time of the real-time clock (RTC). The default format is
month/day/year (hour:minute:second). If your printer has a built-in RTC, the
RTC time shows here.

**13. 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.

**14. Print Width**

The print width in dots.

**15. Lab Len (Top to Top)**

For non-continues media, it is the length between the tops of two labels.

**16. Speed**

The speed of printing. The unit is inch per second (ips).

**17. Darkness**

The current darkness.

**18. Print Method**

It is either thermal transfer (TT) or direct thermal (DT) printing. TT requires ribbons and DT doesn't.

**19. Print Length**

The total print length.

**20. Cut Count**

It counts the times the cutter cuts.

**21. RS232 Protocol**

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

**22. Code page**

The character set table.

**23. Media**

The media type in use.

**24. Calibration mode**

There are intelli mode or smart mode.

Intelli mode: Just install labels, latch print module, press FEED button once, and then the printer will feed 1-2 labels to detect next gap / black mark before printing. The printer will feed 1-2 labels automatically before printing, if FEED button is not pressed.

Smart mode: Print from the first label immediately according to label length setting. Make sure to carefully align label bottom edge at the tear-off position before printing.

**25. Backfeed Enabled/Disabled**

Enable or disable backfeed during the printing process. When it is enabled, the printer moves the paper forward in a predefined length 1 second after printing, and pulls the paper back in a predefined length once the printing begins again. When it is disabled, the printer won't move the paper at all.

**26. Cutter Enabled/Disabled**

Enable or disable the cutter during the printing process.

**27. Dispenser Enabled/Disabled**

Enable or disable the dispenser during the printing process.

**28. Cutter/Dispenser Offset**

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

**29. IP Address**

The static IP address of the printer. The default value is "192.168.1.1".

**30. Subnet Mask**

The manually specified subnet mask of the printer. The default value is "255.255.255.0."

**31. Gateway**

The manually specified gateway of the printer. The default value is "0.0.0.0."

**32. MAC Address**

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

**33. DHCP**

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

**34. DHCP Client ID**

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

**35. DHCP Host Name**

The name of a DHCP client.

**36. SNMP**

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

**37. Socket Communication**

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

**38. Socket Port**

The socket number of the printer.

**39. IPv6 Mode**

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

**40. IPv6 Type**

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

**41. IPv6 Address**

The static IPv6 address of your printer.

**42. Link Local**

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

**43. Product SN**

The serial number of product.

**44. USB SN**

The Serial number of USB host.

**45. TPH and Cutter Offset**

For developers to debug.

**46. Reflective Sensor Gap Calibration**

For developers to debug.

**47. See-Through Sensor Gap Calibration**

For developers to debug.

**48. Reflective Sensor Profile**

For developers to debug.

**49. See-Through Sensor Profile**

For developers to debug.

**50. Ribbon Sensor Profile**

For developers to debug.

**51. Reflective Sensor Offset**

For developers to debug.

**52. See-Through Sensor Offset**

For developers to debug.

**53-57. Font Image**

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

**58-63. TPH Test Pattern**

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

If your printer has a Wi-Fi module, your PPLB configuration label will contain the following entries:

```
WLAN FW VERSION:  1.00─────────────────── 1
           DATE: 2015.05.26───────────── 2
WLAN IP ADDRESS: 0.0.0.0──────────────── 3
WLAN SUBNET MASK: 0.0.0.0─────────────── 4
WLAN GATEWAY: 0.0.0.0 ────────────────── 5
WLAN MAC ADDRESS: 00-80-92-4F-77-35───── 6
WLAN DHCP: AUTO ──────────────────────── 7
WLAN DHCP HOSTNAME: 00-80-92-4F-77-3──── 8
               : 5
WLAN SOCKET PORT: 9100 ───────────────── 9
WLAN SSID: WIRELESS PRINTER───────────── 10
WLAN MODE: Infrastructure ────────────── 11
WLAN COUNTRY CODE: USA ───────────────── 12
WLAN CHANNEL: AUTO ───────────────────── 13
WLAN NETWORK AUTHENTICATION: Open ────── 14
WLAN WEP: OFF─────────────────────────── 15
```

**1. FW Version**

WLAN board firmware version.

**2. Date**

WLAN board firmware version date.

**3. IP Address**

The IP address of your printer. When DHCP is enabled, it shows the automatically assigned IP address; when DHCP is disabled, it shows the manually specified IP address.

**4. Subnet mask**

The netmask of your printer. When DHCP is enabled, it shows the automatically assigned netmask; when DHCP is disabled, it shows the manually specified netmask.

**5. Gateway**

The gateway of your printer. When DHCP is enabled, it shows the automatically assigned gateway; when DHCP is disabled, it shows the manually specified gateway.

**6. Mac address**

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

**7. DHCP**

When DHCP is enabled, it assigns an IP address to your printer automatically.

**8. DHCP Hostname**

The name of a DHCP client.

**9. Socket Port**

The socket number of the printer.

**10. SSID**

Short for service set identifier. It is the name of a wireless local area network.

**11. Mode**

There are ad-hoc and infrastructure mode. Refer to Print Tool Network type description from Technical manual.

**12. Country Code**

The country or region.

**13. Channel**

The Wi-Fi channel.

**14. Network Authentication**

There are six mode. Refer to Printer Tool Network authentication description from Technical manual.

**15. WEP**

Refer to Printer Tool Wep description from Technical manual.

■    PPLA

■   PPLZ

```
LABEL PRINTER WITH FIRMWARE
I4-250-V01.03 20170103 PPLZ
STANDARD RAM : 32M BYTES
AVAILABLE RAM : 3676K BYTES
FLASH TYPE : ON BOARD 16M BYTES
AVAILABLE FLASH : 1118K BYTES
NO. OF DL SOFT FONTS(FLASH) :   3
NO. OF DL SOFT FONTS(RAM)   :   0
NO. OF DL SOFT FONTS(HOST)  :   0
H. POSITION ADJUST.: 0000
SEE-THRU SENSOR
REF: 00A3 SEE: 00A2
RTC TIME: 1/24/17(13:27:38)
MAX LABEL HEIGHT: 100 INCHES
PRINT WIDTH: 801 DOTS
LAB LEN(TOP TO TOP): 79mm
SPEED: 5 IPS
ABS. DARKNESS: 16
TRIM. DARKNESS: 0
THERMAL TRANSFER
PRINT LENGTH: 0M
CUT COUNT:0
RS232: 9600, 8, N, 1P, XON/XOFF
CARET CONTROL CHAR    : <^>   5EH
DELIMITER CONTROL CHAR : <,>   2CH
TILDE CONTROL CHAR    : <~>   7EH
CODE PAGE : USA1
MEDIA : NON-CONTINUOUS
CALIBRATION MODE: INTELLI PRINT
REPRINT AFTER ERROR : ENABLED
BACKFEED ENABLED
CUTTER DISABLED
PEELER DISABLED
CUTTER/PEELER OFFSET: 0 (+-0.01mm)
IP ADDRESS: 0.0.0.0
SUBNET MASK: 0.0.0.0
GATEWAY: 0.0.0.0
MAC ADDRESS: 00-00-00-00-00-00
DHCP: ENABLED
DHCP CLIENT ID: FFFFFFFFFFFFFFFF
               FFFFFFFFFFFFFFFF
DHCP HOST NAME:
SNMP: DISABLED
SOCKET COMM.: ENABLED
SOCKET PORT: 9100
IPV6 MODE: MANUAL
IPV6 TYPE: NONE
IPV6 ADDRESS: 0000:0000:0000:0000:
             0000:0000:0000:0000
LINK LOCAL  : 0000:0000:0000:0000:
             0000:0000:0000:0000
WLAN FW VERSION:  1.00
          DATE: 2015.05.26
WLAN IP ADDRESS: 0.0.0.0
WLAN SUBNET MASK: 0.0.0.0
WLAN GATEWAY: 0.0.0.0
WLAN MAC ADDRESS: 00-80-92-4F-77-35
WLAN DHCP: AUTO
WLAN DHCP HOSTNAME: 00-80-92-4F-77-3
               5
WLAN SOCKET PORT: 9100
WLAN SSID: WIRELESS PRINTER
WLAN MODE: Infrastructure
WLAN COUNTRY CODE: USA
WLAN CHANNEL: AUTO
WLAN NETWORK AUTHENTICATION: Open
WLAN WEP: OFF
PRODUCT SN: 00000000001
USB SN: 000000000001
ot(0,0)<0.1dot,0.01mm>
rm(0,0)<1+ 0-,0.01mm>
sm(0,0)<1+ 0-,0.01mm>
rv(212,125,87)<0.01v><P>
sv(282,181,110)<0.01v><P>
bv(329,9,320)<0.01v><P>
rso(0)<0.01mm>
sso(0)<0.01mm>
THIS IS FONT A. 0123ABCabc
THIS IS FONT B. 0123ABCabc
THIS IS FONT C. 0123ABCabc
THIS IS FONT D. 0123ABCabc
THIS IS FONT E. 0123ABCabc
THIS IS FONT F. 0123ABCabc
THIS IS FONT G.
THIS IS FONT H. 0123ABC
This Is Font CG Triumv Bd Condensed.
```
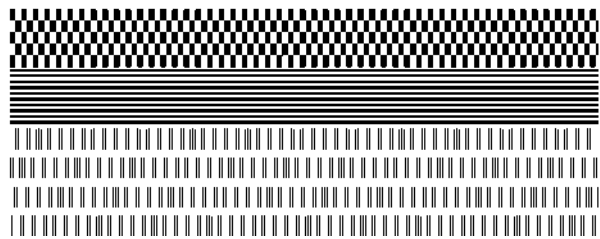
# 3.4 Resetting to Factory Default Settings

Be cautioned that this will reset all printer settings back to defaults; if possible, print the configuration label in advance before reset. All settings stored in FLASH memory are retained even after turning off the printer. Printer mode without LCD can see indicators.

To *reset the printer to factory default settings:*

1. Turn off the printer.

2. Press and hold the **CANCEL** button and turn on the printer.

3. When "RESET …" is displayed on the LCD and the READY indicator blinks, release the **CANCEL** button.

4. When "READY" is displayed on the LCD, the READY indicator stops blinking but remains illuminated.


5. The following information is now back to defaults:

   - Label parameters

   - Heat (Darkness)

   - Speed

   - Others for specific emulation


For more detail information, refer to CH 3.1.1 NO.26 Load default

> **Note:**
>
> Print length meter which indicates label length already printed cannot be reset.

# 3.5 Media sensing

Printer offer two types of media sensor: transmissive and reflective. They are used for detecting specific media types. Both sensor types are installed together as a movable module.

## 3.5.1   Transmissive sensor

The transmissive sensor is used for detecting gaps across the entire width of the label.
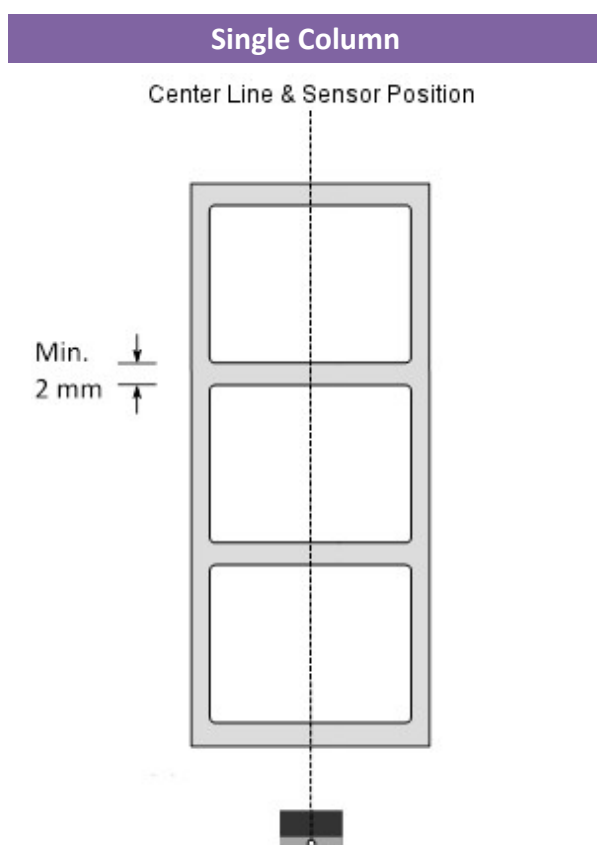
## 3.5.2   Reflective sensor

The reflective sensor detects gaps, notches and black marks.

| Multi Columns | Notch |
|---|---|

Sensor Position

Min.
2 mm

Sensor Position
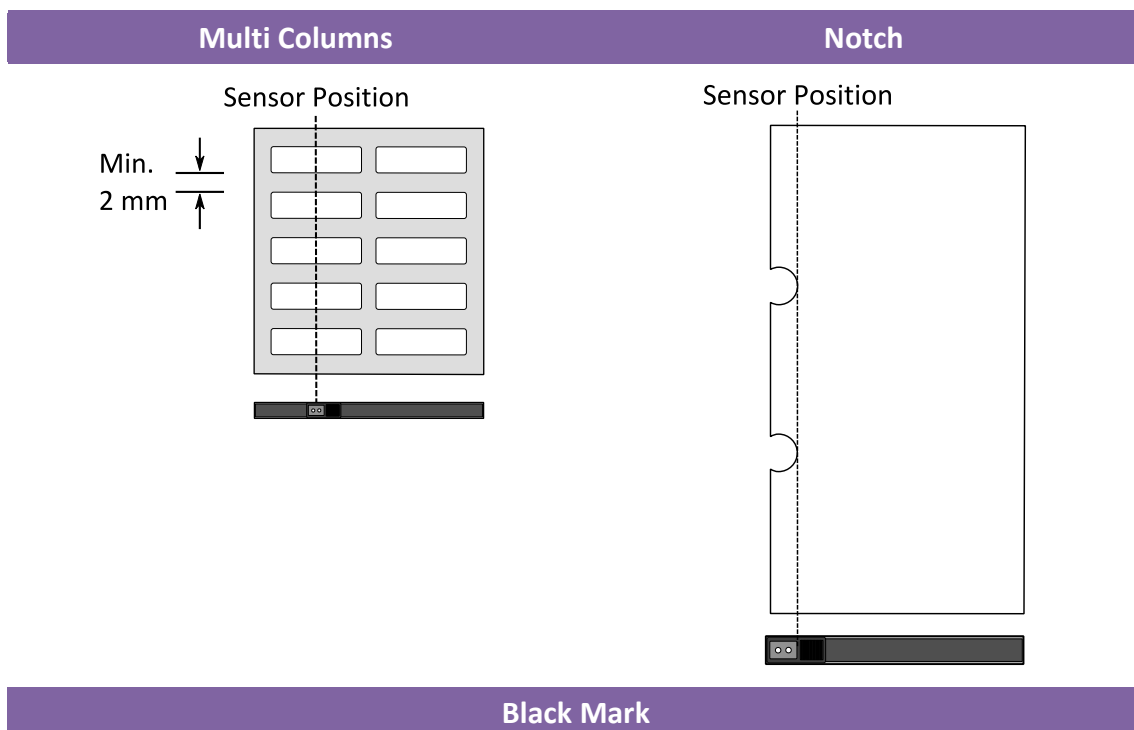
| Black Mark | |
|---|---|

Flip the media so the black-mark side is facing down to align with the sensor.

Min.
2 mm
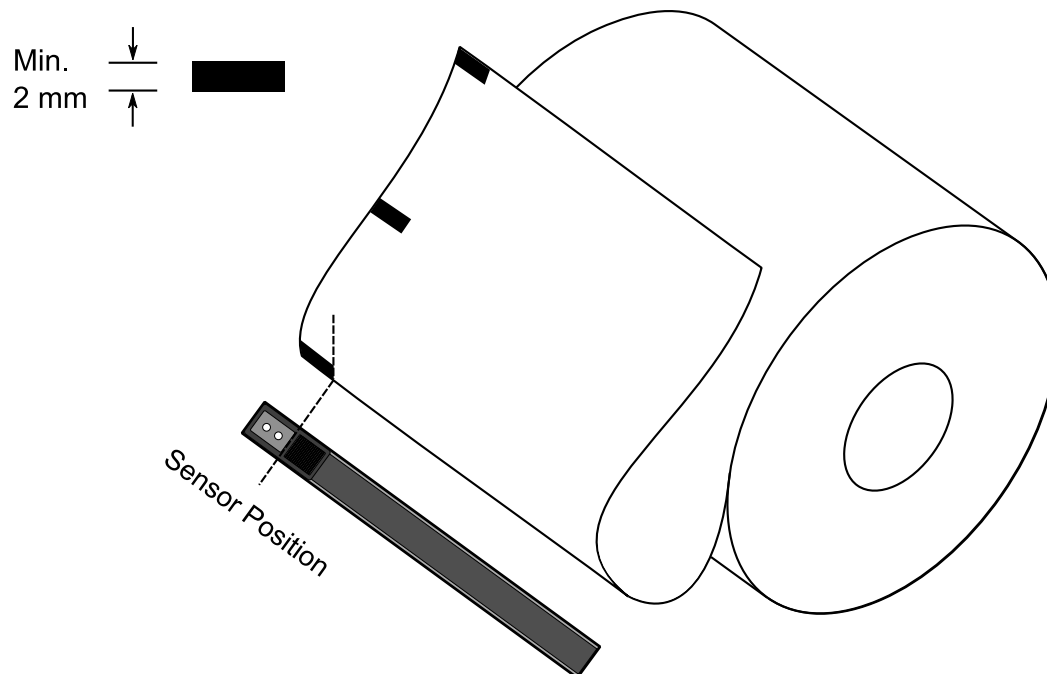
Sensor Position

## 3.5.3   Adjust Position of Label Sensor

Function of the label sensor is to detect the gap, notch, or holes of labels, to help the printer for accurate print positions and label length. For labels with gaps, label sensor can be positioned wherever media locates. If labels with notches or holes are in use, follow the steps below to check position of the label sensor:

- Unlatch the Print head Latch. (as Load Ribbon)

Head Latch

Bracket
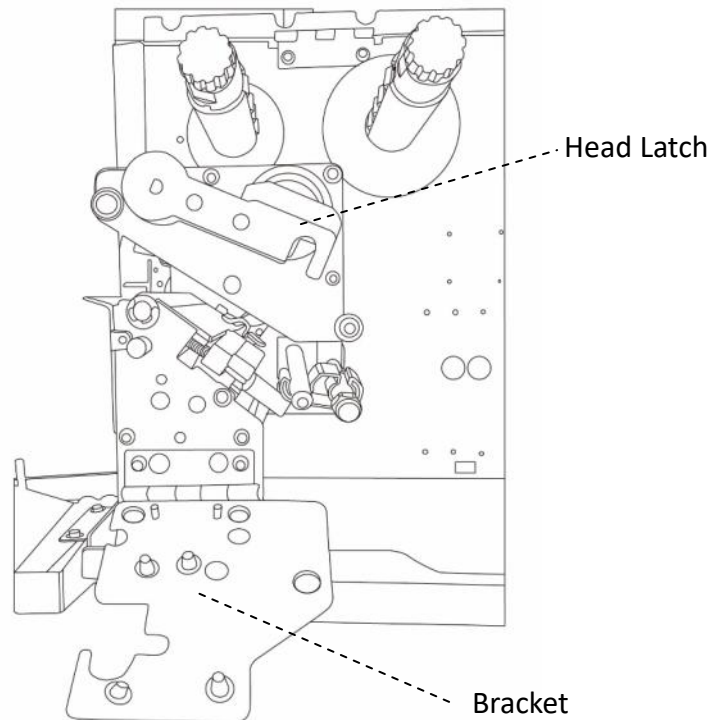
- Pull down Paper Sensor Position Lever, to horizontally adjust position of label sensor.

Paper Sensor
Position Lever
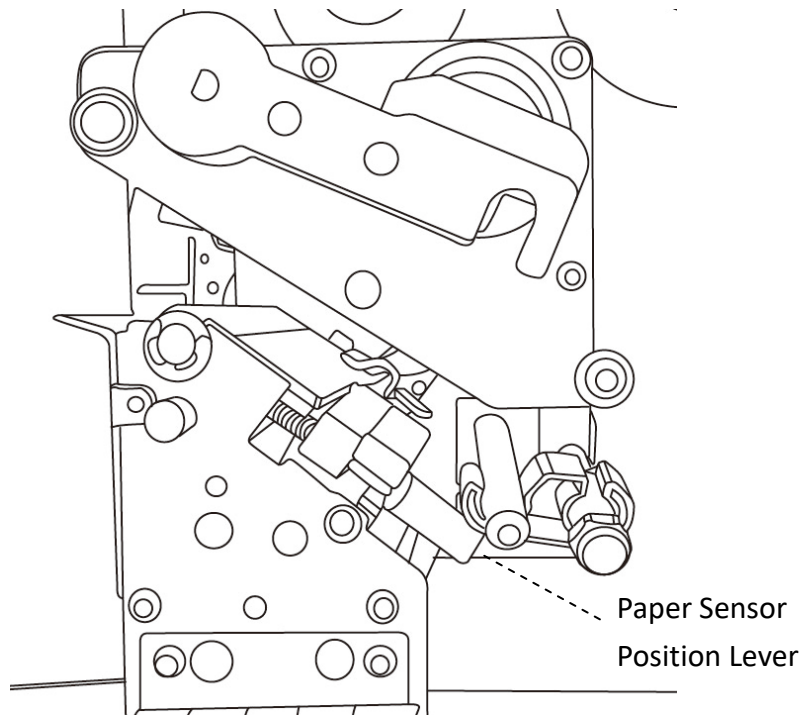
- Make sure the Media sensor position mark locates right on notch or hole of labels.

   Check below.



Media sensor
holder

Media sensor
position mark

(Front View)
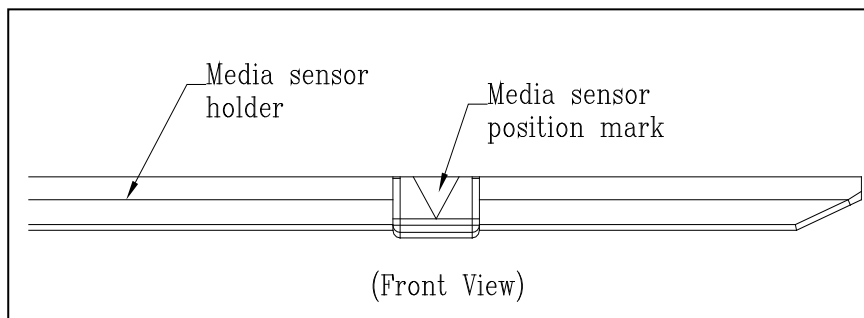
# 3.6  Communications

## 3.6.1  Interfaces and Requirements

This printer comes with USB type A and type B interface, a nine-pin Electronics Industries Association (EIA) RS-232 serial data interface, a standard Centronics parallel interface(Option), GPIO interface(Option), .

### ■ 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 RS-232C in this manual.

### ■ Centronics Parallel Port(Option)

You can connect the printer to the host computer's parallel port using any standard Centronics cable. The required cable must have a standard 36-pin parallel connector on one end, which is plugged into the parallel port located on the back of the printer. The other end of the parallel interface cable connects to the printer connector at the host computer. For pin-out information, please refer to Centronics in this manual.

> **Note**
> Centronics allows a much higher communication speed than serial.

## ■   General-purpose input/output (GPIO)

Pins depend on usage and the signal is user selectable. The function is diversity. For general-purpose, I/O signals programmed as inputs can cause CPU interrupted. For more information, contact local dealer.

## ■   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 20~30 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 |

# 3.7  Driver installation

The bundled printer driver can be applied to all applications under Windows
XP/ 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.


Drivers can be downloaded from Argox website

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

> **Note:**
>
> 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.)

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".
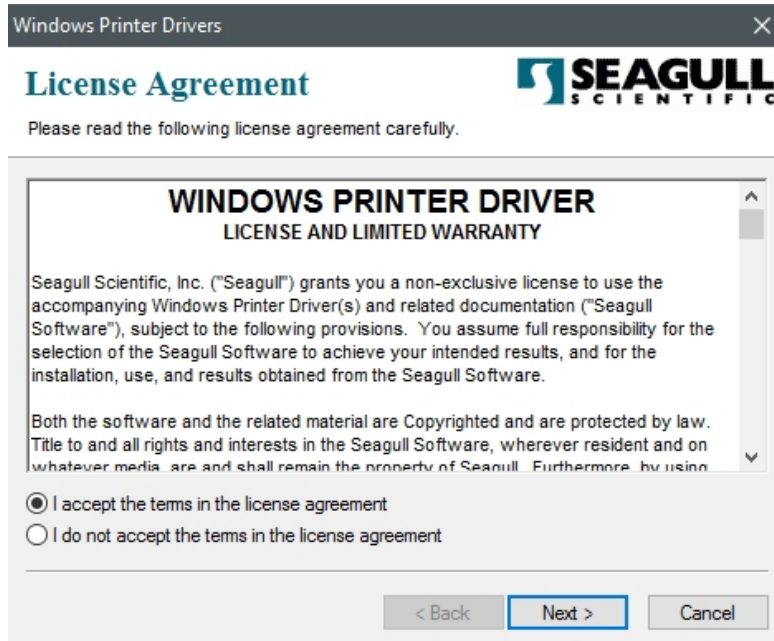


4.  Assign the directory to keep Seagull driver, (for example: C:\Seagull) and click "Next".

5. Click "Finish".



6. Select Install printer drivers and Click "Next"
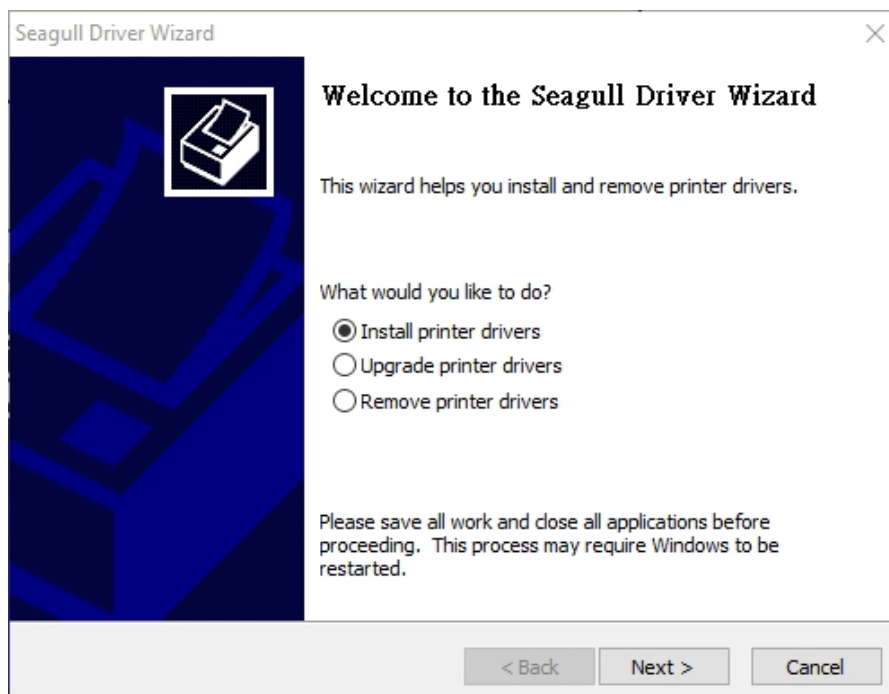
7.  On the Seagull Driver Wizard prompt, select the first radio button to "Install a driver for a Plug and Play printer" Then click "Next."
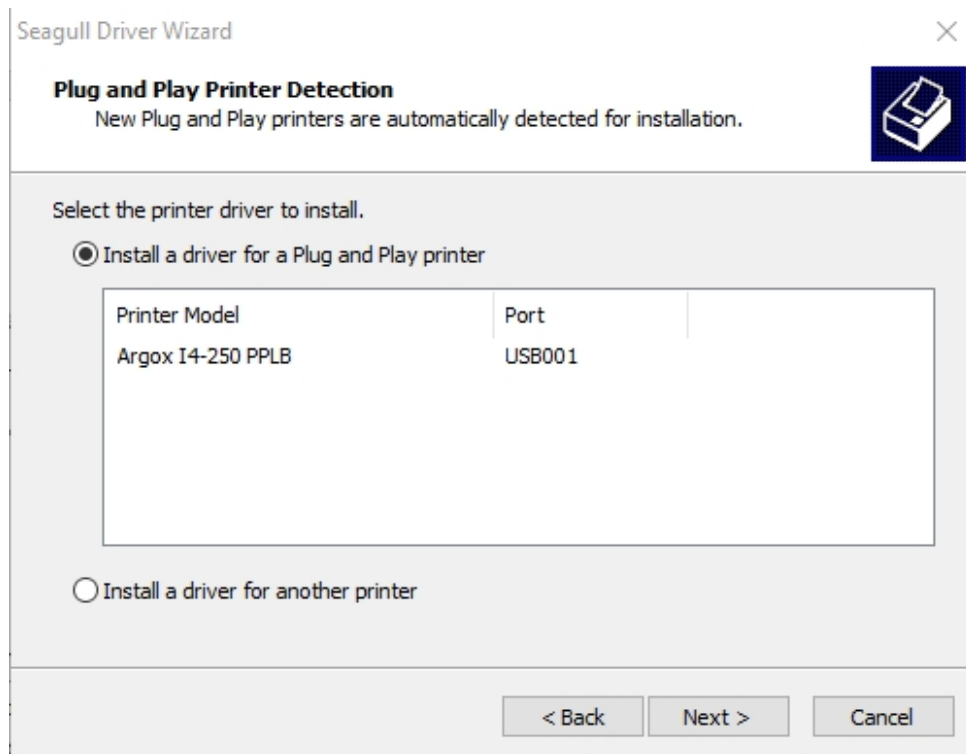


8.  Enter Printer name (i.e. Argox I4-250 PPLB) and select "do not share this printer", and click "Next"
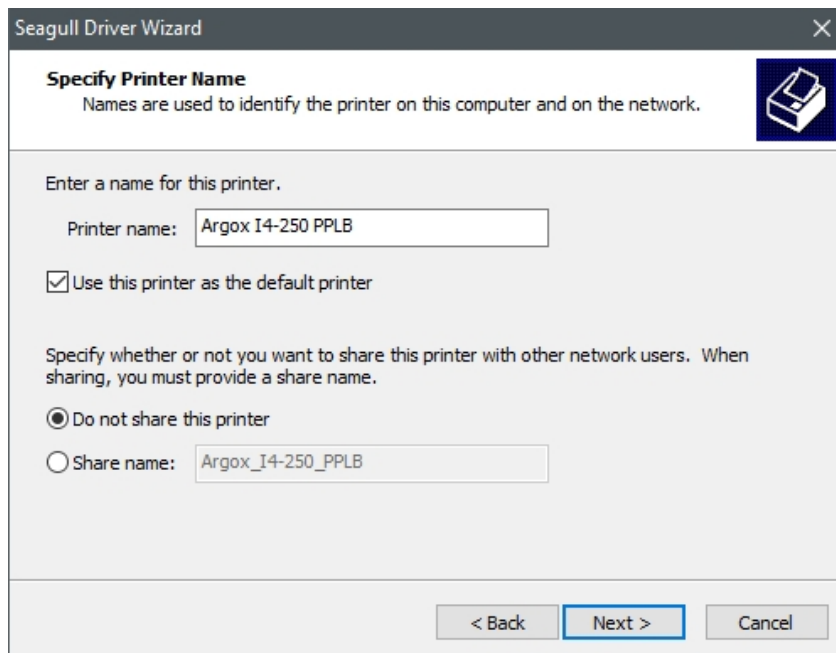
9.  Check all the data on the showing screen, if it is correct, click "Finish".
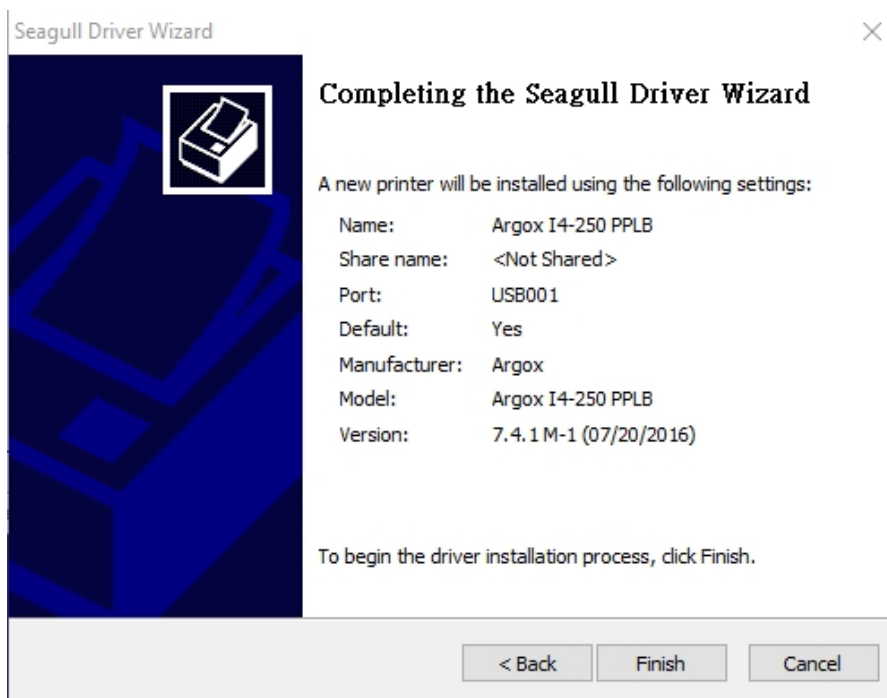


10. After the related files have been copied to your system, click "Finish".
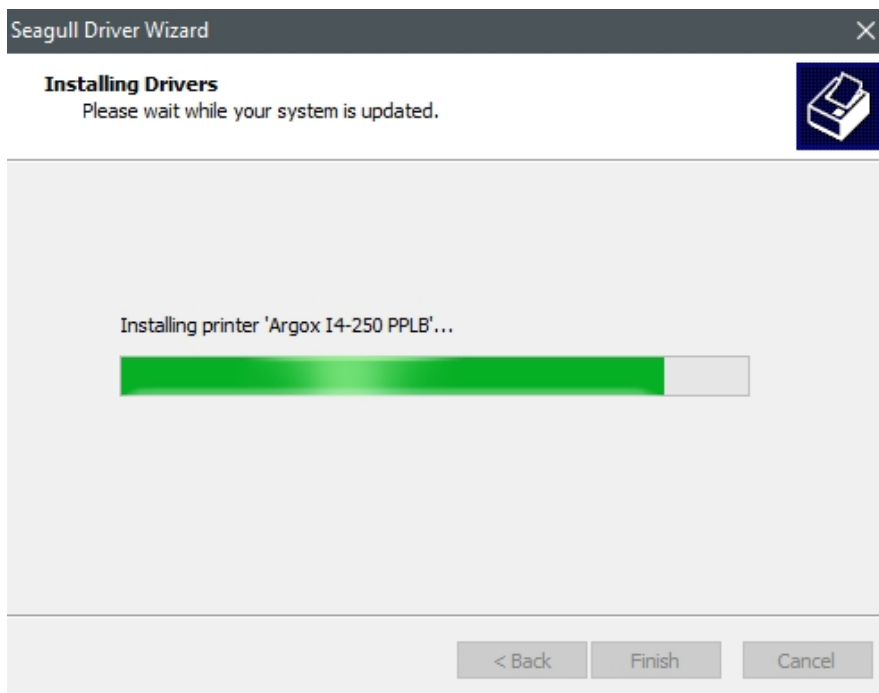
11. After driver installation is complete, click "Close". The driver should now be
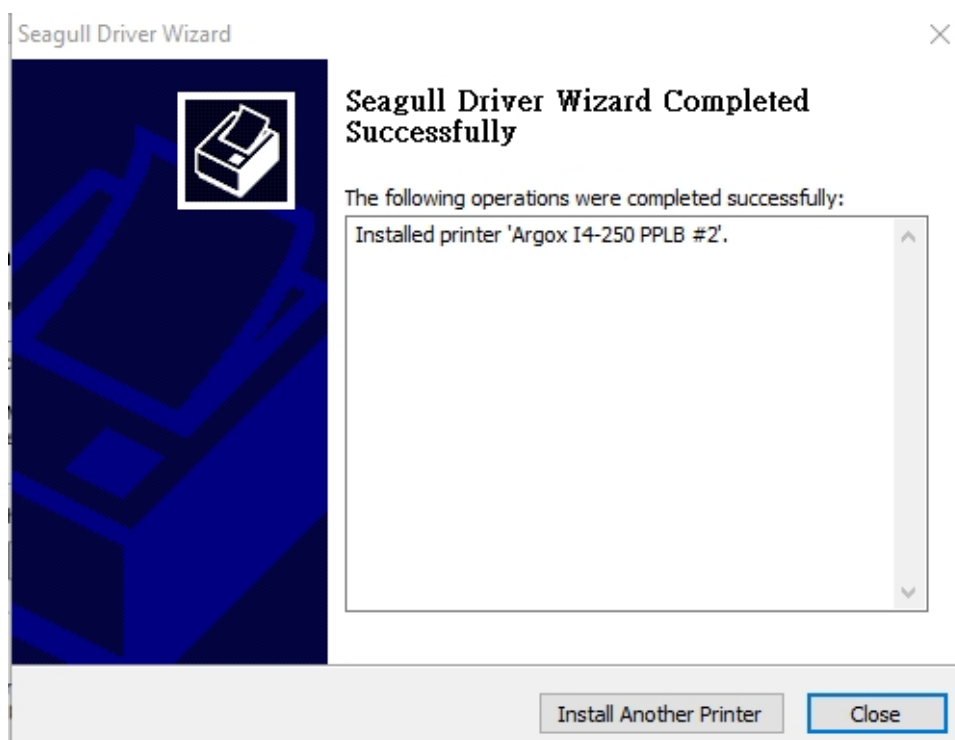
installed.

# 3.7.2   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.

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".

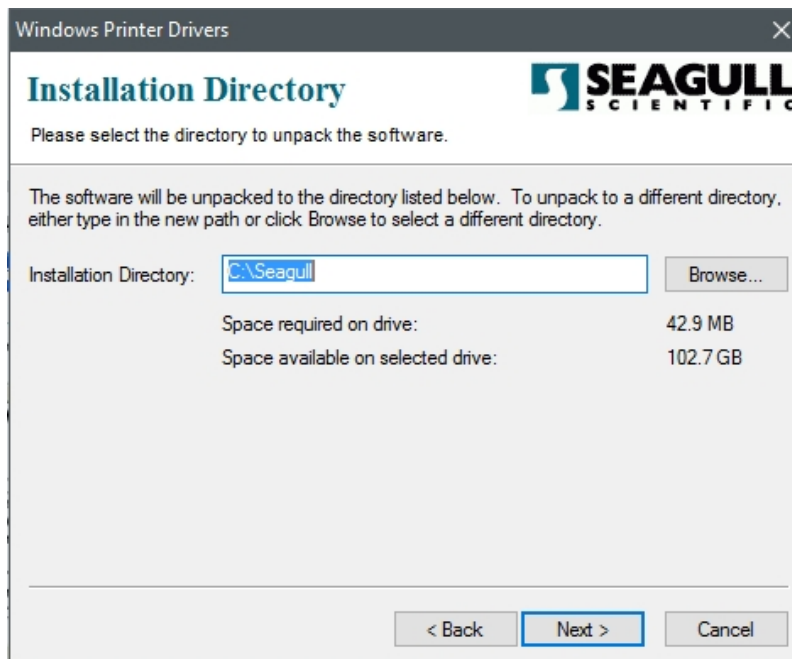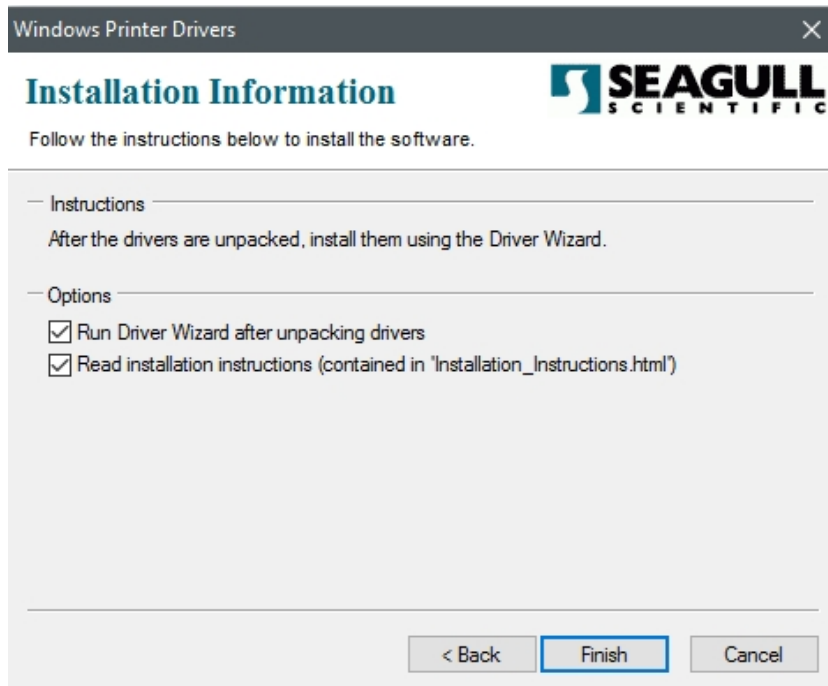**Windows Printer Drivers**                                               ✕

## Installation Directory                          🖺 **SEAGULL**
                                                        **S C I E N T I F I C**

Please select the directory to unpack the software.

The software will be unpacked to the directory listed below. To unpack to a different directory, either type in the new path or click Browse to select a different directory.

Installation Directory:   C:\Seagull                              Browse...

               Space required on drive:                   42.9 MB
               Space available on selected drive:         110.3 GB

                                          < Back    Next >    Cancel

4. Click "Finish".

**Windows Printer Drivers**                                               ✕

## Installation Information                        🖺 **SEAGULL**
                                                        **S C I E N T I F I C**

Follow the instructions below to install the software.

Instructions

After the drivers are unpacked, install them using the Driver Wizard.

Options
☑ Run Driver Wizard after unpacking drivers
☑ Read installation instructions (contained in 'Installation_Instructions.html')

                                          < Back    Finish    Cancel

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5. Select Install printer drivers and Click "Next"



6. Make sure printer is connected to PC, select "Other" and click "Next":
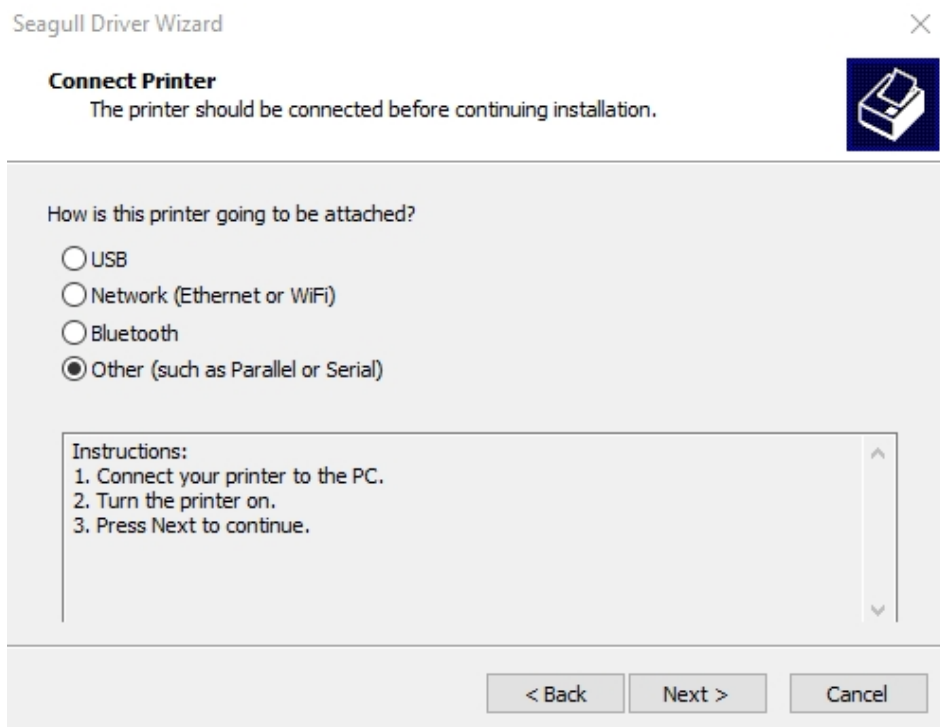
7. Select model & emulation - the following examples are based on model I4-250
   PPLB:
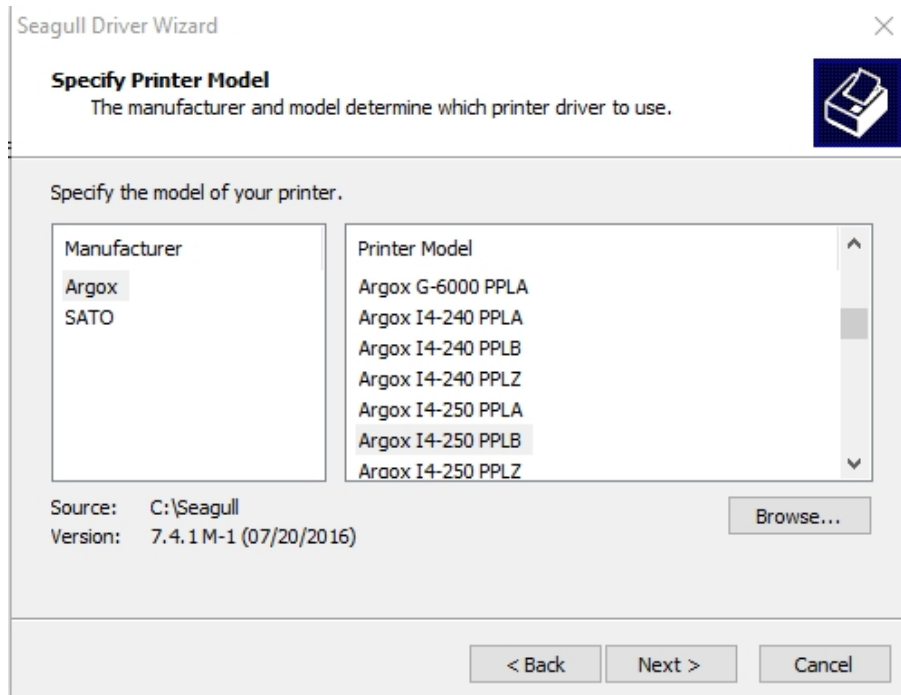


8. Select the port of the printer and click "Next".
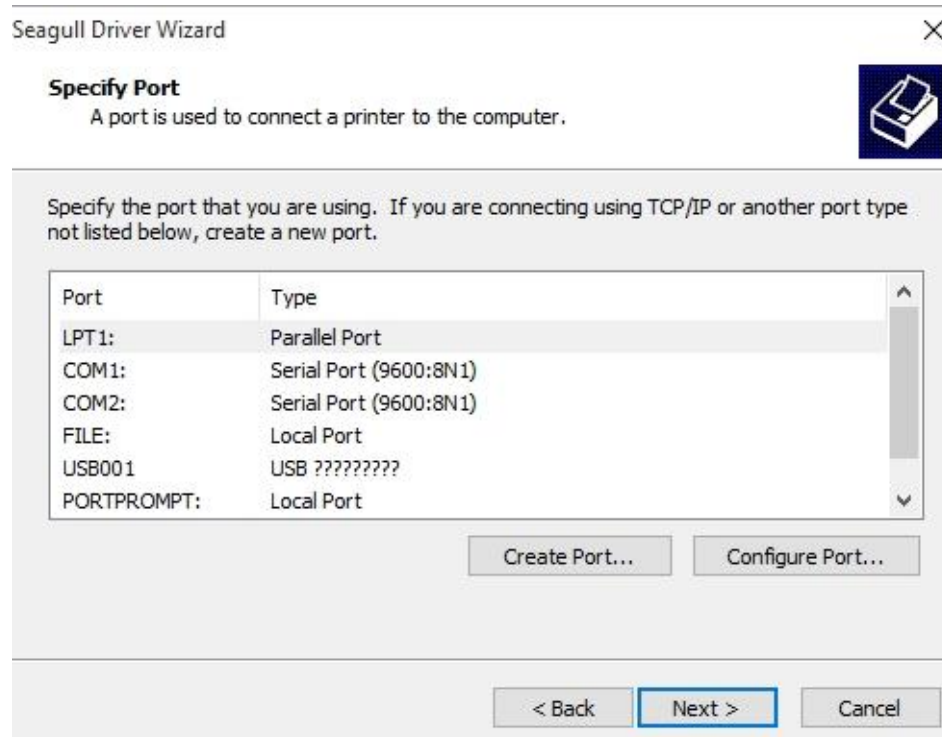
9.  Enter Printer name (i.e. Argox I4-250 PPLB) and select "do not share this printer",

and click "Next".
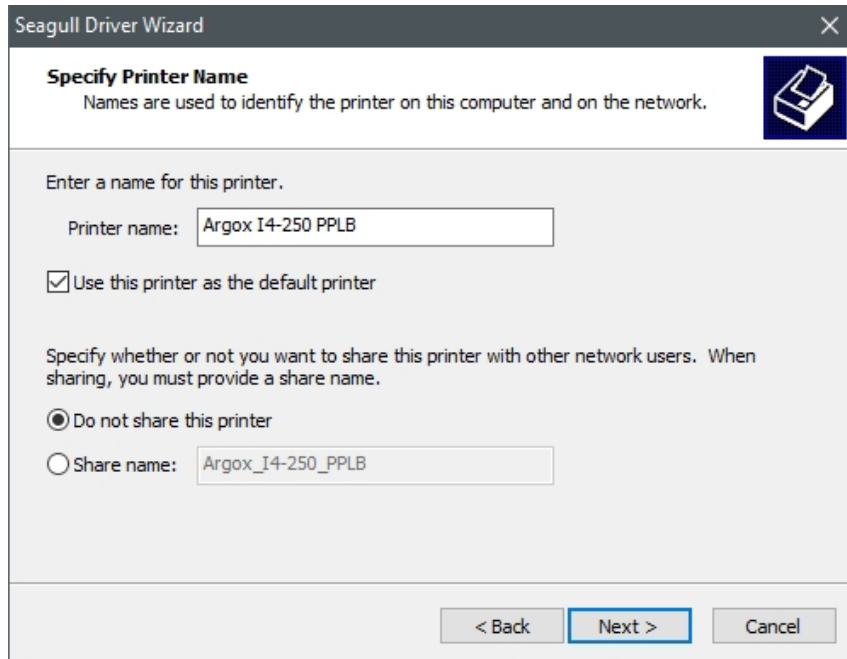


10.  Check all the data on the showing screen, if it is correct, click "Finish".
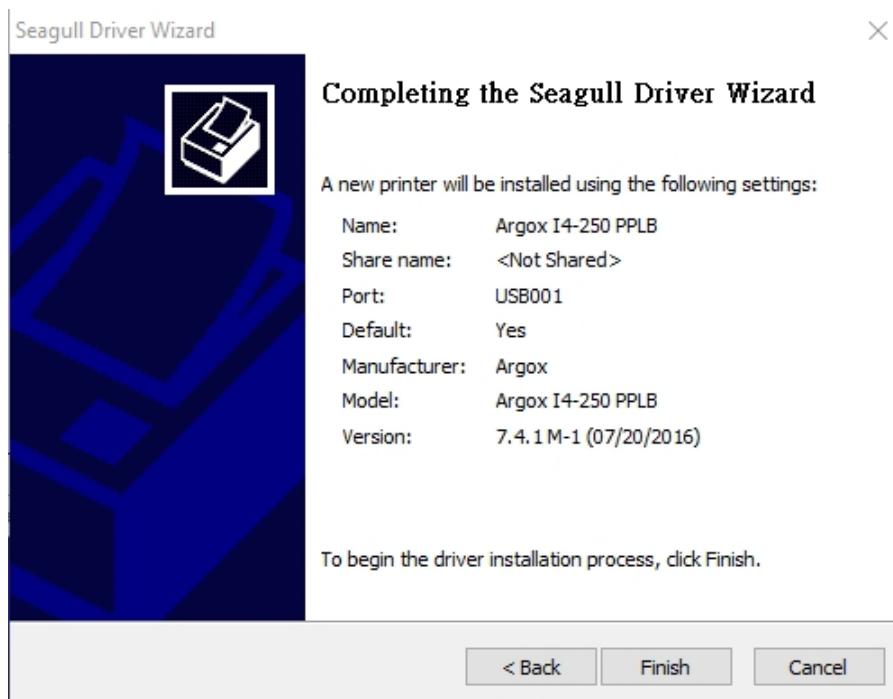
11. After the related files have been copied to your system, click "Finish".
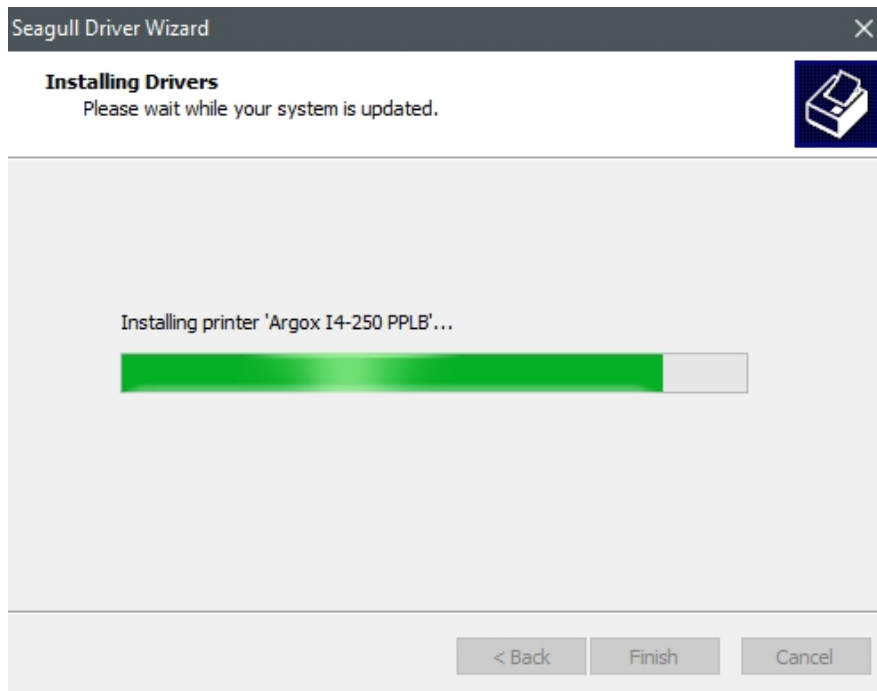


12. After driver installation is complete, click "Close". The driver should now be installed.
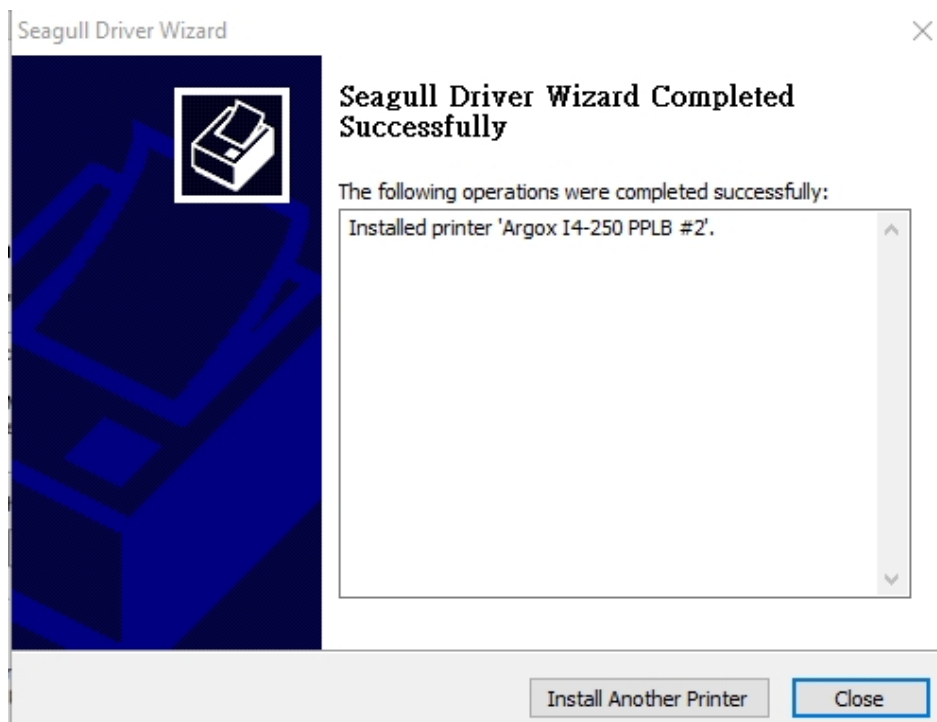
# 4 Maintenance

Vertical streaks in the printout usually indicate a dirty or faulty print head. (Refer to the following examples.) Clean the print head. If the problem persists, replace the print head.
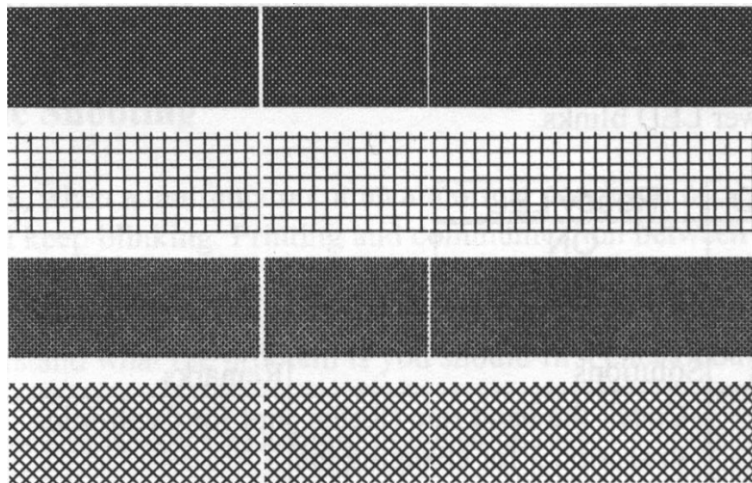


For unstable ribbon roll rotation, check the label path and make sure the head latch is securely closed.

Poor printout quality:

- The ribbon may not match the media in use.
- Adjust the Darkness (heat temperature).
- Slow down the print speed.
- Refer to the following and clean the related spare parts.

# 4.1 Cleaning

To maintain print quality and prolong the printer's life, you need to perform some routine maintenance. Daily maintenance should be done for high volume printing, and weekly for low volume printing.

> ⚠️ **Warning**　Always turn off the printer before cleaning.

## 4.1.1　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. Moisten a soft cloth or a cotton swab with ethyl alcohol.

2. Gently wipe the printhead in one direction. That is, wipe it only from left to right or vice versa. Do not wipe back-and-forth, in case dust or dirt attaches to the printhead again.

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

## 4.1.2   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.

# 4.2 RTC Battery Replacement

RTC stands for real-time clock. It is a battery powered clock that keep track of the current date and time. If your printer has a built-in RTC, you'll find the RTC battery on the main board. The RTC battery keeps the RTC running even if the printer is turned off. If the battery is low or out, you need to replace it with a new one.

To replace a RTC battery:

1.   Open the left cover of printer. Turn off the printer.
2.   Locate the battery on the main board.
3.   Remove the old coin battery and install a new one.
4.   Turn on the printer.
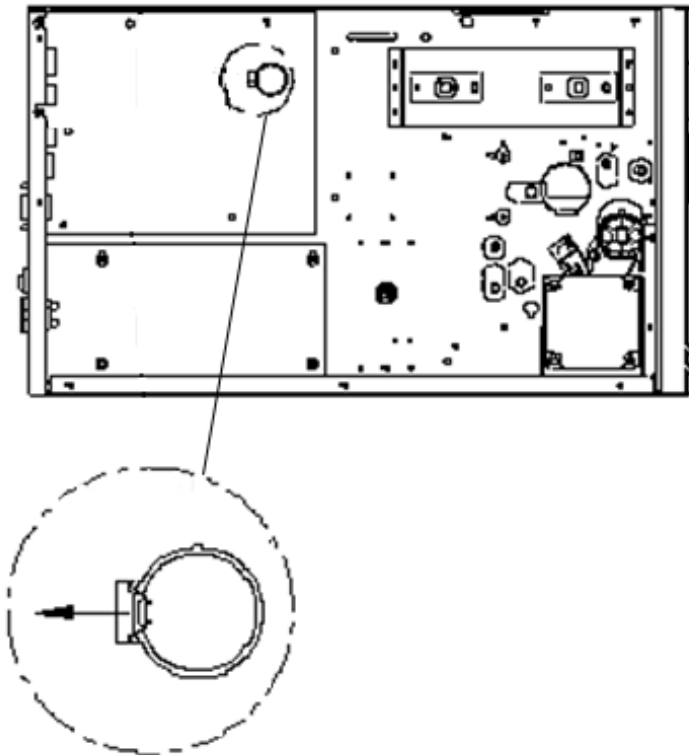


**CAUTION:**

Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

# 5  Troubleshooting

This chapter provides the information about printer problems and solutions.

## 5.1  Printer issues

### The printer won't turn on

- Did you attach the AC power cord?

- 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.

- 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.

# 5.2 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 3.2, "Printing Media Calibration & Configuration" 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.

- Make sure the media and ribbon are both matched.

**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 appropriate media roll instead.

# 5.3  Ribbon issues

### The ribbon is out

■    Load a new ribbon roll.

### The ribbon is broken

■    Check the print darkness and adjust it if it is too high, and take the following steps to fix the broken ribbon:

1.    Unload the ribbon supply roll and take-up roll from the printer.

2.    Pull the ribbon from the supply roll so it overlaps the broken end of the take-up roll.

3.    Tape the overlapped parts together.

4.    Reload both rolls into the printer.

### The ribbon is "printed out" with the media

■    The ribbon is not loaded correctly. See Section 2.4, "Loading Ribbon" to reload the ribbon.

■    The printhead temperature is too high. Reload the ribbon and print a configuration label to check the settings (See Section 3.2, "Printing Media Calibration & Configuration"). If the print darkness is very high, adjust it in printer preference, or reset your printer (see Section 3.3, "Resetting to Factory Default Setting").

### The ribbon is wrinkled

1.    Make sure the ribbon is loaded correctly.

Rotate Thumb Wheel of Ribbon spindles to straighten the ribbon.

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# 5.4  Other issues

### There are broken lines in the printed label

■    The printhead is dirty. Clean the printhead.

### 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.

# 6   Specifications

This chapter provides specifications for the printer.

## 6.1   Printer

| Model | I4-240 | I4-250 | I4-350 |
|---|---|---|---|
| Print method | Direct Thermal & Thermal Transfer | | |
| Resolution | 203 dpi (8 dots/mm) | | 300 dpi (12 dots/mm) |
| Operation Mode | Standard: Continuous mode, Tear-off mode<br>Optional: Cutter mode, Peeler mode | | |
| Sensor | Media Reflective sensor x 1 (movable) &<br>Media Transmissive sensor x 1 (movable) /<br>Head open switch / Ribbon end sensor | | |
| Operation interface | LED indicator x 3,<br>Button x 3 | LED indicator x 3, Button x 3, RTC battery,<br>LCD display | |
| Battery for RTC | Type: CR2032, +3V, 225mAh | | |
| Print Speed | 2-6 ips<br>(51~152 mm/s) | 2-8 ips<br>(51~203 mm/s) | 2-6 ips<br>(51~152 mm/s) |
| Print Length | Max 100"(2540 mm)<br>Min 0.2"(5mm) | | 50"(1270mm)<br>0.2"(5mm) |
| Print Width | 4.25" (108 mm) | | 4.08" (103.7 mm) |
| Communication Interface | Standard: Ethernet, dual USB hosts, USB device, RS-232<br>Option: Wi-Fi (IEEE 802.11 b/g/n), GPIO, Parallel, Buzzer | | |
| Programming Language | Standard: PPLA+PPLB+PPLZ | | |
| Accessories | Guillotine - Full Cutter / Partial Cutter,<br>Rotary Cutter, Peeler, Rewinder | | |
| Onboard Memory | 32 MB SDRAM (3.6 MB User Available)<br>16MBFlash ROM (8.4 MB User Available)<br>USB storage up to 32 GB (FAT32 format only) | | |
| CPU Type | 32 bit RISC microprocessor | | |
| Software---Label editing | Windows Driver (Windows XP/Vista/ Win 7/    Win 8/<br>Win 10), BarTender®    from Seagull    Scientific | | |

| Model | I4-240 | I4-250 | I4-350 |
|---|---|---|---|
| Software--- Utility | Printer Tool | | |
| Agency Listing | CE, FCC, CB/LVD, cULus, ICES, Energy Star | | |

> **Note**   Print quality and speed is based on 15% print coverage.

# 6.2  Media & Ribbon

| Properties | Description |
| --- | --- |
| **Media Size** | Max. width:4.4" (112mm).<br>Min. width: 1" (25.4 mm).<br>Thickness:0.0025"~0.01" (0.0635mm~0.254mm)<br>8"(203mm) OD on a 3"(76mm) ID core.<br>7"(177.8mm) OD on a 1.5"(38mm) ID core.<br>Min. width 2.3" (58mm)for partial cutter options.<br>Min. length 1"(25.4mm)for cutter options. |
| **Media Type** | Roll-feed, die-cut, continuous, fan-fold, tags, ticket or plain paper or label. |
| **Ribbon Size** | Width:1"~4"(25.4 mm~112 mm)<br>Length: max 360m Wax, 300m Semi-Resin.<br>Max OD 3" (76 mm).<br>Core size ID 1"(25.4 mm). |
| **Ribbon Type** | Wax, Wax/Resin, Resin (Ribbon wound ink-side out or ink-side in) |

# 6.1  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<br>(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、<br>Code 39 with check sum digit 、Code 93、EAN-13、EAN-8 (Standard, 2 /5digit add-on) 、Codabar、Postnet、Code128 subset A/B/C、<br>Code 128 UCC (shipping container code) 、<br>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、<br>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、<br>Interleaved 2 of 5 with check sum、<br>Interleaved 2 of 5 with human readable check digit、Code 93、Code 39 with check sum digit、<br>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 |

## 6.3  Electrical and operating

## environment

| Properties | Description |
|---|---|
| **Power Supply** | Voltage: AC 100 V ~ 240 V ± 10 % (full range) |
| | Frequency: 50 Hz - 60 Hz ± 5 % |
| **Temperature** | Operating: 40°F~104°F (4°C~40°C) |
| | Storage: -4°F~122°F (-20°C~50°C) |
| **Humidity** | Operating: 25 %RH ~ 85 %RH (non-condensing) |
| | Storage: 10 %RH ~ 90 %RH (non-condensing) |

## 6.4  Physical dimension

| Dimension | Size and Weight |
|---|---|
| **Size** | W 250mm x H 263mm x D 418 mm |
| **Weight** | 11 kg(24lbs) |

## 6.5  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 | 11/5.5 Mbps: CCK |

| Properties | | Wireless LAN I/F | |
|---|---|---|---|
| | | Speed/Modulation | 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) |
| | 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: Command (PC Setting Tool) | |

| Properties | Wireless LAN I/F |
|---|---|
| Parameter Setting and Status Monitor | |

> **Note**   The specifications may be changed at any time without prior notice. For more information about the new specifications, visit Argox website or contact your dealer.

# 6.6  Interfaces

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

## 6.6.1  USB

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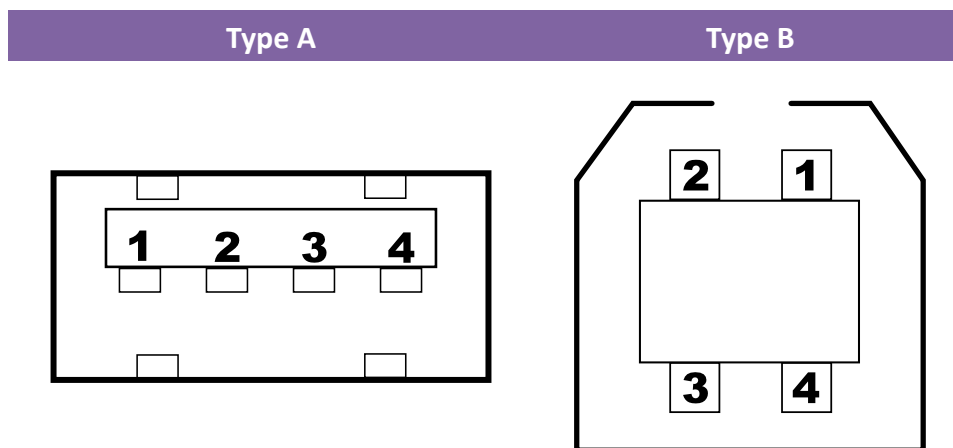
| Type A | Type B |
|--------|--------|



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

## 6.6.2   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.
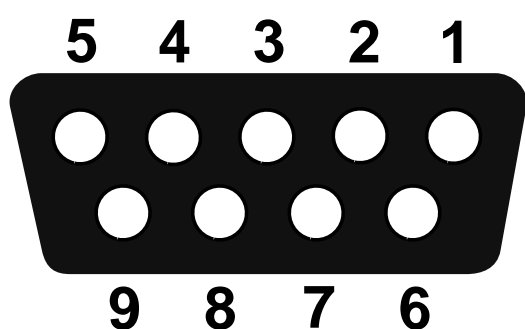


| Pin | Signal | Description |
|---|---|---|
| 1 | NA | No Function |
| 2 | TxD | Transmit |
| 3 | RxD | Receive |
| 4 | NA | No Function |
| 5 | GND | Ground |
| 6 | NA | No Function |
| 7 | CTS | Clear to Send |
| 8 | RTS | Request to Send |
| 9 | NC | No Connection |

| 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 |

## 6.6.3   Centronics

The 36-pin Centronics on the printer uses parallel communication, and complies with IEEE 1284 compatibility mode (also called SPP, Standard Parallel Port). The figure below shows its pinout.
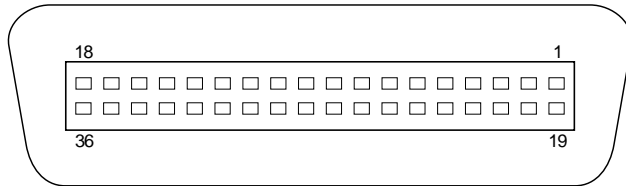


| Pin | Signal Direction | Signal | Pin | Signal Direction | Signal |
|-----|------------------|--------|-----|------------------|--------|
| 1 | To Printer | /STROBE | 19 | S-GND | Signal-GND |
| 2 | To Printer | Data 1 | 20 | S-GND | Signal-GND |
| 3 | To Printer | Data 2 | 21 | S-GND | Signal-GND |
| 4 | To Printer | Data 3 | 22 | S-GND | Signal-GND |
| 5 | To Printer | Data 4 | 23 | S-GND | Signal-GND |
| 6 | To Printer | Data 5 | 24 | S-GND | Signal-GND |
| 7 | To Printer | Data 6 | 25 | S-GND | Signal-GND |
| 8 | To Printer | Data 7 | 26 | S-GND | Signal-GND |
| 9 | To Printer | Data 8 | 27 | S-GND | Signal-GND |
| 10 | From Printer | /ACK | 28 | S-GND | Signal-GND |
| 11 | From Printer | BUSY | 29 | S-GND | Signal-GND |
| 12 | From Printer | PE | 30 | S-GND | Signal-GND |
| 13 | From Printer | SELECT | 31 | To-Printer | LPTINIT |
| 14 | To Printer | AUTO | 32 | From Printer | /FAULT |
| 15 | NC | | 33 | NC | |
| 16 | S-GND | Signal-GND | 34 | NC | |
| 17 | P-GND | Power-GND | 35 | NC | |
| 18 | Power | 5V | 36 | To Printer | SELIN |

## 6.6.4   Ethernet

The Ethernet uses RJ-45 cable, which is 8P8C (8-Position 8-Contact). The figure below shows its pinout.
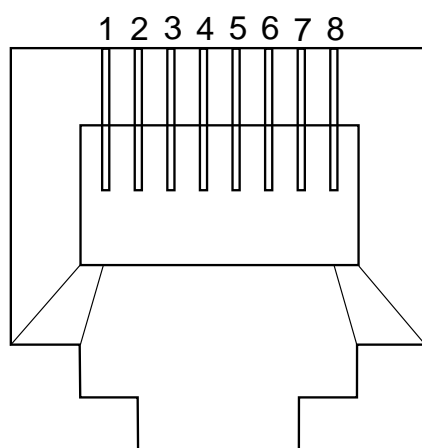
| Pin | Signal |
| --- | --- |
| 1 | Transmit+ |
| 2 | Transmit- |
| 3 | Receive+ |
| 4 | Reserved |
| 5 | Reserved |
| 6 | Receive- |
| 7 | Reserved |
| 8 | Reserved |