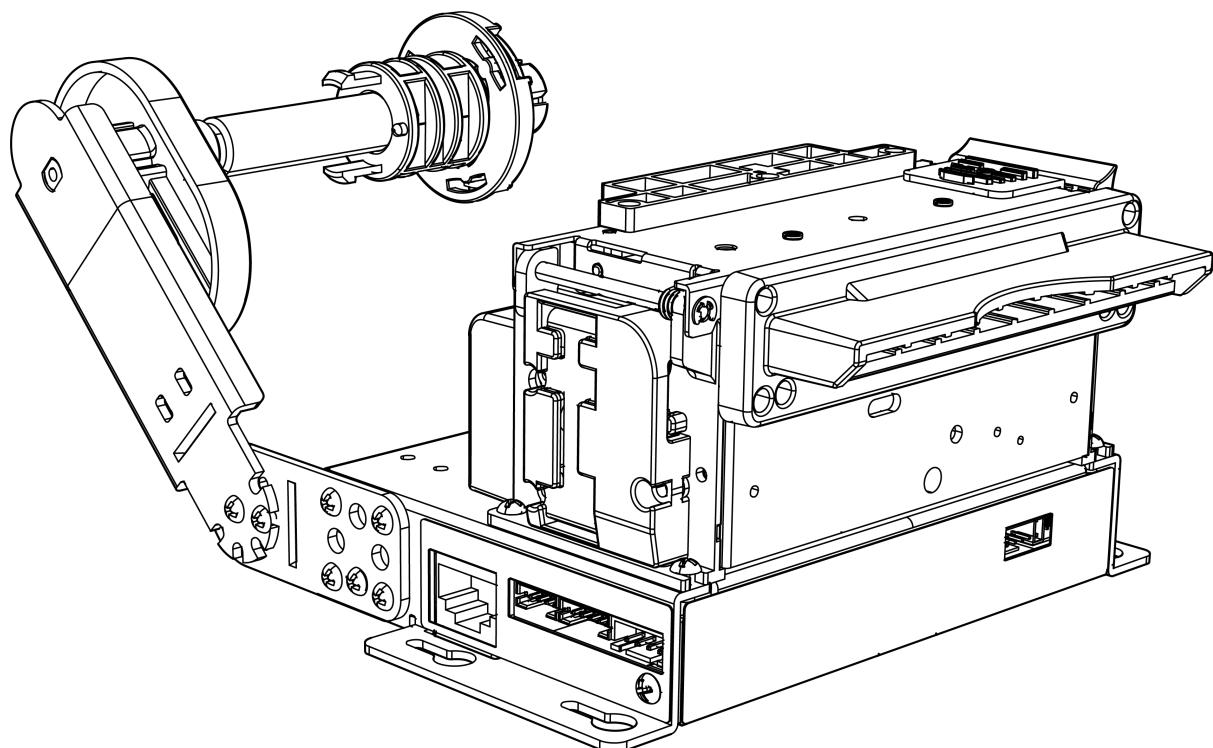


# Embedded Printer

## KP-302 User Manual



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<b>Revised records</b>					
Version	Revision date	Modify the content	Revised by	Page	Remark
V1.0	2024.08.12	The first draft	Rex	-	-
V2.0	2024.11.11	Updated pictures	MINNA		

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# Statement

The contents of this manual may not be changed at will without consent. "Xiamen Cashino Technology Co., Ltd." reserves the right to change products in technology, parts, software and hardware. If users need further information related to the product, they can contact "Xiamen Cashino Technology Co., Ltd." No part of this manual may be reproduced or transmitted in any form or by any means without the written permission of the company.

## Warning

 Warnings must be followed to avoid harm to the human body and damage to the equipment. And pay attention to the important information and tips for printer operation..

 The print head is a heating component. Do not touch the print head and surrounding components during the printing process and immediately after printing.

 Do not touch the print head and connection plug-in to avoid damage to the print head due to static electricity

## Attention

Due to continuous product improvement, the model specifications, accessories and procedures described in the manual are based on the actual machine and are subject to change without prior notice.

## Safety instructions

- Safety requirements 1) The printer should be installed in a flat and stable place;
- 2) Leave enough space around the printer for operation and maintenance;
- 3) The printer should be kept away from water sources and away from direct sunlight, strong light and heat sources;
- 4) Do not use or store the printer in places with high temperature, high humidity or serious pollution;
- 5) Avoid placing the printer in places subject to vibration and impact;
- 6) Avoid bending the power cord with force or heavy objects;
- 7) Connect the printer's power adapter to a properly grounded outlet and avoid using the same outlet with large motors or equipment that can cause power voltage fluctuations.
- 8) If the printer will not be used for a long time, please disconnect the printer power adapter;

- 
- 9) In order to ensure printing quality and product life, it is recommended to use recommended or equivalent quality paper;
  - 10) When plugging or disconnecting each interface, the power must be turned off, otherwise the printer control circuit may be damaged;
  - 11) If you smell severe smoke or odor, please turn off the power and disconnect each interface, and then contact the supplier;
  - 12) Users are not allowed to disassemble the printer for maintenance;
  - 13) Keep this manual properly for reference.

# 1 Overview

## 1.1 Introduction

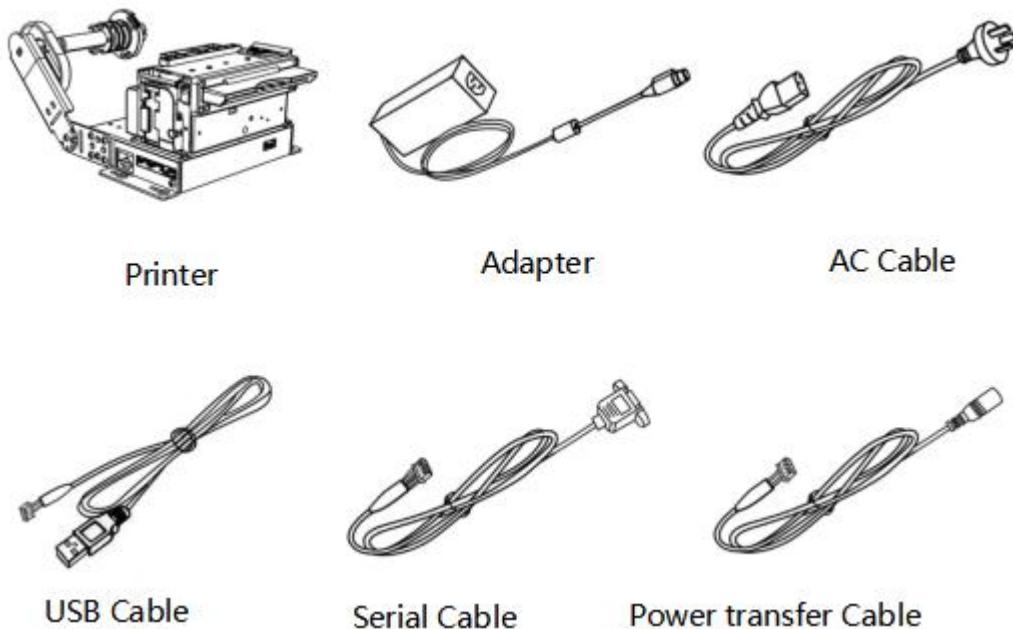
The KP-302 printer module adopts a line thermal print head, which has the characteristics of high-speed printing, low noise, strong reliability, high printing quality, support for centered printing, and compact structure. It is equipped with a special engineering plastic paper outlet, making installation and maintenance more convenient and quick.

## 1.2 Main features

- 1) Low noise, high speed printing
- 2) Convenient and fast paper loading method
- 3) Easy to use and maintain
- 4) Compatible with various widths of paper
- 5) Exquisite and compact design

## 1.3 Unpacking list

- 1) Unpack the printer and save the packaging materials for future shipping.
- 2) Make sure you have all the items shown in Figure 1-1 and check for shipping damage.



**Figure 1-1**

Note: The actual contents in the box are subject to the shipping list.

## 1.4 Other notice

Although we have taken great care in preparing this manual, some errors or omissions may inevitably occur. When you have any questions, contact sales teams. For damage caused

by product damage, malfunction or misuse caused by users or third parties not following or ignoring the operation and maintenance information and instructions provided by our company, as well as damage caused by unauthorized changes, repairs or modifications to the product , losses, costs or expenses, our company and its branches are not legally responsible.

Our company is not responsible for any damage or problems caused by the use of counterfeit our options, parts or unauthorized products.

## 2 Product specification

### 2.1 Specifications

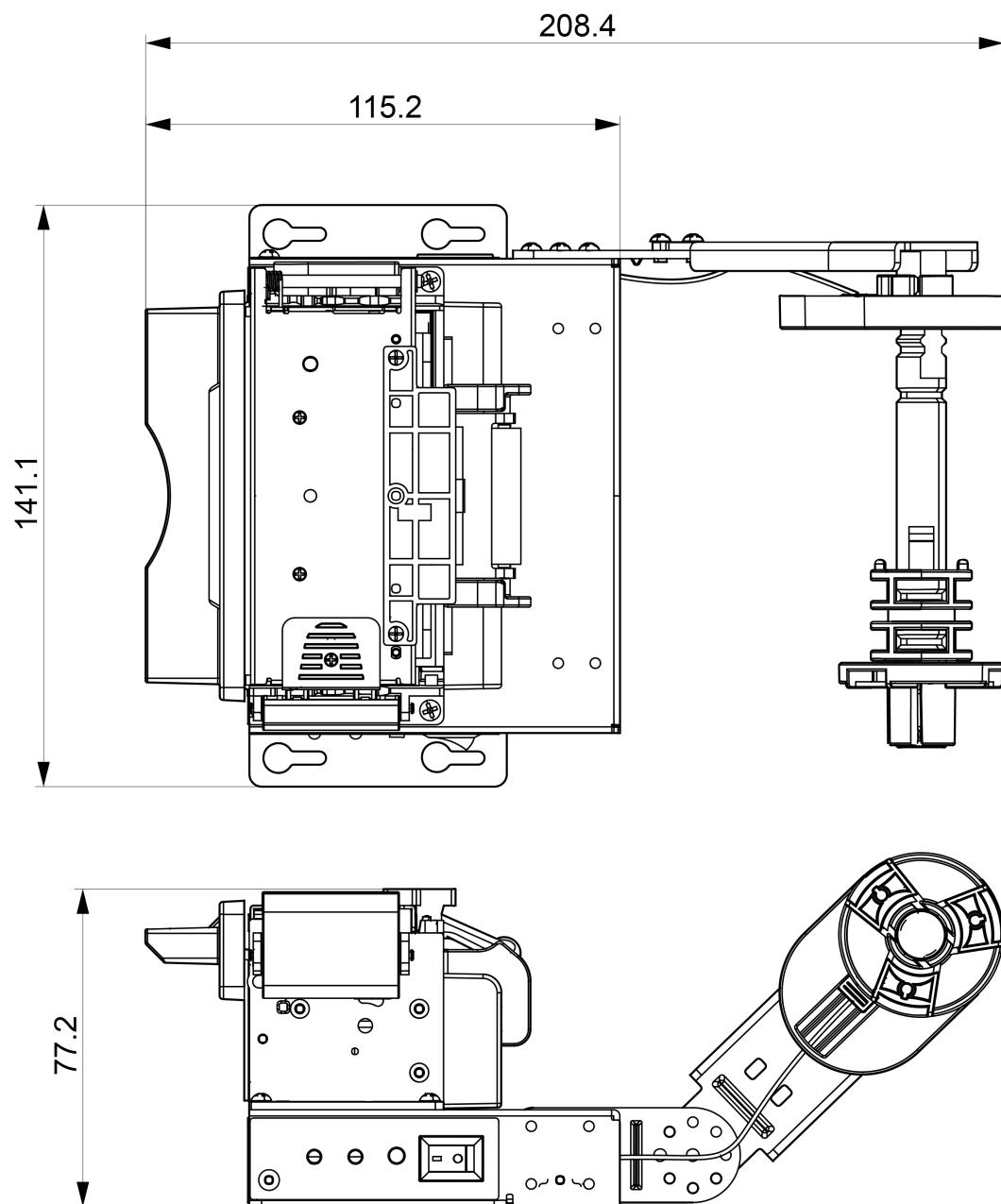
Print	Print method	Thermal-line dot method
	Resolution	203Dpi
	Effective print width	76mm (Max)
	Print speed	250MM/S
	Print life	100KM (Max)
	Cutter method	Partial cut/full cut
Paper Roll specification	Paper type	Thermal receipt paper, black label paper
	Paper width	58、80 mm(adjustable)
	Outer diameter of paper Roll	Standard within 120mm maximum support 150mm
	Inner diameter of paper roll	25mm、13mm
	Paper thickness	0.05-0.09mm
Detection	THP Temperature	Thermistor
	Cover open detection	
	Cutter HOME point detection	Micro touch switch
	Automatic paper feeding	Through-beam photoelectric sensor
	Paper Taken detection	Paper bezel with photoelectric sensor

	Paper near end detection	Reflective photoelectric sensor
	Black mark detection	
	Seam mark detection ( customizable )	Reflective photoelectric sensor ( reserve)
Power supply	Input voltage	110V-220V
	Output voltage	24V, 2A DC±10%
	Average current	2A ( 25% printing rate )
	Peak current	8A ( 100% printing rate )
Character	Character	Font A:12*24 ; Font B: 9*17 ; Chinese 24*24
	Printing front	Normal, 1~8 times of height and width, highlight, inverse, underline, italic, bold
	1D code	UPC-A, UPC-E, EAN13, EAN8,CODE39, ITF,CODABAR, CODE93, CODE128
	2D code	QR Code,PDF417
Command	Compatible with ESC/POS command (page mode needs to be customized)	
Reliability	Wear resistance	100km (Max)
	Number of pulses	100 million
	Cutter life	1000,000 cuts
Interface	Standard	USB+RS232
	Optional	USB+RS232+LAN
Operating interface	Indicator light	POWER light+ERROR light
	Button	FEED button*1
	Power switch	Ship type switch*1
Operating environment	Operating temperature	-10 °C ~ 50 °C
	Operating humidity	20-80%RH ( No condensation )
	Storage temperature	-20 °C - 70 °C
	Static protection	Contact discharge 6KV、Air discharge 8KV

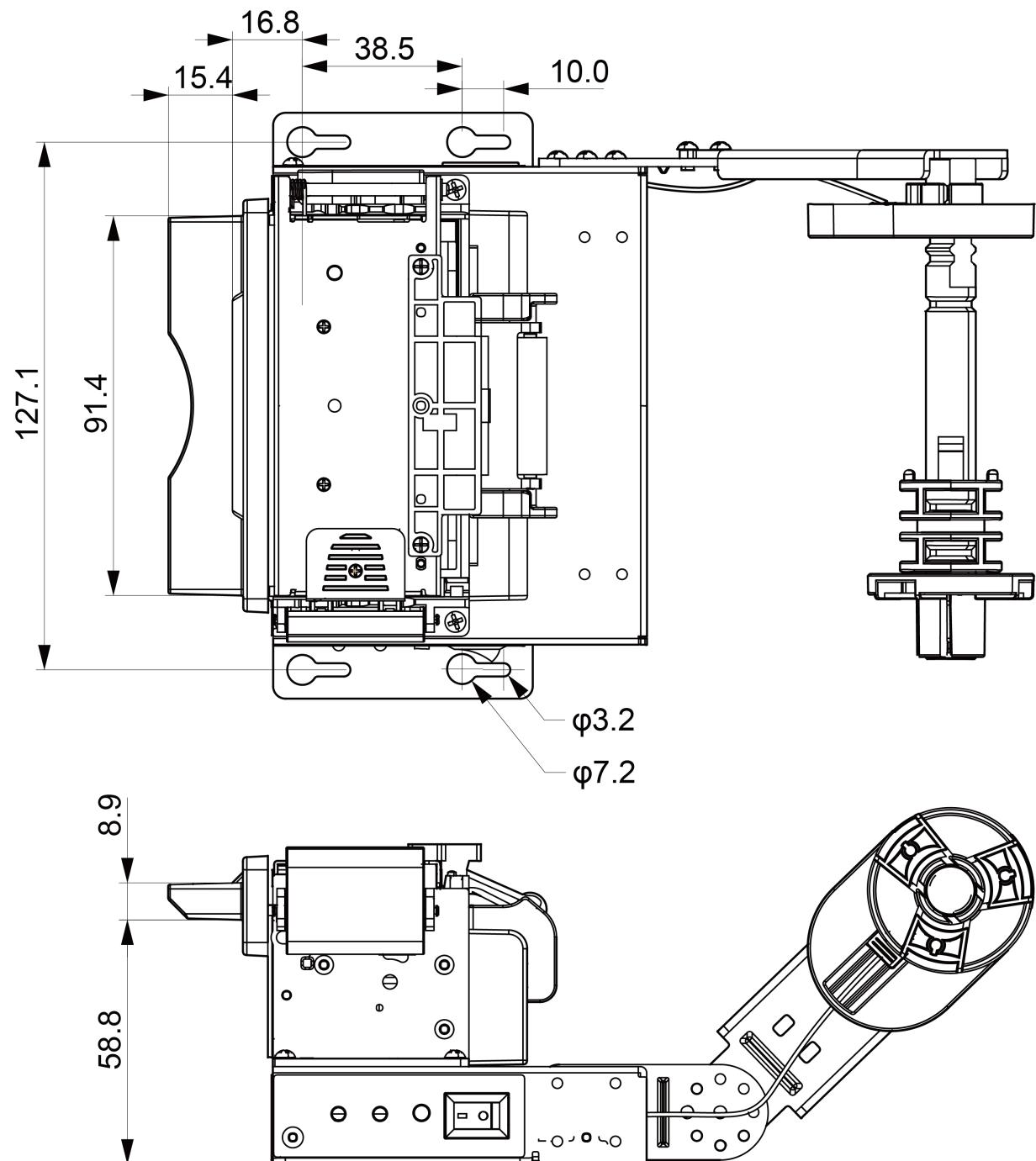
	Storage humidity	10-90%RH (No condensation)
Physical	Dimension	141.1 (W) x115.2(L)x77.1 (H)mm including Bezel (without Paper holder)
	Weight	1.32 KG

## 3 Printer instruction

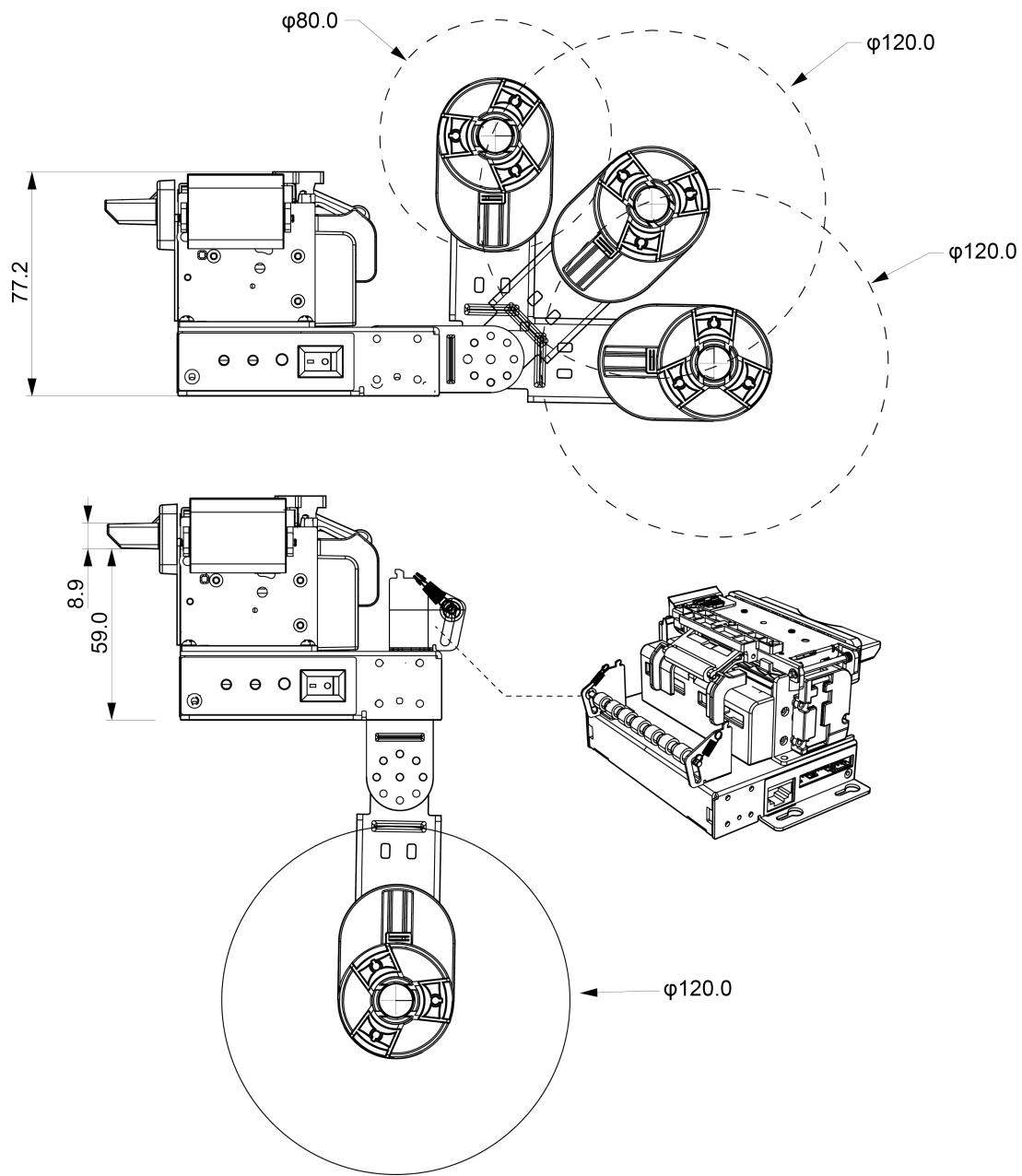
### 3.1 Dimension (mm)



### 3.2 Installation Size (mm)

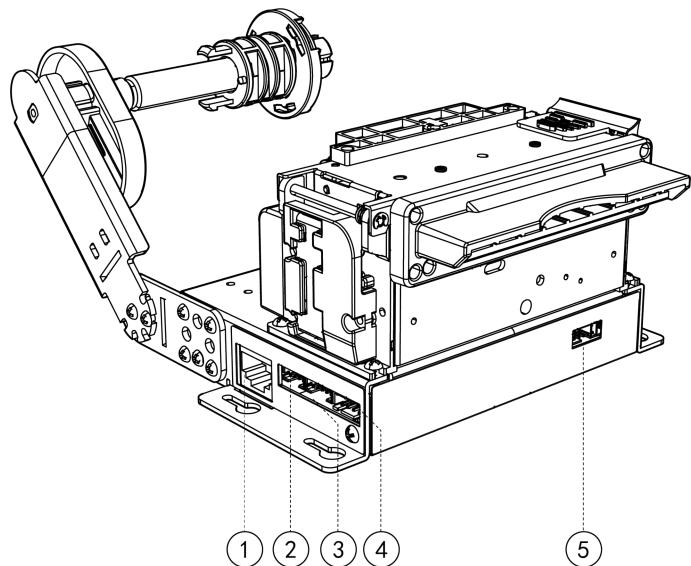


### 3.3 Paper roll adjustment size

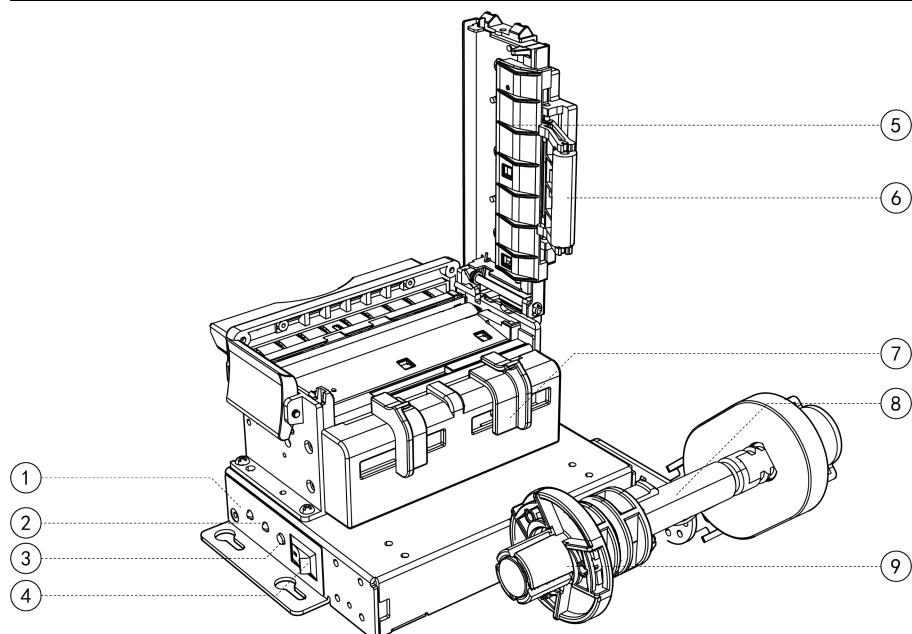


- 1) This product supports four paper roll angles, 90°/135°/180°/270°, respectively. Users can adjust the bracket to match the printer according to actual conditions.
- 2) Note: 90° supports ≤80mm diameter paper rolls, other angles support ≤120mm diameter paper rolls, and if you need to support 150mm diameter paper rolls, you need to customize.
- 3) Note: When the bracket is adjusted to 270°, it needs to be used with a buffer mechanism for high-speed paper feeding and printing.

### 3.4 Appearance and Components



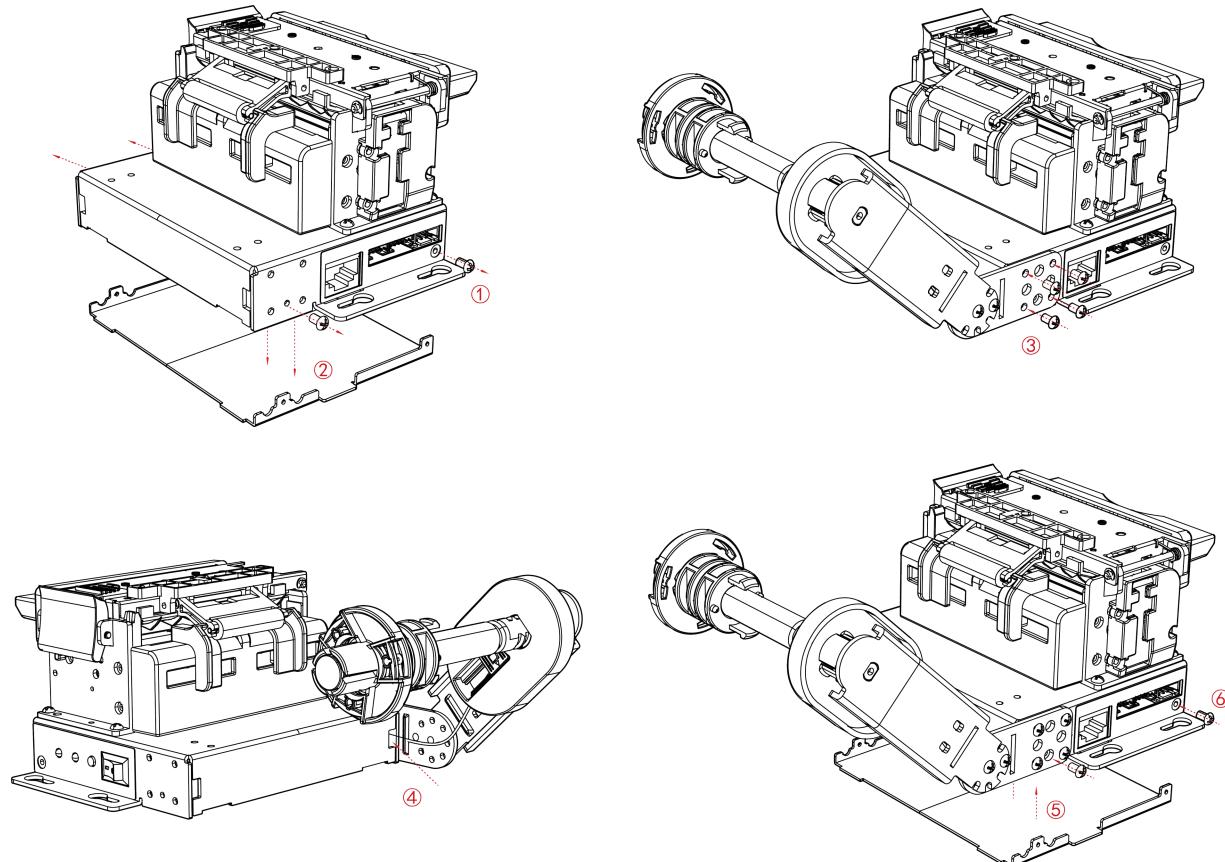
No.	Directions
1	LAN (Ethernet) (Support DHCP)
2	4pin USB
3	RS232 (Serial)
4	POWER Power switch
5	Paper pick-up detection interface



No.	Directions
1	ERROR Red LED
2	POWER Green LED
3	FEED
4	Power switch
5	Optocoupler assembly area
6	Paper pressing roller
7	Center the paper limit slider
8	25mm、13mm Switchable paper roll holder (paper end optical coupling)
9	Fixed paper stopper

### 3.5 Paper Holder Assembly Instructions

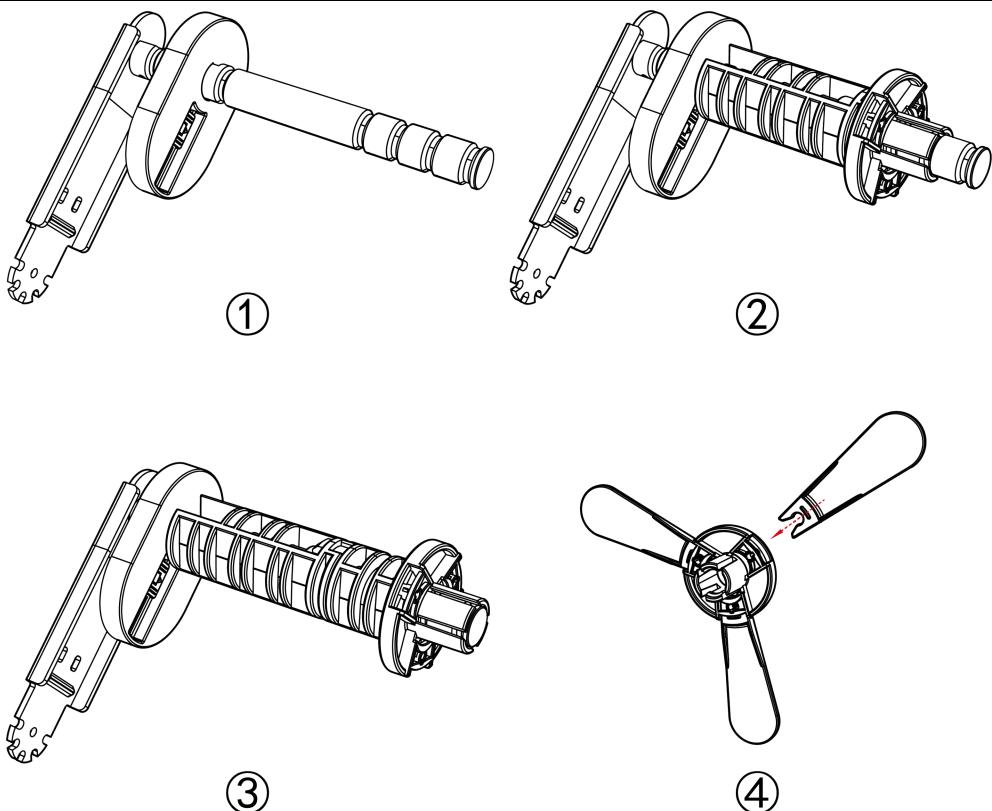
#### 3.5.1 Bracket body installation



- 1) Use a cross screwdriver to unscrew the 4 screws on the base
- 2) Remove the bottom sheet metal cover
- 3) Fix the paper roll holder to the corresponding screw holes and fix the side screws (same for the left side)
- 4) Connect the paper end insertion interface (same for the left PIN paper end interface)
- 5) Replace the bottom cover
- 6) Tighten the 4 screws on the bottom side and the assembly is complete

Note: The paper roll holder can be installed on both sides of this product. Users can choose to install it on the left or right side according to the actual self-service equipment. The paper end function interface can also be installed on both sides.

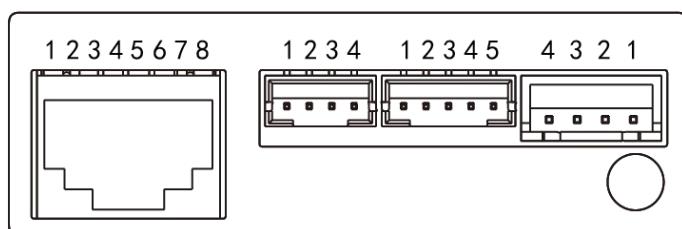
#### 3.5.2 Paper Scroll Installation



- 1) The paper roll shaft without the shaft sleeve is suitable for 13mm inner diameter paper roll. Move the paper limit block to level 1 for paper width of 80mm, as shown in Figure ①.
- 2) The paper roll shaft with the shaft sleeve is suitable for 25mm inner diameter paper roll. Move the paper limit block to level 2 for paper width of 58mm, as shown in Figure ②.
- 3) Installing the paper limit seat at the end of the paper roll shaft can prevent the paper roll from moving, as shown in Figure ③.
- 4) If you need to print on a large paper roll, you can install umbrella blades on the paper limit seat to prevent the paper from slipping, as shown in Figure ④

## 4 Interface Description

### 4.1 Interface Type



**LAN +USB+RS232+POWRE**

Note: The interface is standard or customized. The specific interface is subject to the actual product.

#### 4.2 USB MH1.25mm/4P

PIN No.	Definition	Description
1	NC	Empty
2	D-	Data line negative
3	D+	Data line positive
4	GND	Ground

#### 4.3 Serial ( RS232) PH 2.0mm/5Pin

PIN No.	Definition	Description
1	GND	Ground
2	TXD	Data transmission
3	NC	Empty
4	RXD	Data reception
5	DTR	Flow control

#### 4.4 POWER XH2.54mm/4Pin

PIN No.	Definition	Description
1	GND	Ground
2	GND	Ground
3	VH	Positive power supply
4	VH	Positive power supply

#### 4.5 LAN interface

PIN No.	Definition
1	TX+
2	TX-
3	RX-
4	n/c
5	n/c
6	RX-
7	n/c
8	n/c

## 5 Instructions for use

### 5.1 Buttons and operations

#### 1) Power on

Turn on the power, pull the printer's power switch to the "-" position, turn on the printer's power, turn on the printer, and the printer's POWER power indicator light stays on. Pull the power switch to the "0" position, turn off the power, and the POWER indicator light goes out.

#### 2) Button

There is a "FEED" button on the printer. This button is usually used as a paper feed button. It can be used as a self-test button when the printer is first powered on. "TEST" button This button is used as a LOGO printing button.

#### 3) Self-test

When the printer is not powered on, press and hold the "FEED" button, then power on, and the printer will perform self-test for about 2 seconds. The self-test will print out basic information such as the machine model, firmware version, system configuration, interface type, etc.

#### 4) Paper feed

Feed : (Black mark paper) Press the paper feed key once when the power is on to feed out a sheet of black mark paper.

Feed : (Receipt paper) Press the paper feed key once when the power is on to feed out a certain length of receipt paper.

#### 5) Dump mode

When the printer is turned off and the cover is open, press and hold the paper feed key to switch to Dump mode, and press the paper feed key shortly to exit Dump mode.

### 5.2 Indicator light description

The printer has two indicator lights, which are used to indicate the various statuses of the printer after it is powered on. The meanings are as follows:

Description	POWER-Green light	ERROR-Red light	Beep status
Printer is normal	Always on	Lights off	No sound
Paper out	Always on	Flashes 3 times	3 beeps

Cutter error	Always on	Flashes 4 times	4 beeps
Temperature is too high	Always on	Flashes 5 times	5 beeps
The Rubber roller shaft is not depressed	Always on	Flashes 6 times	6 beeps
Position detection error	Always on	Flashes 8 times	8 beeps

 **Note:** The printer uses a thermistor to detect the temperature of the print head. If the print head temperature exceeds 65°C, the printer will stop working until the temperature drops below 55°C.

## 5.3 Detection instructions

### 1) Paper out detection

The paper exit detection sensor is located in the paper exit nozzle and is used to detect whether the paper has been removed. When the paper ejection detection sensor detects paper, the light bar in the paper ejection nozzle flashes slowly.

### 2) Automatic paper feed detection

The paper detection sensor detects whether there is paper for printing. When the sensor is triggered, it drives the motor to continuously feed paper.

### 3 ) Paper taken detection

The paper removal detection sensor is located in the paper outlet and is used to detect whether the paper has been removed. When the paper removal detection sensor detects that the paper has not been removed after the cutter, the light in the paper outlet flashes slowly.

### 4) Cover open detection

When the paper cover is closed and the latch presses the switch arm, the cover opening detection sensor installed on the right side of the print head is activated. When the paper cover is opened, the printer enters an offline state.

### 5) Paper near end detection

Paper end detection component, customers can choose the installation location according to

their own needs to detect the remaining amount of paper roll. Check whether the paper roll is sufficient. If the sensor detects that there is no paper at the specified position, the PE light will light up.

## 6) Cutter HOME point detection

The cutter return detection sensor is installed on the knife holder of the cutter part. If a paper jam or other abnormal situation occurs, the cutter return detection sensor can detect the jammed paper and stop the printer operation.

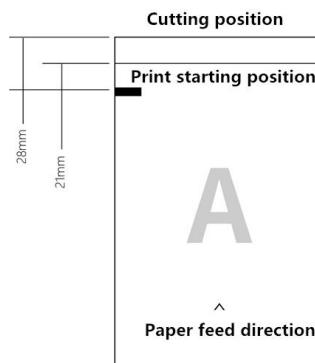
## 7) Over-temperature detection

When the temperature of the printer head reaches 65°C, the printer will give an over-temperature alarm and stop printing. When the temperature drops to 55°C, the printer will return to the ready state and continue printing automatically.

## 8) Black mark detection

The black mark detection sensor is installed in the paper path and detects pre-printed black dots on the ticket if present. This black mark is used to position the paper on the preprinted paper for printing. Normally, the bill is pre-positioned to the identification point, and when the bill is completed, the paper is fed to the identification point and then cut

The position of the mark point is as shown in Figure A. The paper width is 80mm. (The marking points are all on the non-heat-sensitive layer)



## 5.4 Troubleshooting of paper jams & cutter jams

- 1) Reset the cutter by turning the machine off and then on again, and quickly remove the jammed cutter using software.
- 2) Open the top cover to forcefully remove the jammed cutter mechanically.
- 3) Remove the jammed cutter first, then the jammed paper, and clear the paper scraps left in the paper path.

## 6 Applicable paper

### 6.1 Paper type

- 1) The printable paper width is 25mm~80mm thermal paper. Customers who use different types of ticket paper need to set them through debugging software.
- 2) If you need to print special size ticket paper, please contact "Xiamen Cashino Technology Co., Ltd." to order it.
- 3) The printer can be used with paper thickness 0.05mm~0.09mm, Thermal continue paper, black mark paper, Thermal Label paper (need to customized).

## 7 Troubleshooting

When the printer fails, you can refer to this chapter to handle it accordingly. If the fault still cannot be eliminated, please contact the agent or manufacturer.

### 7.1 Common faults

Issue phenomenon	cause of issue	Solution
The red light flashes 1 time in succession and the buzzer sounds 1 time in succession.	Printer triggers paper jam function.	Clear paper on paper jam detection
The red light flashes 2 times in succession and the buzzer sounds 2 times in succession.	The movement cable is not connected properly or has poor contact.	Check the cable and reconnect
The red light flashes 3 times in a row and the buzzer sounds 3 times in a row.	Printer is no paper	Please install printing paper correctly
The red light flashes 4 times in a	Cutter error (cutter jammed)	Turn off the machine and then

row and the buzzer sounds 4 times in a row		on again to reset the cutter; or turn the cover opening wrench several times to reset the cutter.
The red light flashes 5 times in a row and the buzzer sounds 5 times in a row.	Print head temperature is too hot	Turn off the printer power and wait for the printer temperature to return to normal
The red light flashes 6 times in a row and the buzzer sounds 6 times in a row.	The shaft is not pressed down (open the cover)	Close the paper compartment cover
The red light flashes 7 times in a row and the buzzer sounds 7 times in a row.	Black mark device error	Please place the correct paper roll
The red light flashes 9 times in a row and the buzzer sounds 9 times in a row.	Printer triggers paper pulling function	Release paper pulling mode
Printing only feeds paper, no data is printed out	Printing paper installed backwards	Please re-install the printing paper in another direction
Printing is unclear or stained	The print head or printing rubber roller has not been cleaned for a long time, resulting in contamination by stolen goods.	Clean the print head or rubber roller
	Poor color development on printing paper	Please use printing paper with better printing quality or color rendering effect
	Print density set low	Increase the print density to

		meet your needs
Portrait printing content is lost	The print head or printing roller is dirty	Clean the print head or rubber roller
	Print head failure	Contact the dealer or manufacturer

## 8 Routine maintenance

### 8.1 Precautions

- 1) Dust, foreign matter, gunk, or other contaminants that get stuck inside the print head or printer can reduce print quality. When dirty, please clean the print head as follows
- 2) Always turn off the printer before cleaning.
- 3) Because when printing, the print head will become very hot. Therefore, if you want to clean the print head, turn off the printer power, and wait 2~3 minutes before starting.
- 4) When cleaning the print head, be careful not to touch the heated part of the print head to avoid damage to the print head due to static electricity, etc.
- 5) Be careful not to scratch or damage the print head.

### 8.2 Printer head cleaning

- 1) Please open the printer paper compartment cover and use a cotton swab dipped in dilute alcohol (alcohol or isopropyl alcohol) to clean the print head from the center to the surroundings.
- 2) After cleaning the print head, do not use the printer immediately. Wait for the cleaning alcohol used to completely evaporate (1 to 2 minutes). The print head can be used only after it is completely dry.

### 8.3 Sensor, rubber roller and paper path cleaning

- 1) Please open the printer paper compartment cover and take out the paper roll.
- 2) Use a dry cotton cloth or cotton swab to wipe away dust or foreign matter.
- 3) Soak a cotton cloth or cotton swab with medical alcohol and use it to wipe away sticky foreign matter or other contaminants.
- 4) Do not use the printer immediately after cleaning the parts. Wait for the alcohol to

completely evaporate (1 to 2 minutes) and the printer to dry completely before use.

- 5) When the print quality or paper detection performance decreases, clean the parts.

## 9 Shipping and storage matters

- 1) Make sure the device is placed on a firm, stable, level surface.
- 2) When transporting the printer, it must be packed in foam, bubble bags, etc.
- 3) If the device is dropped, it may be damaged or otherwise injured.
- 4) Excessive moisture and excessive dust may damage equipment.
- 5) Do not place heavy objects on top of this product and never stand or lean on it.
- 6) The device may fall or collapse, causing damage and possible damage.
- 7) To ensure safety, please unplug the battery when the product is not used for a period of time.