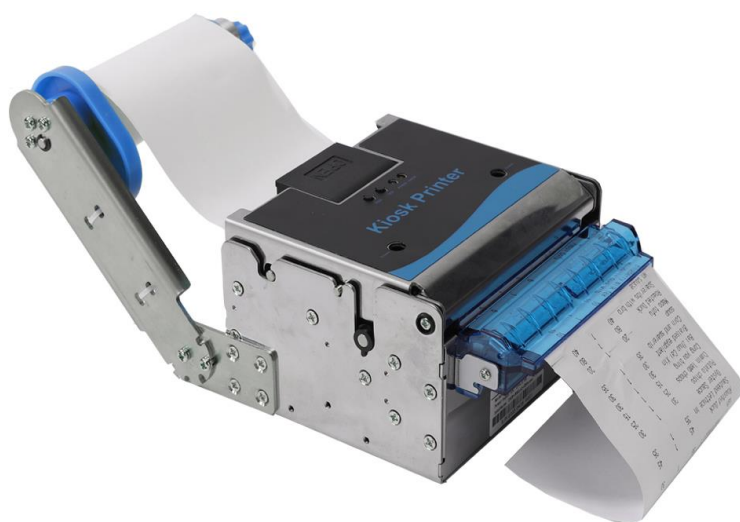


KIOSK Printer HS-K54 User Manual



Manufacturer: HSPOS TECHNOLOGY LIMITED (ZHONGSHAN)

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Statement

The contents of this manual may not be changed at will without consent. " HSPOS TECHNOLOGY LIMITED (ZHONGSHAN)" reserves the right to change products in technology, parts, software and hardware. If users need further information related to the product, they can contact " HSPOS TECHNOLOGY LIMITED (ZHONGSHAN)." 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 HS-K54 kiosk printer is the latest upgraded embedded thermal receipt printer launched by HSPOS TECHNOLOGY LIMITED (ZHONGSHAN). It integrates the printer mechanism, auto cutter, print control board, anti-blocking and anti-pull function to form a complete embedded printing unit. It can print thermal paper with a thickness of 0.055-0.15mm. The printing module adopts a line-type thermal print head, which has the characteristics of high-speed printing, low noise, strong reliability, high printing quality, compact structure, etc. It is stable and reliable to use and easy to maintain. It is suitable for printing scenic spot tickets, cinema tickets, parking lots, gambling, aviation, coupons and other occasions.

1.2 Main features

- 1) Low noise, high speed printing
- 2) Auto feed paper function, Convenient and fast paper loading method
- 3) Compatible with various widths and thickness paper
- 4) Supports Thermal receipt paper, black mark paper and label paper
- 5) Small and exquisite appearance, easy to install and maintain
- 6) Metal motor firmware, low power consumption and fast heat dissipation

1.3 Content Confirmation

- 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.

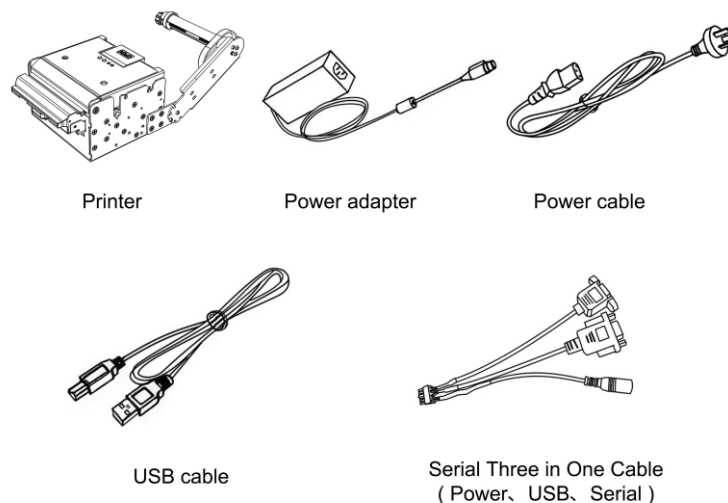


Figure 1-1

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

2 Product specification

2.1 Specifications

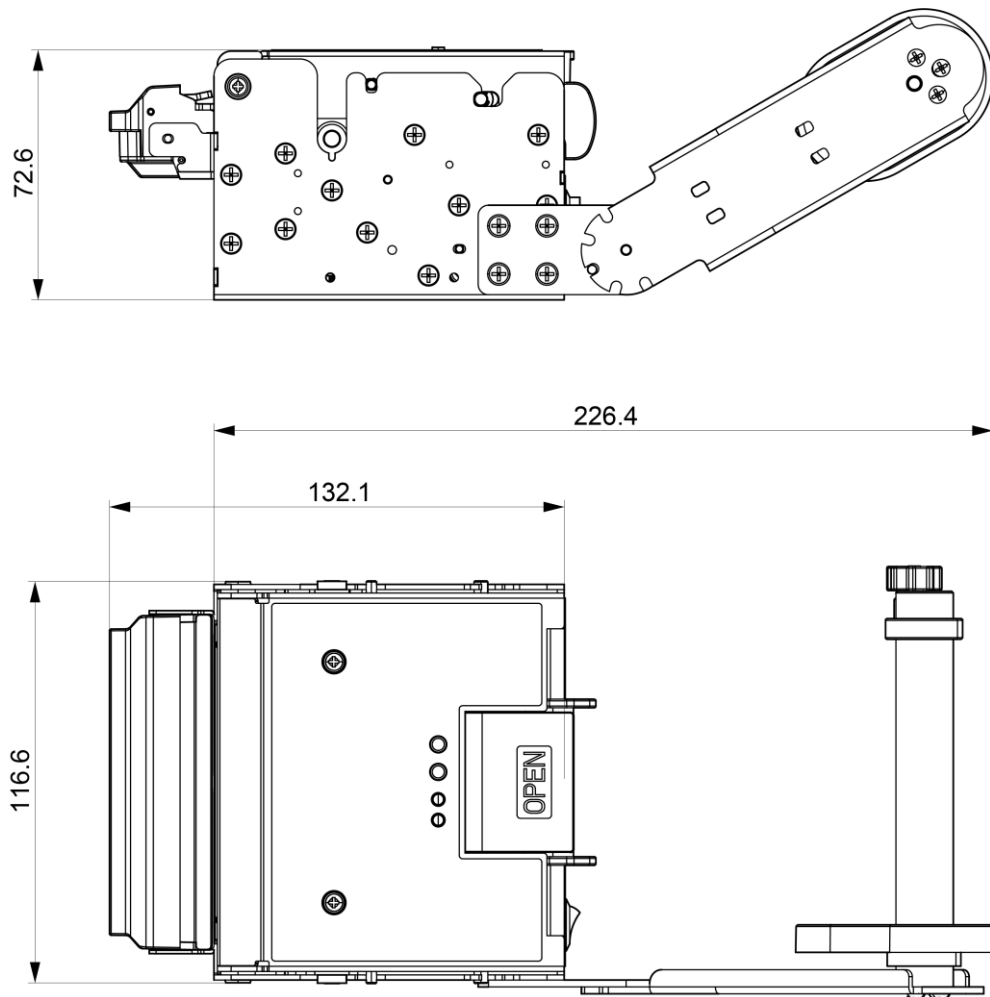
Print	Print method	Thermal-line dot method
	Print dot matrix	640Dots
	Resolution	203Dpi
	Effective print width(Max)	80mm (Max)
	Print speed(Max)	250mm/s (Max)
	Print life	100KM (Max)
	Various adjustment widths	48-82.5 mm(Adjustable, centered printing)
	Cutter method	Full cut/Partial cut
	Feed method	Auto paper feeding (first ticket page positioning,last ticket printing)
	Command Protocol	ESC/POS command set (support page mode)
Paper Roll Spec.	Paper type	Thermal receipt,black mark paper
	Paper thickness	0.055-0.09mm(receipt) 0.15mm MAX(label)
	outer diameter	150mm (MAX) Outer diameter bracket 45° upward
	Inner diameter	25mm
Detection	THP Temperature	Thermistor
	Cutter HOME point detection	Mechanical Sensors
	Platen position detection (Cover up)	
	Auto paper feed/ paper detection	Paper detection (photoelectric sensor)

	Paper near end detection	Reflective photoelectric sensor (located on the paper roll holder)
	Paper taken out detection	Photoelectric sensor
	Black mark detection	Movable reflective sensor
	Gap mark detection	Through-beam sensor (the main sensor needs to be moved to the center for through-beam)
Power supply	Input voltage	110V-220V
	Output voltage	DC 24V 2A \pm 10%
	Average current	2A/2.5A (25%printing rate)
	Peak current	10.6 A
Character	Character set	Font A:12x24 Font B:9x17Chinese:24x24
	Print front	Normal, 1~8 times of height and width, highlight, inverse, underline, italic, bold
Barcode	1D code	UPC-A, UPC-E, EAN13, EAN8, CODE39, ITF, CODABAR, CODE93, CODE128
	2D code	QR Code,PDF417
Reliability	Wear resistance	100km (Max)
	Number of pulses	100 million
	Cutter life	1 million cuts
Interface	Standard	DC+USB+RS232 three in one cable+LAN (support DHCP)
Operating	Indicator light	POWER LED +ERROR LED
	Button	FEED button*1 TEST button*1
	Power switch	Ship type switch*1
Operating environment	Operating temperature	-10°C~60°C
	Operating humidity	20-80%RH (No condensation)

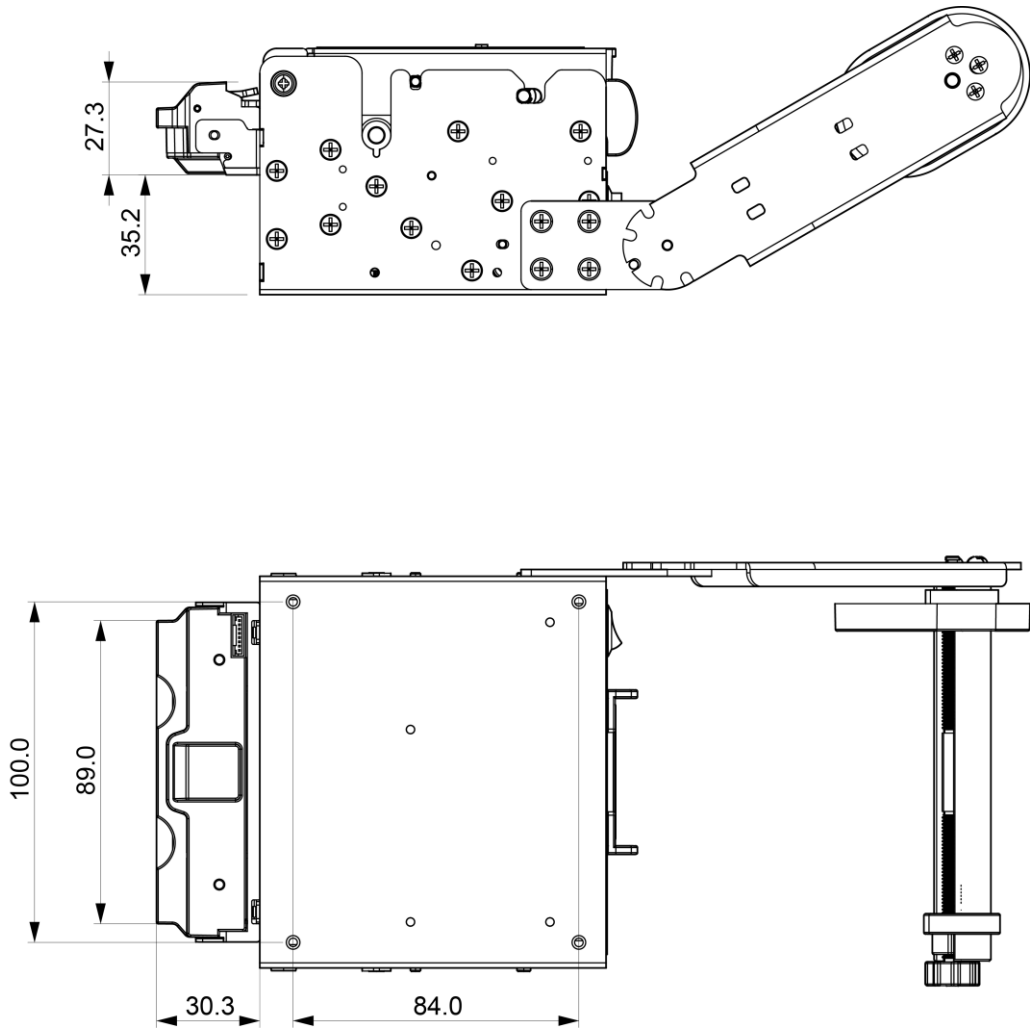
	Storage temperature	-20°C-70°C
	Electrostatic protection	Contact $\pm 6KV$, Air $\pm 8KV$
	Storage humidity	10-90%RH (No condensation)
Physical	Dimension	132.1x116.6x72.6 mm (Without paper roll holder)
	Weight	1.15KG

3 Printer instruction

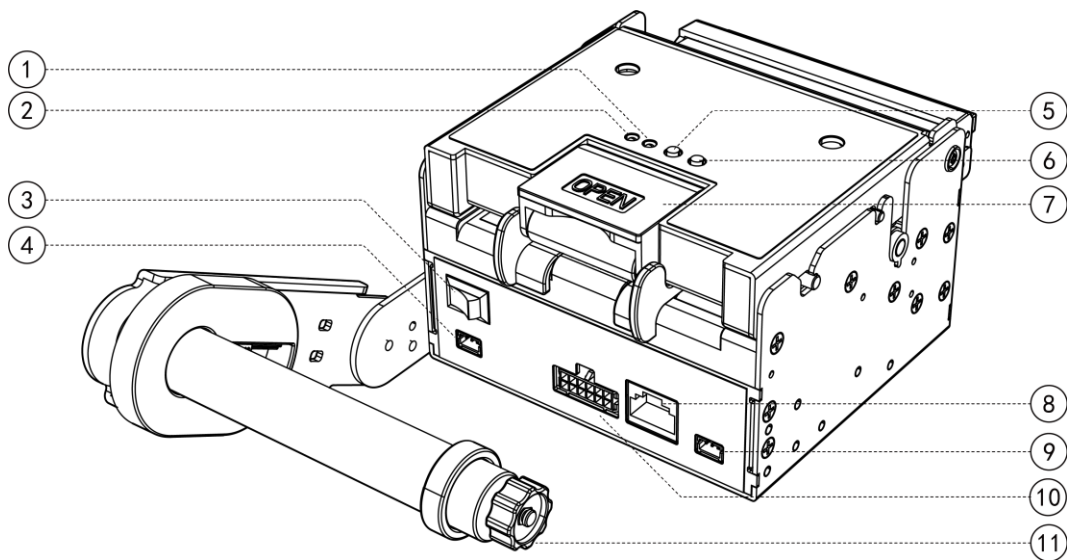
3.1 Dimension (mm)



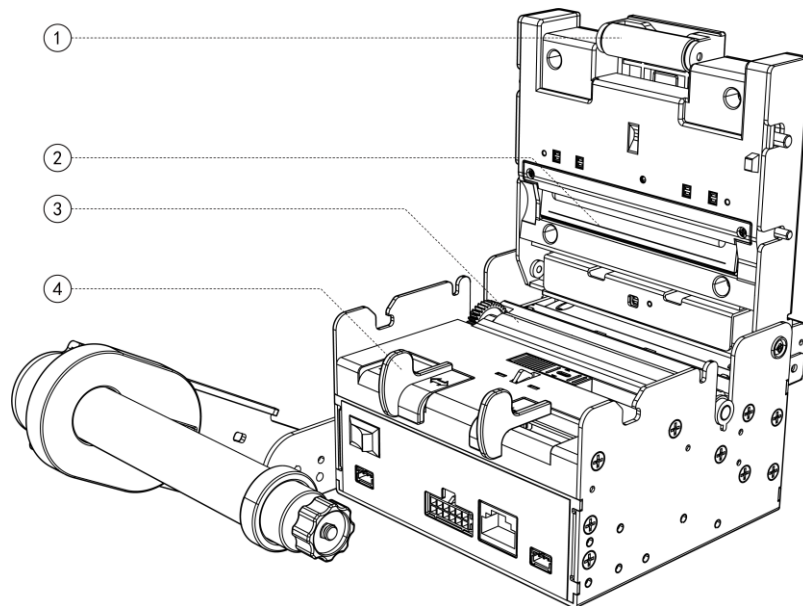
3.2 Installation dimensions (mm)



3.3 Appearance and components



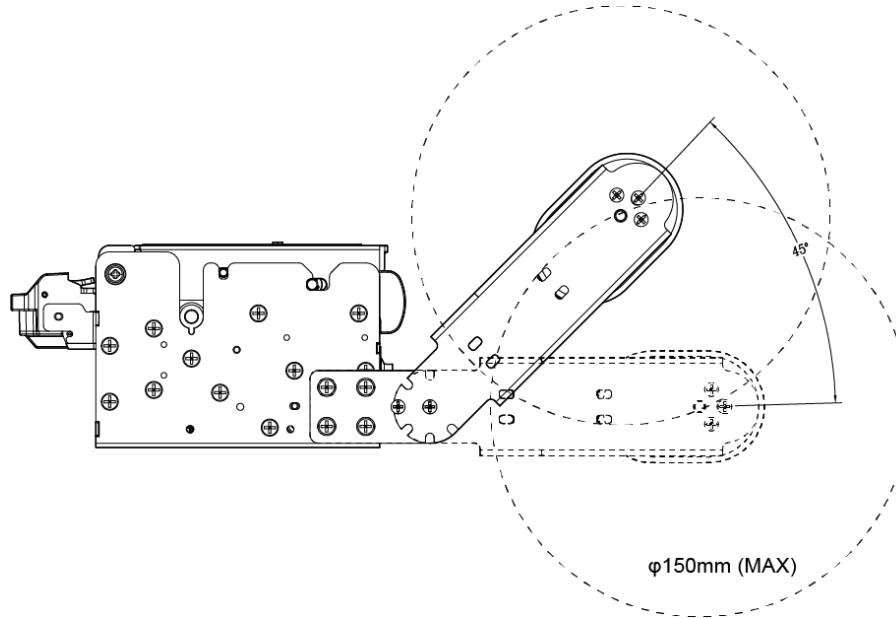
No.	Illustrate
1	Indicator light: POWER green LED
2	Indicator light: ERROR red LED
3	Ship type switch
4	PNE Paper Near End Interface
5	Button: TEST button*1
6	Button: FEED button*1
7	Cover up button
8	LAN Interface
9	PNE Paper Near End Interface
10	Three-in-one cable interface
11	Paper roll



No.	Illustrate
1	Paper pressing roller
2	Heating head piece
3	Rubber Roller
4	Adjust Guide-Paper Left and Right to fit the paper width

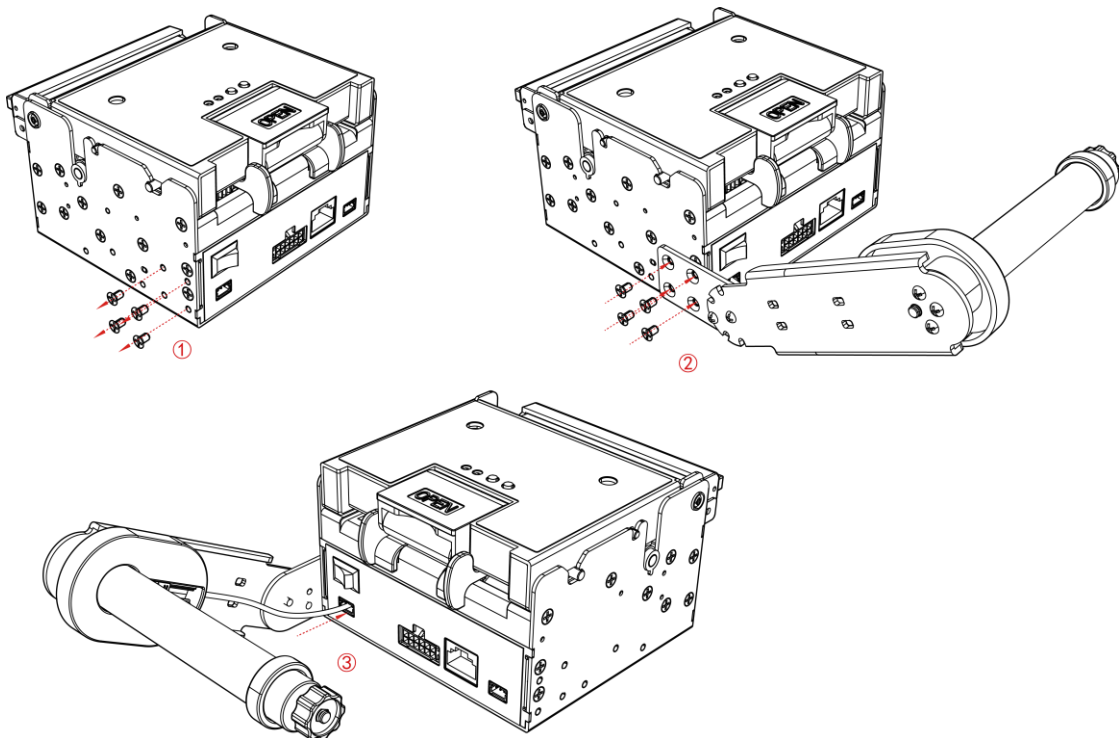
3.4 Paper roll holder (Optional)

3.4.1 Paper roll holder angle adjustment



1)The product supports three adjustable angles, and users can adjust according to actual conditions.

3.4.2 Paper roll holder assembly instructions

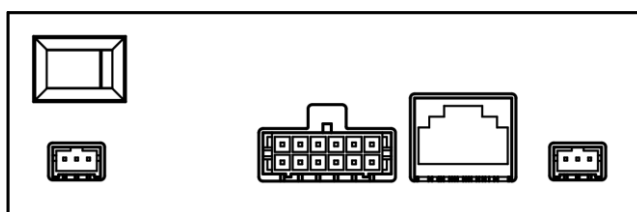


- 1) Use a cross screwdriver to unscrew the 4 screws on the base
- 2) Fix the paper roll holder to the corresponding screw holes and fix it with the side screws (same for the left side)
- 3) Connect the paper near end insertion interface (same for the left PIN paper end interface), and the assembly is 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.

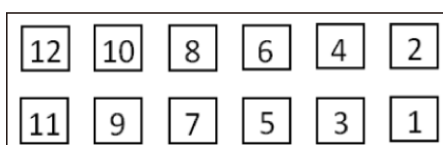
4 Interface Description

4.1 Interface Type



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

4.2 Three-in-one cable



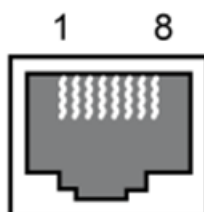
PIN No.	Signal name
1	24V+
2	24V+
3	24V-
4	24V-
5	TX
6	RX
7	DTR
8	GND
9	VBUS
10	GND
11	D-
12	D+

One DC24 2A DC is used for printer power supply interface.

One RS232 serial port interface is used for printing data transmission and printing of text/pictures and other contents.

One USB port is used for printing data transmission and printing of text/pictures and other contents.

4.3 Ethernet interface



PIN No.	Signal name
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 "O" position, turn off the power, and the POWER indicator light goes out.

2) Paper type setting:

The printer defaults to ordinary receipt printing. You can use the K-Printer Setting Tool to set black mark ticket paper to enable black mark positioning

Note: After changing different black mark paper or readjusting the position of the reflective sensor on the printer body, you need to press and hold the test key to learn. Only after successful learning can it be positioned and used normally.

3) FEED button

There is a "FEED" button on the printer, which is usually used as a paper feed button. It can be used as a self-test button when the printer is just powered on.

When powered on, press and hold the "FEED" button for about 2 seconds and then turn on the printer to perform a self-test. The self-test page will print out basic information such as the machine model, firmware version, system configuration, and interface type.

4) TEST button:

Short press this button to print NVLOGO immediately. After black mark/seam mark detection is turned on, long press this button to learn black mark and seam mark.

5.2 Indicator Light Description

The printer has 3 indicator lights, which are used to indicate the various states of the printer after it is powered on. The meanings are as follows:

Illustrate	POWER-Green	ERROR-Red	Beeping state
Printer is normal	Continuously brightening	off	No sound
Paper near end	Continuously brightening	off	No sound
Printer out of paper	Continuously brightening	Flashing 3 times	3 beeps
Cutter error	Continuously brightening	Flashing 4 times	4 beeps
Printer Over Temp	Continuously brightening	Flashing 5 times	5 beeps
Axis not pressed down	Continuously brightening	Flashing 6 times	6 beeps
Position detection error	Continuously brightening	Flashing 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 alarm. If the temperature exceeds 65°C, the printer will stop working until the temperature returns to 55°C.

5.3 Detection instructions

1) Auto paper feed detection:

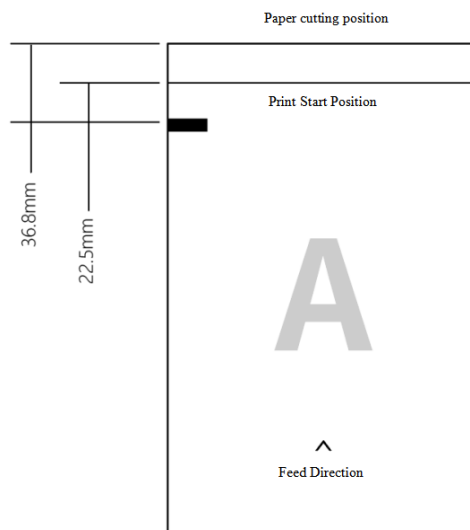
The paper detection sensor detects whether there is paper for printing. When the sensor is triggered, it drives the motor to continuously feed paper.

2) 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 or 82.5mm, the paper width of figure B is 60mm. (The marking points are all on the non-heat-sensitive layer)

Note: Black mark detection only supports thermal back black mark by default. If front black mark detection is required, it needs to be customized. The black mark parameters (black mark search distance/black mark width/black mark thick paper feed, etc.) can be set according to the specific paper using the setting tool.



3) Cover open detection:

When the 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

4) 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. If the sensor detects that there is no paper at the specified position, the PE light will turn on.

Note: The paper near end sensor will be assembled on the paper roll holder.

1)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.

2)Anti-blocking and anti-pulling bezel(standard, also used as paper feed detection):

When the paper is normally fed and printed, the blue light of the anti-blocking and anti-pull paper nozzle is always on when it detects that there is paper and is positioned at the paper head. When the cutter detects that the paper has not been removed, the blue light of the paper nozzle flashes. The anti-blocking/anti-pull function is turned on. When paper jam or paper pull occurs, the red light of the printer body flashes and an alarm stops printing. Users can set the anti-blocking/anti-pull function on/off through the K-Printer Setting Tool tool setting command (see the command set for details). The self-test page will display the current anti-blocking/pull on or off status.

Note: The standard software paper bezel is used as paper feed detection. If you do not need a paper bezel ,that needs to customize the printer's firmware, you can also choose the ordinary paper bezel with paper taken detection.

6 Applicable paper

6.1 Paper type

1) The printer can be used for ordinary thermal paper with a paper width of 25-82.5mm, a paper thickness of 0.055-0.09mm, and a ticket length of 60-800mm. Or label paper with the same paper width, the maximum paper thickness is 0.15mm. Customers need to customize the software to adapt to different types of ticket paper.

2) If you need to print special size ticket paper, you can contact " HSPOS TECHNOLOGY LIMITED (ZHONGSHAN)" for customization. Both roll paper and folding paper can be used.

3) The printer can be used for black mark/seam mark positioning paper.

4) The position of the optical coupler can be adjusted to adapt to the position and size of the black mark on the paper. Note that the black mark needs to completely cover the optical coupler.

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	Solution
Out of paper,the red light flashes 3 times	Reload paper roll
Cutter error,cutter jam	Turn off the power, then turn it on again, the cutter will automatically reset
The upper cover pops up automatically during printing	The upper cover is not fully closed. Close the upper cover again and make sure the locking piece completely locks the upper cover fixing pin.
Error during printing, red light alarm eight times	The ticket paper is positioned incorrectly. Please reinstall the paper cover.
The printed QR code is not clear	Open the upper cover, clean the print head with alcohol, and close the upper cover to ensure it is fully closed.
Paper keeps ejecting during loading	The paper output sensor is disturbed by strong light. Move the direction of the printer's paper output port to avoid being disturbed by strong light.
Print white page	Thermal ticket paper is not used or the thermal side of the ticket paper is not facing up.

7.2 Troubleshooting of paper 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.

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.

8.4 Paper cleaning

- 1) Open the printer's paper compartment cover and remove the paper roll.
- 2) Use a dry cotton cloth or cotton swab to wipe off dust or foreign matter.
- 3) Soak the cotton cloth or cotton swab in medical alcohol and use it to wipe off sticky foreign matter or other contaminants.
- 4) Do not use the printer immediately after cleaning the parts. Wait for the alcohol to evaporate completely (1 to 2 minutes) and the printer to dry completely before use.
- 5) Clean the parts when the print quality or paper detection performance deteriorates.

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.

10 Other considerations

The instruction manual has been calibrated and reviewed. If there are any untimely changes or incomplete contents, please refer to the actual product or contact our company.

If the user or third party fails to follow the operating instructions or precautions, and arbitrarily disassembles or repairs the equipment without authorization, the user shall bear the losses caused by product failure, damage, etc.

For failures or losses caused by using adapters or optional accessories not provided by our company, the consequences shall be borne by the user if they are not within the scope of our company's responsibility.