Product User Guide

Smart Cash Register

Model： Moby C150

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Rev20180802

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Documentation Conventions：

Danger：This symbol means that it is harmful to the safety of person and property.

Caution: This symbol means that you must be extremely careful not to do some things that may damage the device.

Notice: This symbol brings your attention to some helpful suggestions and references.

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Abbreviations list

Abbreviations character	Means
AC	alternating current
DC	direct current
LPDDR3	Low Power Double Data Rate memory
POS	Point of sale
BT	Bluetooth
CSR	Contact Smart-card Reader
MSR	Magnetic Smart-card reader
Cless card	Contactless card
WIFI	Wi-Fi (or WiFi) is a local area wireless technology that allows an electronic device to participate in computer networking using 2.4 GHz UHF and 5 GHz SHF ISM radio bands
LCD	liquid crystal display
USB	Universal Serial Bus

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1 Introduction

1.1 Safety Notices before Installation or Use

- The terminal must be installed following the instructions stated in this manual. Connect the power cable to the power socket. Make sure that the ground wire of the power socket is connected to the earth. Avoid sockets that share copying machine, air conditioner and other machine switched frequently in the same circuit.
- Do not use any other adapter. The use of mismatched adapter may damage your terminal.
- If the power cable is broken, please stop using it immediately and contact the customer service.
- Do not splash any liquid or conductive objects such as pins and wires; otherwise it will cause short circuits and damage the terminal.
- Do not load or place anything on the terminal.
- Do not shake or knock the terminal.
- Keep the terminal far from high temperature, dust, moisture and electromagnetic field.
- Do not plug in or out any parts or peripherals in charging state. Please turn off the power before cutting off the power.
- Do not use or place flammable aerosols or paint to avoid fire.
- Turn off the power immediately once any fault happens. Never try to disassemble and fix the terminal by yourself, contact our customer service for help if necessary.
- Cut off the power supply of the terminal in case of lightning strike in lightning weather.
- When the terminal is attacked illegally (e.g. opening the casing), the sensitive information stored in the terminal will be immediately erased. Please do not open the casing to avoid unnecessary trouble.
- When the terminal is attacked/tampered, there will be obvious alarm information and alarm sound. Please contact the customer service.

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Product USES and features

Moby C150 is a new generation smart cash register terminal designed by Ingenico, configured with touch screen and high-speed communications, to be used in an indoor environment.

As a smart cash register terminal, Moby C150 integrates the function of a cash register and financial payment terminal. It has passed various industrial certifications to ensure transaction security. Moby C150 has novel appearance and friendly interface, using Octa-Core 2.0GHz high-speed CPU, large capacity memory, large touch screen, high-speed printer with cutter, deliver enjoyable customer experience. Moby C150 supports a variety of communication modes including Ethernet, WIFI and BT. The C150 is integrated with Ingenico RP45x series payment reader module, which support Smart card reader, contactless card reader & ISO/IBM format magnetic card.

1.2 Product Configuration

Moby C150 model description

Model	Name	Notes
Moby C150	Smart Cash Register	

Moby C150 Configuration

Moby C150 series offer as many functional configurations as possible to meet different demands of the customers, hence the product configuration difference. Please contact the customer manager for more details.

Product Configuration	Description	Notes
10.1" customer display	15.6" Main Screen+10.1" Customer Display	
No customer display	15.6" Main Screen + no customer Display	

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1.3 Operating Environment

Operating and Storage Conditions

Temperature	Ambient Temperature	-10℃～50℃
	Storage Temperature	-20℃～70℃
Relative Humidity	Operating Humidity	5%～90%, Non-condensing
	Storage Humidity	5%～90%, Non-condensing
Air Pressure		86kPa～106 kPa Altitude: <2000m

1.4 Dimension and Weight

Customer display Configuration	Weight (g)	Dimension L(mm) x W(mm) x H(mm)	Note
10.1" Customer Display	≈5400	403 × 225 × 390	Dual screen, without printing paper roll
No Customer Display	≈4850	403 × 225 × 380	Single screen, without printing paper roll

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2 Unpacking

Please check carefully to ensure the terminal and fittings are not disassembled or damaged. Any disassembling behavior may lead to its failure to use.

1. The following items are included in Moby C150 box.

- ✧ Moby C150 terminal
- ✧ User guide
- ✧ Power Adapter

The adapter should use one of the following three：

MANUFACTURER	MODEL	INPUT（AC）	OUTPUT（DC）
Lite-On Technology Corp	PA-1650-90	100~240Vac 50-60Hz，1.6A	19Vdc,3.42A
Chicony Power Technology Co., Ltd	A14-065N1A	100~240Vac 50-60Hz，1.7A	19.5Vdc,3.33A

2. Disassemble all the packaging of the terminal and accessories.

3. It is recommended to keep all the packaging of C150 for further packing or shipment if needed in the future.

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3 Appearance and interface

3.1 Configuration 1: 10.1" customer display

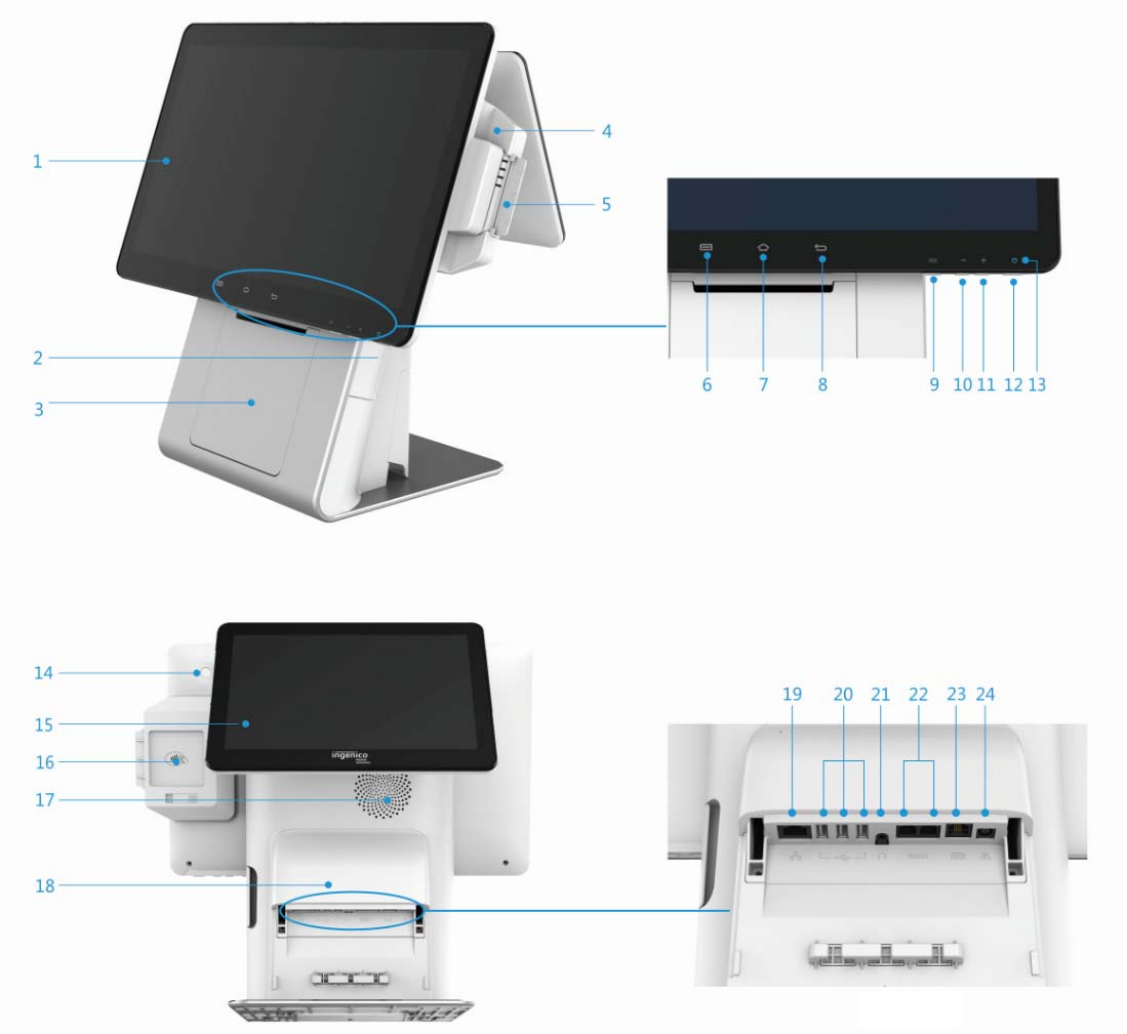

Figure 3-1

1. Main Screen (LCD and touch panel)
2. Buckle of paper roll cover
3. Paper roll cover
4. Magnetic card reader
5. Smart card reader
6. Menu key
7. Home key
8. Back key
9. Cash drawer button
10. Volume - Keys
11. Volume + Keys
12. Power Key
13. Power LED
14. Finger print reader
15. Customer Display (10.1-inch LCD without touch panel)
16. Contactless card reader
17. Speaker
18. Cable outlet cover plate
19. LAN (Ethernet) port
20. USB port *3
21. Headphone jack
22. RS232 port
23. Cash drawer port
24. DC power jack

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3.2 Configuration 2: no customer display

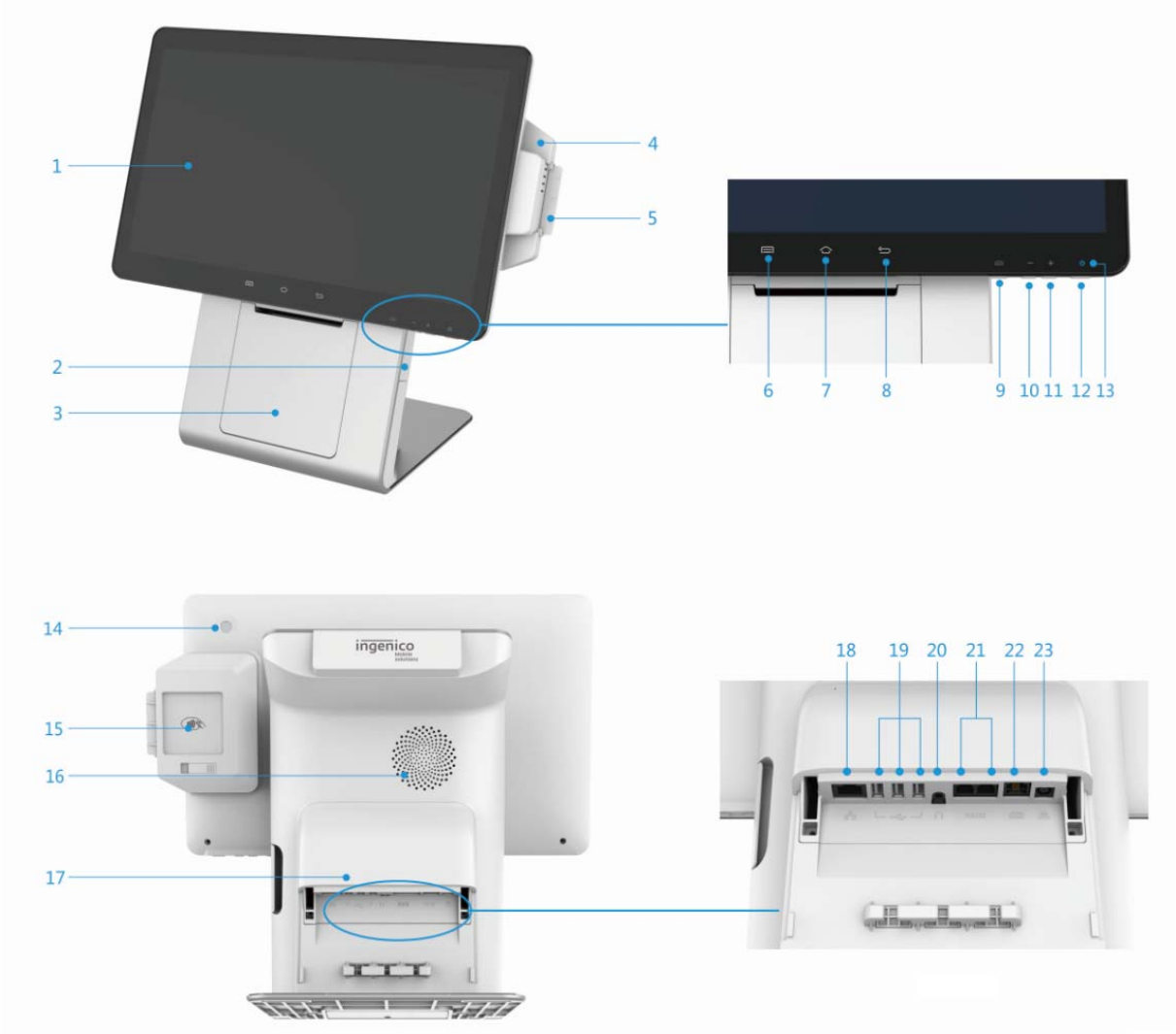

Figure 3-2

1. Main Screen (LCD and touch panel)
2. Buckle of paper roll cover
3. Paper roll cover
4. Magnetic card reader
5. Smart card reader
6. Menu key
7. Home key
8. Back key
9. Cash drawer button
10. Volume - Keys
11. Volume + Keys
12. Power Key
13. Power LED
14. Finger print reader
15. Contactless card reader
16.Speaker
17. Cable outlet cover plate
18. LAN (Ethernet) port
19. USB port *3
20. Headphone jack
21. RS232 port
22. Cash drawer port
23. DC power jack

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4 Installation

4.1 Checking Environment for Installation

Place the terminal onto a desk or table big and stable enough to support the weight of the system and peripherals to prevent it from dropping. The terminal should be in the environment far away from heat source, and free from moisture, electromagnetic and electrical devices (e.g. PC screen and electric motor, etc.).

Notice: Do not arrange power cables along the pedestrian walkway or across the channel on the floor for the sake of safety.

4.2 Install RP45x module

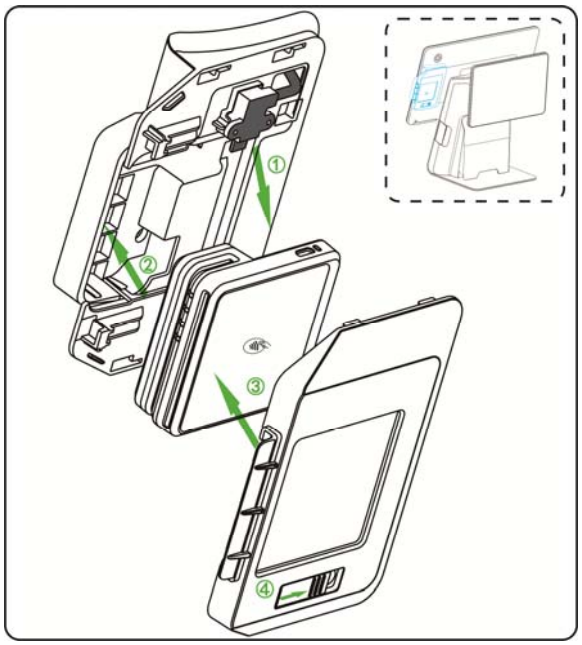

Figure 4-1

After the RP45x cover plate is lifted,

(1) Insert the RP45x reader card module into the Micro USB cable head

(2) Put the RP45x vertically into the structural groove

(3) Cover the RP45x cover plate

(4) Screw the cover plate screw and set the screw cover plate screw to the right.

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4.3 Micro USB

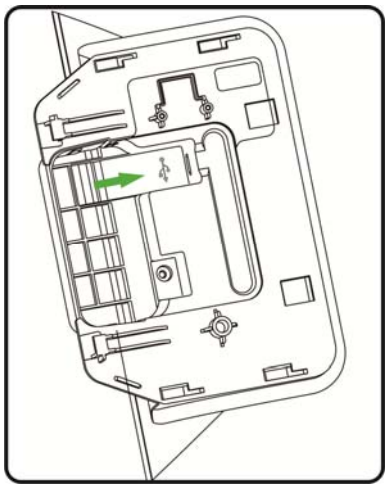

Figure 4-2

Open the RP45x cover plate, then you will find a logo, it shows the Micro USB located.

Caution: The ports of the terminal should not be connected improperly.

Micro USB is only used as a slave device to connect the computer to debug and copy data.

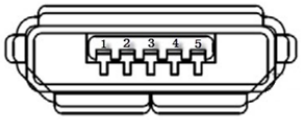

Figure 4-3

Pin	Definition	Description
1	VBUS	5V
2	D-	Differential Date, Negative
3	D+	Differential Date, Positive
4	ID	NC
5	GND	Ground

Notice: When the Moby C150 is connected to the computer, the Ethernet and the USB Type-A connections are temporarily disabled. The connection will be resumed automatically when the Moby C150 is disconnected to the computer.

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4.4 Peripheral Cable Connections

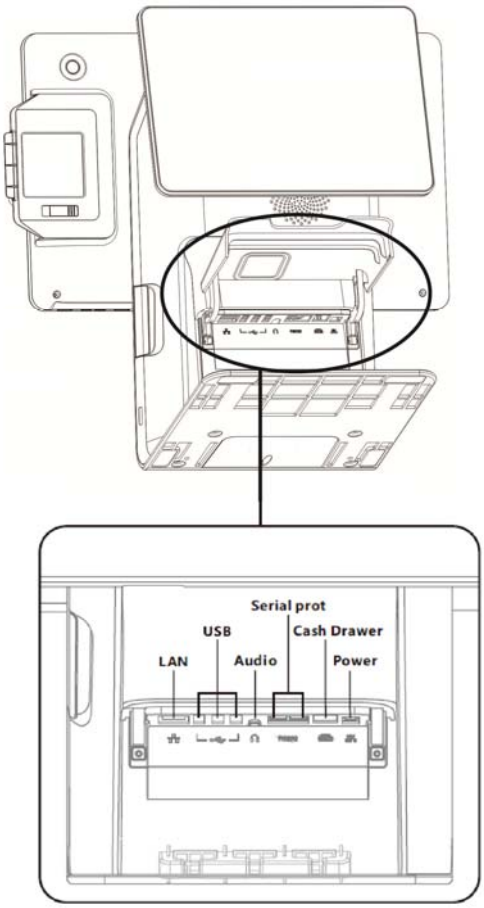


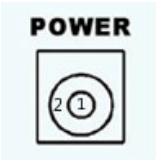
Figure 4-4

When the cover behind the base is removed, the ports from left to right are as follows: RJ45 Internet port, USB Type-A port, audio port, RS232 port, Cash drawer port and DC-JACK port.

Notice: Please put the power cable, USB cable and Ethernet cable in the slot of the back cover to prevent the cables from being scattered.

DC-JACK

Terminal adapter interface. Insert the random configuration of DC adapter socket for terminal power supply.



Item	Signal	Function
1	VDD	DC 19V~20V 3.25A
2	GND	GND

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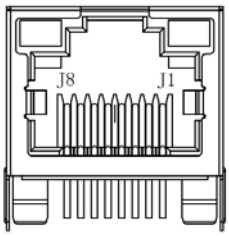
Warning: Please use the standard power adapter from the product package. Any other types of power adapter may lead to the failure of terminal.

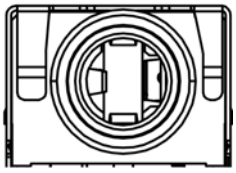
Ethernet Port：RJ45



Item	RJ45 Connector Signal
1	ETH_TX+ Ethernet communication signals
2	ETH_TX- Ethernet communication signals
3	ETH_RX+ Ethernet communication signals
4	NC
5	NC
6	ETH_RX- Ethernet communication signals
7	NC
8	NC

Audio Jack

The audio jack of Moby C150 support OMTP and CTIA standard interface, Includes four-segment audio head (supporting microphone) and three-segment audio head, which can be connected to headphones or speakers



Item	Audio jack signals
1	MIC2_IN MIC input signal
2	HPH_L Left Channel
3	HPH_R right Channel
4	HS_DET insert detect
5	NC
6	HPH_REF reference GND

Cashbox interface: RJ11

Support external cashbox connection, use RJ11 connector，support all the DC 12V cashbox.

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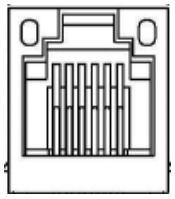
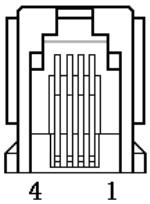


Item	RJ11 connector signal
1	GND
2	NC
3	Drive signal
4	GND

UART COM1/COM2（RJ22）

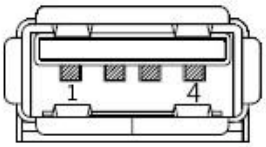
Terminal have 2 standard serial UART COM1 and COM2, the signal are use RS232 level.



Item	RJ22 connector signal
1	5.0V
2	TXD
3	RXD
4	GND

USB Type-A port

The terminal has 3*USB HOST ports which located on the base, they can be used connect to C150 pin pad or other USB devices.



Item	signal
1	VBUS
2	D-
3	D+
4	GND

4.5 Debugging and Trial Operation

Debugging and Trial Operation

1. Check if the power cable is properly connected. When the power supply is functional, the red light will be on.
2. Press the power button and observe the system led is from red to blue. If the button has been pressed but the terminal has no any response, please refer to the "Trouble shooting".
3. After the installation of the equipment, please have a trial operation.

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5 Usage Instruction

5.1 Power On/Power Off the Terminal

Power on: Make sure the power adapter is correctly connected and press <Power> button more than 3s. The power indicator flickers from red to blue. The main display will show the root screen.
Power off: Press <Power> button for more than 2s until the screen displays the following figure, select <Power off> then press it.

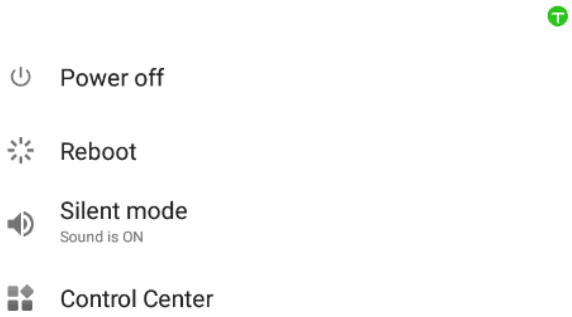

Figure 5-1

The power indicator flickers from blue to red when the terminal is turned off normally.

5.2 Keypad Function

The terminal has four physical keys in total. They are placed at the lower right corner of the Main Screen. The function of the buttons is displayed on the screen.

Figure 5-2

Power Button: To turn on/off the terminal (press for some seconds) and lock/unlock the screen (press in a short time).
Volume Keys: To adjust system volume.
Cash Drawer button: To open the cash drawer quickly. The access right to the drawer is controlled by software.

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5.3 Magnetic stripe card

The card can be read bi-directionally, with the stripe facing down. Use a regular movement in order to ensure a reliable card reading.

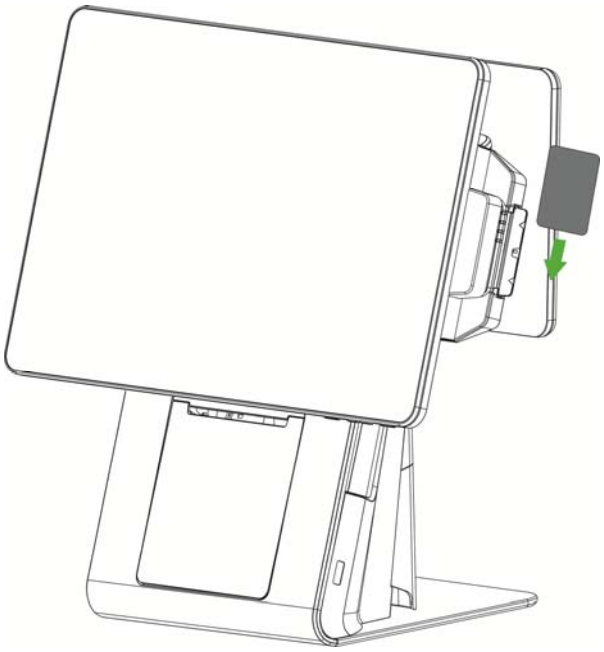

Figure 5-3

Unacceptable magnetic card:

1. Being curved.
2. Deformation and edge defection.
3. The magnetic stripe is obviously damaged, scratched or out of magnetic.

5.4 Smart Card

Insert the smart card vertically with the metal chip facing the operator and keep it in position throughout the transaction.

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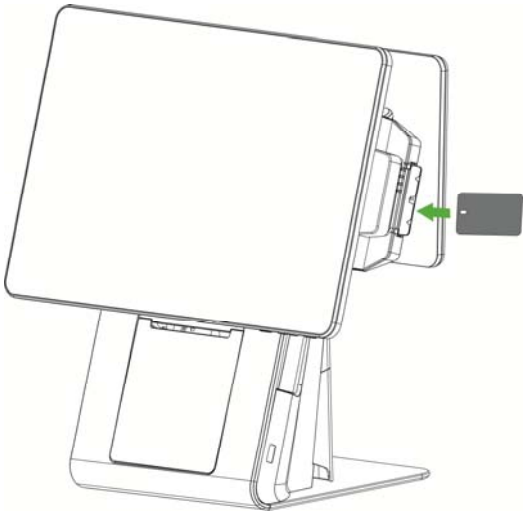

Figure 5-4

Notice: If the chip contacts of the smart card are damaged or oxidized, it may cause transaction failure.

5.5 Contactless Card

Place the card right against the sensing area. Keep the card close to the reader during the transaction. You can remove the card when the transaction is completed.

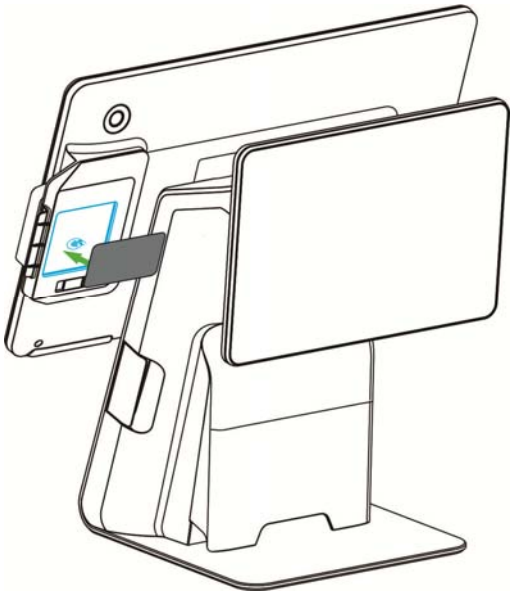

Figure 5-5

5.6 **Fingerprint identification**

Fingerprint identification is located behind the right side of the main display screen and can be used for login, authorization, etc.

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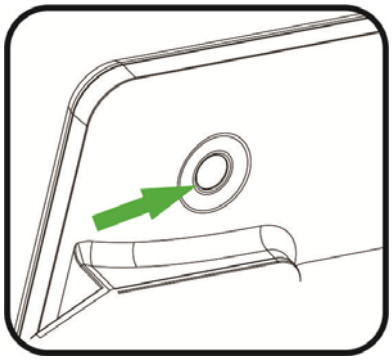

Figure5-6

Notice: please keep the surface of the fingerprint module clean.

5.7 USB Ports

The terminal has 3 USB Type-A ports in total. They are all with power output of 5V/0.5A, located behind the base are recommended for USB devices that are not plugged in/out frequently (e.g. PIN Pad, scanners etc.).

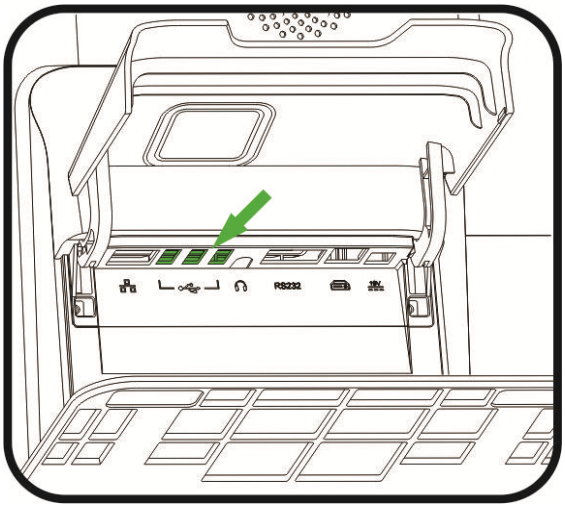

Figure 5-7

5.8 Usage of Printer

Installing paper roll

1. Paper roll characteristics

The paper roll can be purchased in stationery store. If the users need to

purchase or customize their own paper roll, they can refer to the following size specifications.

Width: 80mm

Thickness: 80μm

Diameter: 80mm

The carbonized layer of the paper roll should follow the way as Figure 6-11.

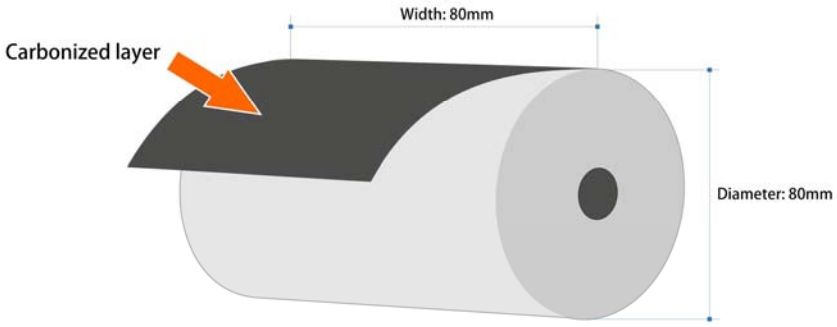

Figure 5-8

Notice: The quality of the paper roll will affect the printing display. Please do not use inferior paper roll to avoid inconvenience.

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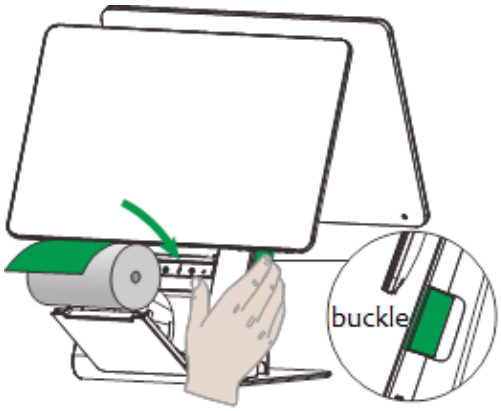
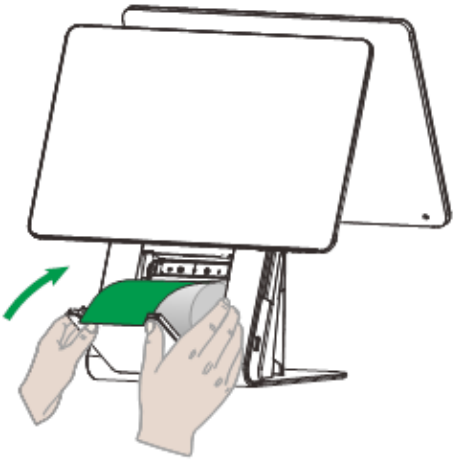
2. Installing paper roll



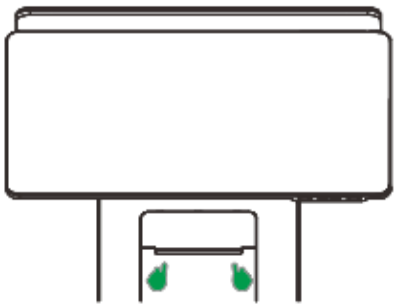
1. Pull the buckle of the paper roll cover.

2. Insert the paper roll in the compartment following the directions show on the below picture.



3. Pull the paper up to the top of the terminal, maintain the paper and close the cover.

4. Press simultaneously on both upper corners of the paper flap until it clips into position.



5. Press both sides of the cover at the same time with both hands. Make sure that both sides of the cover are buttoned.

Figure 5-9

Notice: Please make sure that paper roll cover is buttoned with the entire panel, otherwise it may lead to poor printing or failing to recognize the paper roll.

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6 Standard

FCC Warning

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

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B 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 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 one or more of the following measures:

- ✧ Reorient or relocate the receiving antenna.
- ✧ Increase the separation between the equipment and receiver.
- ✧ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ✧ Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment .

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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Environment (WEEE, Batteries and packaging)

This product is labeled in accordance with European Directives 2002/96/EC concerning Waste Electrical and Electronic Equipment (WEEE) and 2006/66/EC concerning Batteries and Accumulators. Those provisions are requiring producers and manufacturers to become liable for take-back, treatment and recycling upon end of life of equipment and batteries.

BATTERIES

If your product contains batteries, they must be disposed of at appropriate collection points.

CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRCTIONS

THE PRODUCT

The crossed-out waste bin stuck on the product or its accessories means that the product belongs to the family of electrical and electronic equipment, and waste batteries must not be thrown away but collected separately and recycles.

Please contact your retailers for more detailed information about the compliance solution in place for disposing of your old product and used batteries.

Packaging waste must also be collected separately to assure a proper disposal and recycling.

In this way you can participate in the re-use and upgrading of Electrical and Electronic Equipment Waste, which can have an effect on the environment and human health.

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7 Maintenance

7.1 MSR and Smart Card Reader Maintenance

✧ Do not attempt to clean the magnetic card reader and smart card reader, for this action may result in damage to the terminal and void the warranty.

7.2 Printer Maintenance

✧ Do not try to pull up the paper roll under any circumstances.
✧ If paper jam occurs, please pull the buckle and open the paper roll cover. The paper jam will be fixed automatically.
✧ Dust or waste paper remnant in the printer will reduce the efficiency. Please use soft brush to clean it (Be careful not to scratch the printer head).

7.3 Trouble shooting

Question	Explanation	Action
Terminal does not start	Abnormal power supply	1. Make sure the power adapter is correctly connected and the power indicator is red. 2. Make sure the button is pressed more than 3s. 3. If it still fails, please contact our customer service for help.
Screen is off	1. Power is not enough	1. Check whether power cable plugs tightly. 2. Disconnect the power cable and reconnect it. 3. If it still fails, please contact our customer service department for help.
Printer does not work	1. Abnormal power supply. 2. Incorrect paper installation.	1、 Check whether the power is on. 2、 Check if it is out of paper or if the paper roll is incorrectly installed. 3、 Check whether the paper roll cover is fully closed. 4、 If the problem still exists, please contact our customer service center.
Peripheral device does not work	1. Abnormal power supply. 2. Broken cable	1. Check the power cable connected to the peripheral device. 2. Check whether the peripheral device is connected to the power supply and works properly. 3. Please try to replace a cable and reconnect it with reference to device connections. 4. If the problem still exists, please contact our customer service center.
Transaction Processing fails	1. Damaged MSR card.	1. Try to use more than one magnetic card to test the transaction, to confirm the failure is not due to

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	2. Operate the card improperly. 3. Damaged MSR card reader. 4. Damaged smart card 5. Communication breakdown.	magnetic card. 2. Make sure card is swiped correctly. 3. Manually process the transaction instead of using card reader. If manually operated transaction works, the failure may be due to magnetic card reader. 4. If the manual transaction fails, please check the communication status or check the smart card reader. 5. Use more than one smart card to test the transaction, to confirm the failure is not caused by the smart card. 6. If there is communication breakdown, please contact the corresponding communication operator to solve the problem. 7. If there is still problem, please contact our customer service.

8 Notices

- ✧ Do not use the terminal in an environment with direct sunlight, high temperature, moisture or dust.
- ✧ Cut off the power supply before cleaning; use soft dry cloth to clean. Cleaning terminal with a clean cloth dipped in one or two drops of neutral detergent to clean, not to use a damp cloth. For dirt difficult to remove, alcohol or alcoholic washing detergent can be used. Do not use thinner, trichloroethylene or keto solvents, because these chemicals will damage plastic & rubber parts.
- ✧ Do not plug in or out any parts in charging state (Except USB, Ethernet, headset).
- ✧ Do not plug out smart card during transaction process.
- ✧ Please shut down the terminal to save energy at the end of the day.
- ✧ Stop operation when there is abnormal phenomenon. Shut down the terminal and inform the service provider if:
  1. You hear harsh sound when using the system.
  2. If you spilled any liquid into device accidentally.
  3. You smell burning plastic.

WARNING: The terminal is limited to indoor use. Any exposure to rain or dust for the terminal causing its malfunction is not within the scope of warranty.

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9 Transportation and Storage

Adopt general transportation mode, and prevent the goods from sunlight, snow, water and mechanical impact. Transport the devices with care. Do not throw it forcibly. Prevent the packaging from extrusion during transportation, to avoid breakage.

Notice: There are warnings for the transportation on the packaging box. Please follow the warnings during transportation to avoid damage to the terminal.

The product should be stored in the original packaging box. The warehouse is not allowed to have harmful gases, inflammable items, explosives, corrosive chemical goods, strong mechanical vibration and strong magnetic field. Packing box should be at least 15cm above the ground, and be away from heat, cold, window or air inlet source at least 50cm.

10 Others

10.1 Product accessories can be sold separately

We provide you with more kinds of accessories to meet the different requirements.

1. Paper roll
2. PIN Pad
3. Cash drawer
4. Scanner

Note: please contact customer manager for more details.

10.2 Customer Service

Please refer to the contact information in the warranty list of the terminal, contact the nearest service point for maintenance. Please provide valid proof such as purchase invoice in case of maintenance.

10.3 Customer Service Address

Ingenico Inc.

3025 Windward Plaza, Alpharetta, GA 30005

www.ingenico.us

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