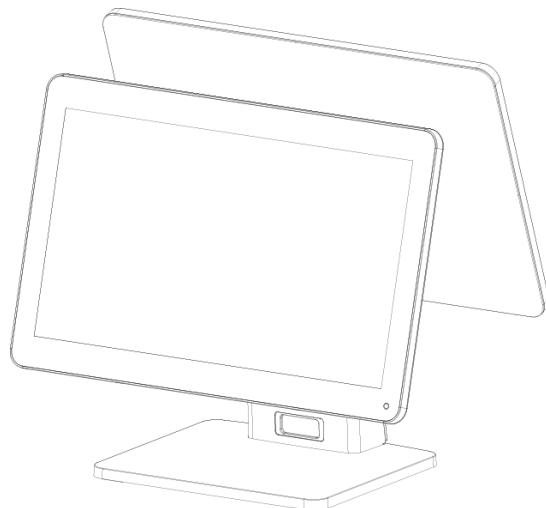


# Hisense

## User Manual

(HK560)



QingDao Hisense Intelligent Commercial System Co.,Ltd.

## **CONTENT**

<b>CONTENT.....</b>	<b>2</b>
<b>PART 1 SYSTEM INTRODUCTION.....</b>	<b>4</b>
SAFETY NOTICES BEFORE INSTALLATION OR USE.....	4
1. SYSTEM INTRODUCTION .....	5
2. BASIC PRODUCT CONFIGURATION.....	6
3. I/O PANEL.....	7
4. MAIN BOARD INTERFACE DESCRIPTION.....	7
<b>PART II SYSTEM ASSEMBLY AND DISASSEMBLY.....</b>	<b>9</b>
1. MAIN SCREEN, SECOND SCREEN (15.6"/10.1") AND VFD.....	9
2. HARD DISK REPLACEMENT .....	11
3. INSTALLATION OF CARD READER .....	12
4. FINGERPRINT READER INSTALLATION .....	13
<b>PART III SYSTEM INSTALLATION .....</b>	<b>14</b>
1. INSPECTION OF INSTALLATION ENVIRONMENT .....	14
2. SYSTEM SOFTWARE INSTALLATION .....	14
3. BIOS .....	20
<b>PART IV INSTRUCTIONS FOR USAGE .....</b>	<b>28</b>

1. SWITCHING INSTRUCTION.....	28
2. INSTRUCTIONS FOR USING MAGNETIC STRIPE CARDS .....	28
3. INSTRUCTIONS FOR USING RFID CONTACTLESS CARDS .....	29
<b>PART V ACCESSORIES ANNEXES .....</b>	<b>30</b>
<b>APPENDIX A .....</b>	<b>30</b>
<b>APPENDIX B .....</b>	<b>30</b>

# Part 1 System Introduction

## Safety Notices Before Installation or Use

- ☆ It is required grounded well and the supply voltage shall be stable, and you must confirm that the voltage of the outlet provides shall be in line with the voltage marked on the label of the unit.
- ☆ Be sure not to sprinkle any liquid or fall any object into the unit.
- ☆ Be sure not to keep heavy, strenuous movement, shake & heavy strike away from the POS.
- ☆ Do not switch on or off the host frequently, because it is easy to result in damage on the machine.
- ☆ Be sure not to unplug or plug in any live part or external device when they are in energized state, and the connecting cables of the POS between parts shall be connected securely.
- ☆ Be sure neither to lengthen cable nor to replace parts at your will, if you have any demand, please contact with the reseller.
- ☆ The unit shall be used under dry, ventilated & clean environment away from sunlight. Avoid to making the air vent of the host machine blocked or covered
- ☆ If any liquid sprinkles or any sundry falls into the unit, please shut it down immediately & switch off power supply, take batteries down, dry the liquid or remove the sundry. If you take the batteries down, you shall reset CMOS.
- ☆ In case of safety fault, such as peculiar smell, abnormal sound, leakage and other faults, you must switch off the power supply at once and then contact with reseller.
- ☆ When inserting USB flash or disk, you shall kill virus to prevent the host machine from virus.
- ☆ The RJ11 port at the back of the host is connected with the cash drawer, as it is not a communication port, users shall not use the port for dial-up networking.
- ☆ The product is a Level A one, it may cause radio interference in living environment. In such case, users may need to take practical & feasible measures against the interference.
- ☆ When the POS is not in use, you shall switch off power supply.

☆ **Warning:**

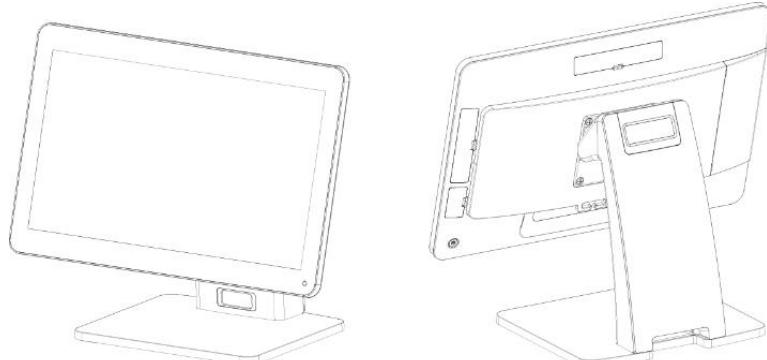
- ☆ **1. Environmental absolute grade:**
- ☆ **A) Working temperature: 0-40 C      B) Working humidity: 10%-85% RH**
- ☆ **C) Storage temperature: -10-50 C      D) Storage humidity: 10%-90% RH**
- ☆ **2. The main plug on the power supply is used as a disconnecting device. The socket shall be installed near the equipment and shall be accessible easily.**
- ☆ **3. Power input: AC 100-240V 50-60Hz**
- ☆ **4. If there is any damage to the power supply or equipment, please contact the local service personnel for help.**
- ☆ **5. Static electricity can damage the integrated circuit in the host computer.**
- ☆ **6. If the replacement battery is incorrect, it may cause explosion or serious damage. Batteries of the same type or similar type recommended by the manufacturer must be replaced.**
- ☆ **7. Use only with additional AC/DC power supply.**

The manufacturer has the right to modify the contents of the instructions without prior declaration.

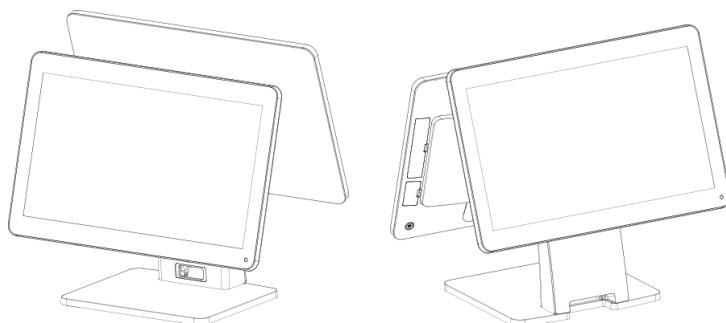
Product Standard Number: Q/0202 RSR527

# 1. System Introduction

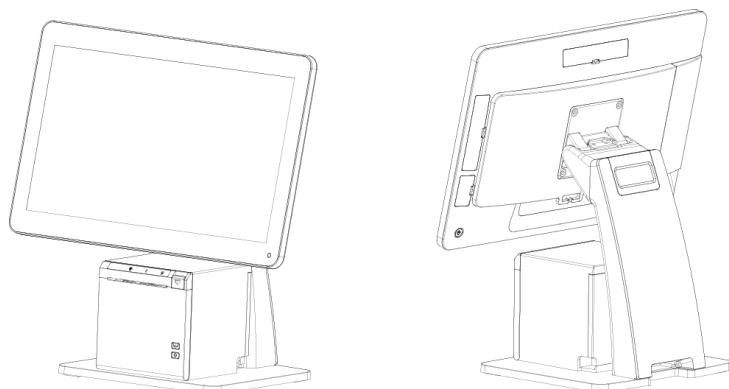
The appearance of the whole machine has the following modes:



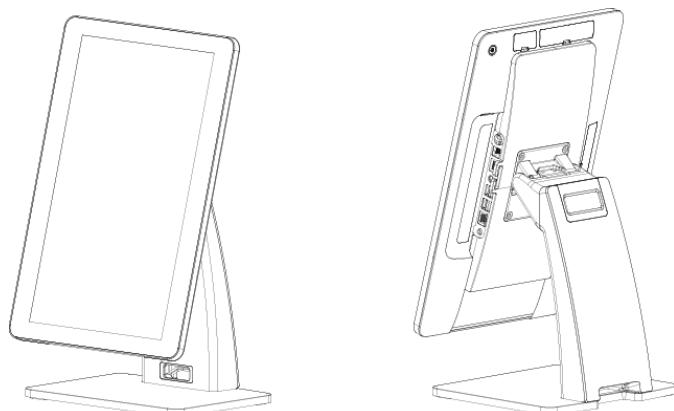
Single-screen Device, length \* width \* height: 405 \* 210 \* 330; main screen flip range: 0-45 degrees



Dual-screen Device, length \* width \* height: 405 \* 250 \* 370; main screen flip range: 0-45 and second screen flip angle 0-30.



Screen High position + printer, length \* width \* height: 405 \* 250 \* 420



Self-service Kiosk, length \* width \* height: 230 \* 250 \* 450

According to the running state of the system, there is a power indicator status light.

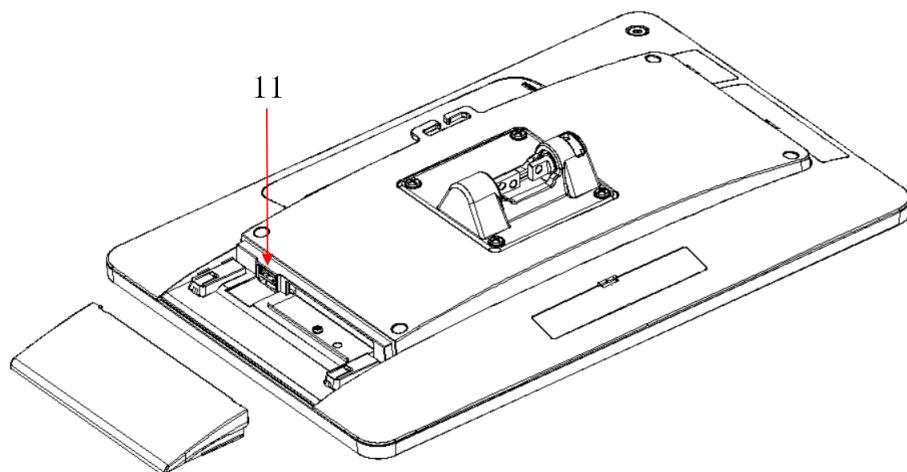
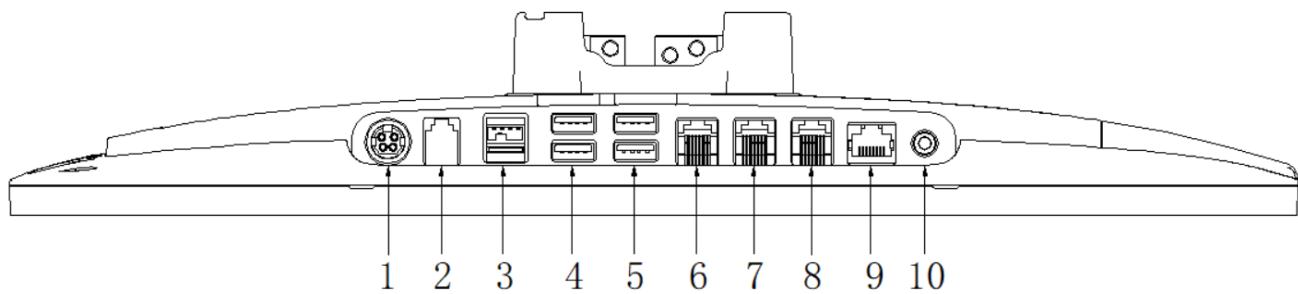
Status	Information	Fig
Red	System errors (e.g. lack of hard disk, memory)	
White	Power on (S1)	
Blue	standby mode (S3)	

## 2. Basic product configuration

Category	Parts	HK560
System	CPU	Intel® Celeron® processor (Baytrail-D) J1900Quad Core, clock speed1.99GHz up to 2.42GHz, TDP 10W
	OS	Windows 7 / Windows 10 / Ubuntu linux
	Memory	DDRIIL 4G (Up to 8G)
	Storage	128G SSD, up to 256GB
Display and Touch Screen	LCD	15.6" LCD
	Resolution	1920*1080
	Touch screen	Capacitive touch screen
	2 <sup>nd</sup> display	15.6" screen optional 10.1" screen optional
I/O	Serial ports	* Standard COM, COM1~3:external port, COM4: onboard port COM1 has no Power selection COM2 and COM3 can set 5V/12V power supply through BIOS (COM2\COM3 are set to 0V by default) COM4 can be set to 5V/12V for VFD through jumper (COM4 is set to 5V by default) .
	USB	4*USB2.0,1*USB3.0
	Ethernet	1 * RJ-45 (1000M)
	Audio	1 Line-out
	Cash drawer port	1 * RJ-11 24V for cash drawer
	DC 24V output	Power USB

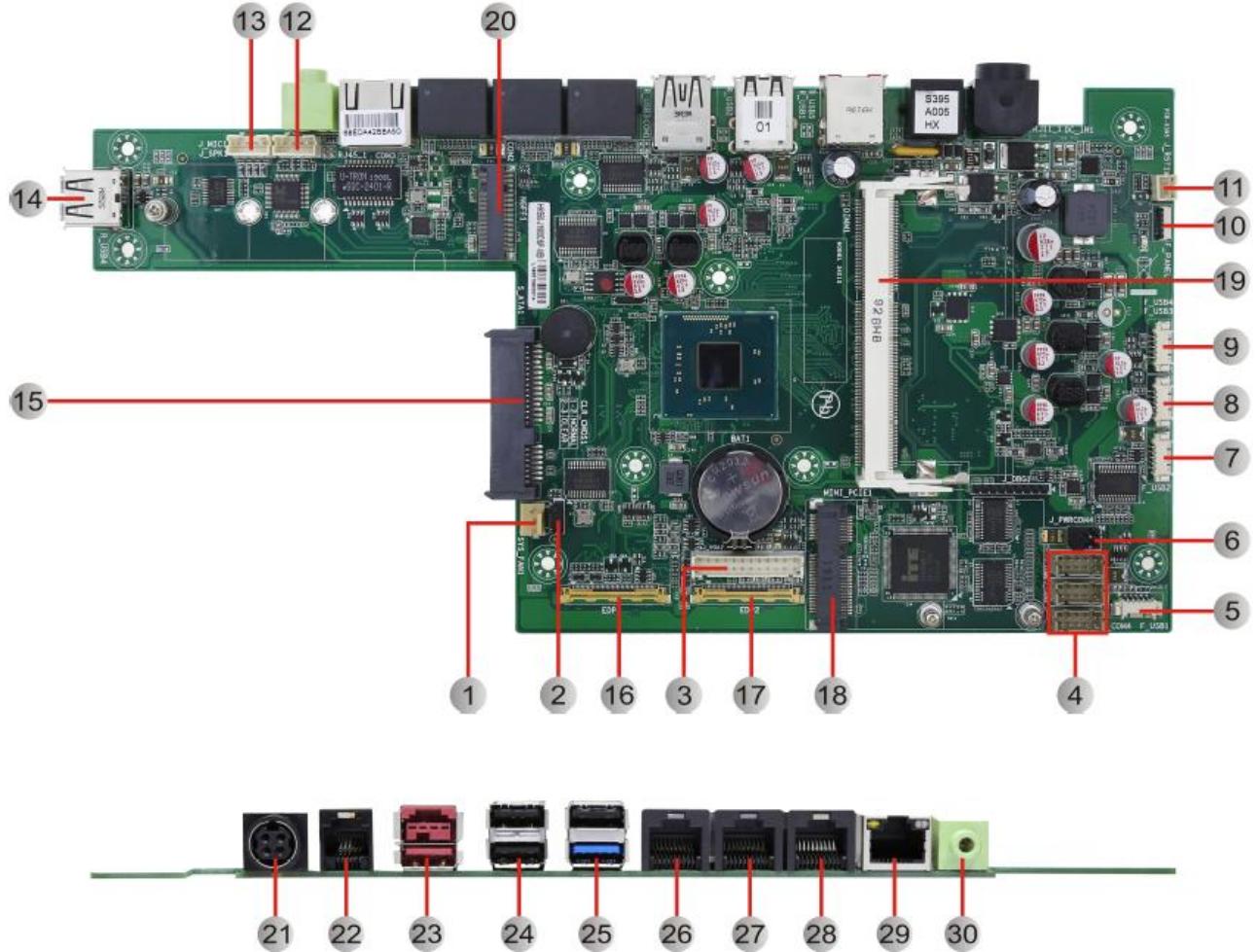
Power	Power Adapter1	Adapter (DC 24V, 2.5A) standard for device without printer or CubeX
	Power Adapter2	Adapter (DC 24V, 5A) for device with printer or CubeX
External	Printer optional	80mm printer
		58mm printer
	Cash drawer	Steel Cash Drawer (Supporting Dual cash drawer)
	card reader optional	Magnetic stripe card reader/RFID contactless card reader
	Scanner	Support
	VFD	2x20 characters VFD (RS232, option)

### 3. I/O Panel



- |                    |                     |
|--------------------|---------------------|
| 1、 24V power input | 2、 Cash Drawer Port |
| 3、 POWER USB       | 4、 USB*2            |
| 5、 USB*2           | 6、 COM1             |
| 7、 COM2            | 8、 COM3             |
| 9、 LAN Port        | 10、 audio output    |
| 11、 USB            |                     |

### 4. Main Board Interface Description



Jumpers / Headers and Connectors		
1	SYS_FAN1	System Fan Connector
2	CLR_CMOS1	CMOS Clear Jumper
3	J_VGA1	VGA Pin Header
4	J_COM4, J_COM5, J_COM6	COM4-6 Pin Headers
5	F_USB1	Front USB2.0 Pin Header1
6	J_PWRCOM4	COM4 VCC Select Jumper
7	F_USB2	Front USB2.0 Pin Header2
8	F_USB3	Front USB2.0 Pin Header3
9	F_USB4	Front USB2.0 Pin Header4
10	F_PANEL1	Front Panel FPC Connector
11	J_RST1	System Reset Button Pin Header
12	J_MIC1	MIC Pin Header
13	J_SPK1	Amplifier Pin Header
14	R_USB4	USB2.0 TYPE-A Connector
15	S_ATA1	SATA2.0 Port (7+15P)
16	EDP1	EDP1 Signal Connector
17	EDP2	EDP2 Signal Connector
18	MINI_PCIE1	Mini PCI-E Slot (WIFI+4G)
19	DIMM1	SO-DIMM DDR3L Slot
20	NGFF1	M.2 (NGFF) Key-B Slot (SSD, 2280)
21	DC_IN1	DC24V Power Input Connector (4Pin Jack)
22	RJ11_1	Cash Drawer RJ11 Connector

23	R_USB1(R_USB5)	POWER USB 24V Key-2 Connector (USB2.0 TYPE-A Connector)
24	R_USB2	USB2.0 Dual TYPE-A Connector
25	R_USB3	USB3.0+USB2.0 TYPE-A Connector
26	COM1	COM1 RJ50 Connector
27	COM2	COM1 RJ50 Connector
28	COM3	COM1 RJ50 Connector
29	RJ45_1	LAN RJ45 Connector
30	PJ1	Line-out 3.5mm Jack

### J\_PWRCOM4 (COM4 VCC Select Jumper 3\*2 Pin 2.54mm)

Graphic	Setting	Function
	1-2	COM4_VCC: + 12V
	3-4	COM4_VCC: + 5V
	5-6(Default)	COM4_VCC: RI#

### CLR\_CMOS1 (CMOS Clear Jumper 3\*1 Pin 2.54mm)

Graphic	Setting	Function
	1-2 (Default)	Normal
	2-3	Clear CMOS

## Part II System Assembly and Disassembly

### 1. Main screen, Second screen (15.6"/10.1") and VFD.

Note: As the second screen (15.6"/10.1") and the fixed structure of the guest display and the base are fixed with three gaskets and anti-loosening screw, the following is illustrated with the 15.6-inch screen as an example.

- 1.1 Remove the rear housing of the base and unscrew the two screw shown here.

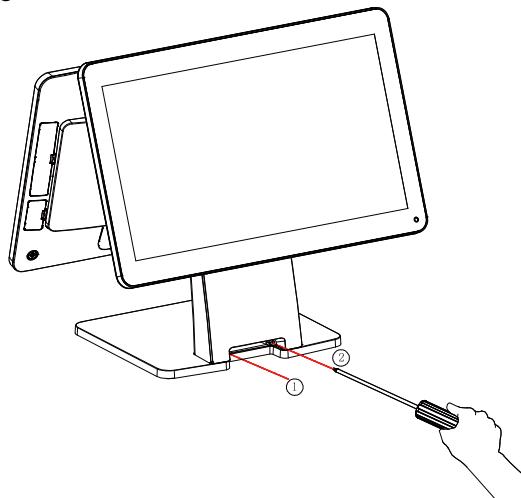


Figure 1

- 1.2 After removing the screw, pull the rear shell of the base forcefully according to the graphic method, remove the rear shell of the base, and then see the transfer plate fixed inside the base.

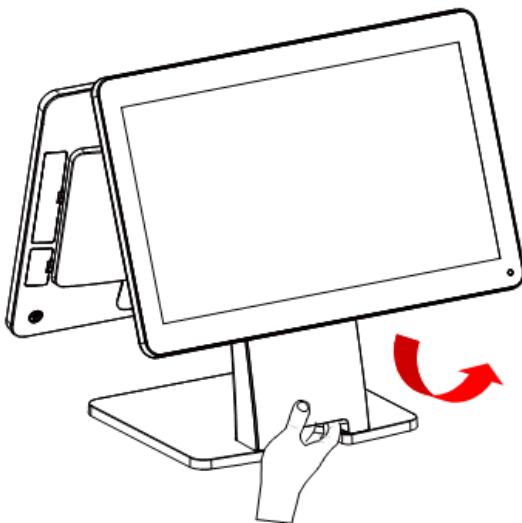


Figure 2

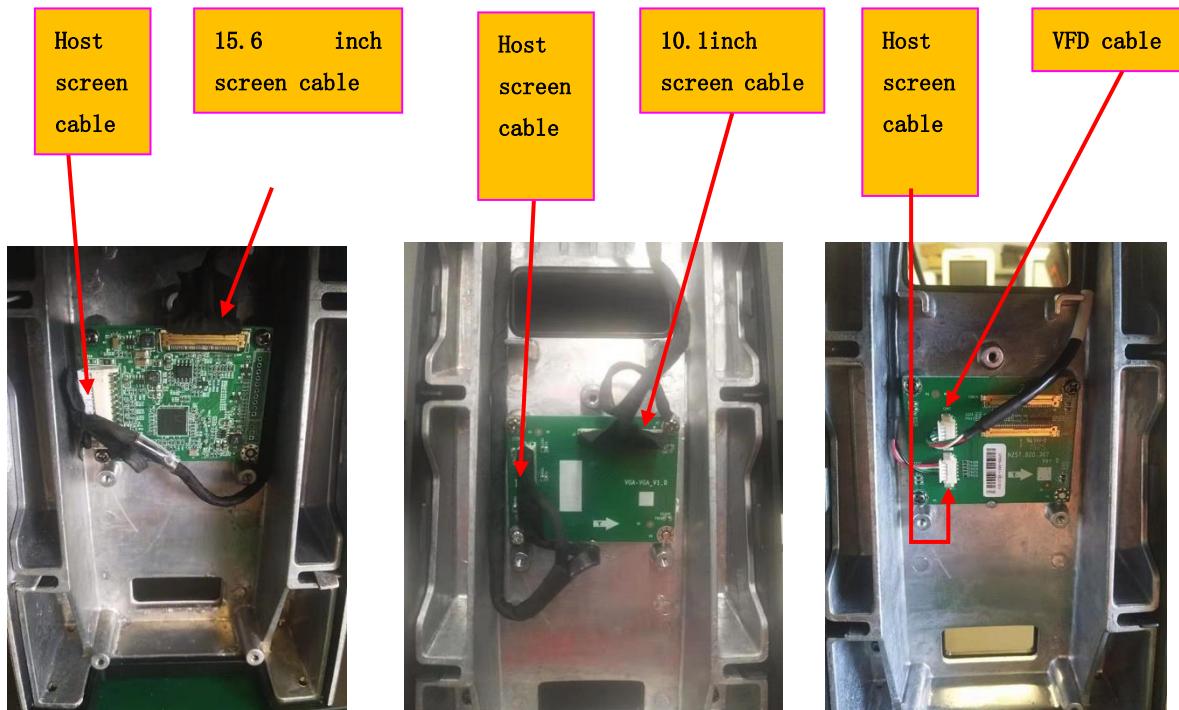


Figure 3 15.6 inches screen

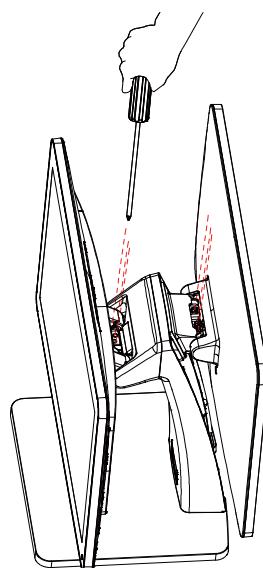
Figure 4 10.1 inches screen

Figure 5 VFD

- 1.3 Remove the two connectors shown in the figure and protect them with the American tape according to the figure (to prevent the connector from being pulled out in the process of dismantling and threading);



- 1.4 Rotate the main screen and the secondary screen to the vertical angle, remove the three fixing screws of the main screen and the second screen (15.6 inch screen/10.1 inch screen/VFD) respectively, and carefully pass the screen cable through the cable hole. Separate the main and auxiliary screen from the base respectively.



## 2. Hard Disk Replacement

Description: The hard disk can be replaced directly on the host. In order to display pictures more clearly, the base and other components are hidden in the following pictures.

- 1.5 Disassemble the extended interface cover and pull it out at the notch according to the PICTURE. Remove the expanded interface cover.

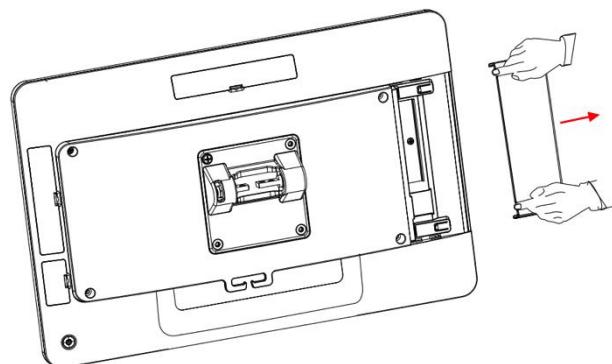


Figure 6

- 1.6 Remove the hard disk. Unscrew the hard disk fixing screw and pull out the hard disk in the arrow direction shown.

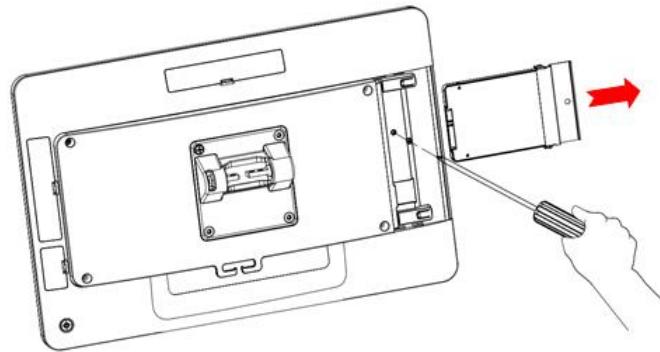


Figure 7

### 3. Installation of Card Reader

Description: The hard disk can be replaced directly on the host computer. In order to display pictures more clearly, the base and other components are hidden in the following pictures.

#### 1.7 Remove the card reader cover

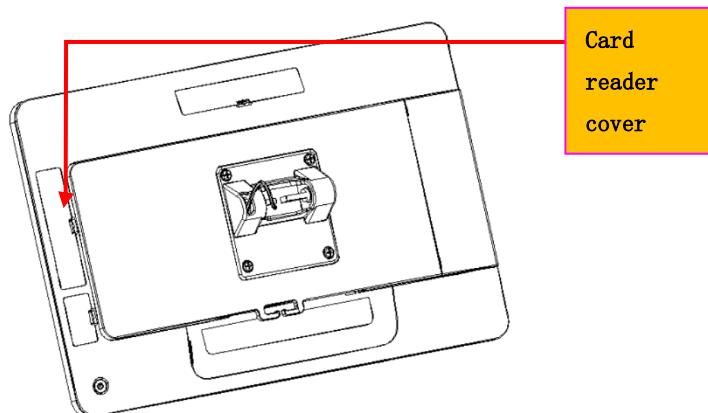


Figure 8

#### 1.8 Insert the cable reserved in the host into the cable socket of the card reader module

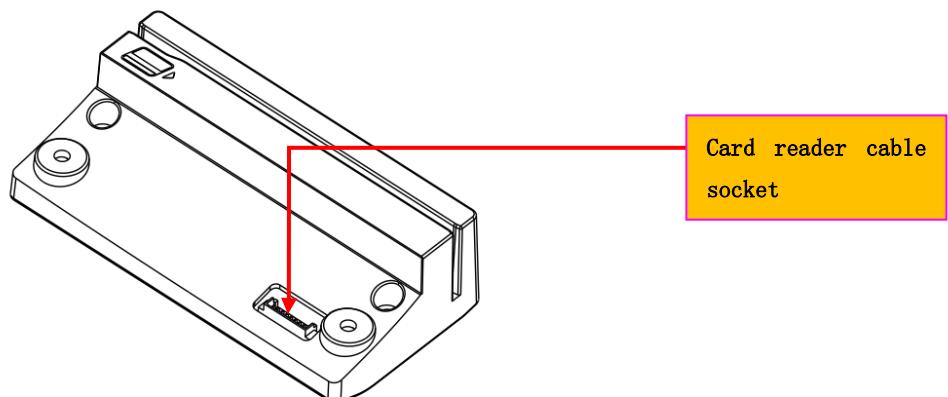


Figure 9

#### 1.9 Install the card brusher in the graphic direction and fix it by locking two M3\*8 screws.

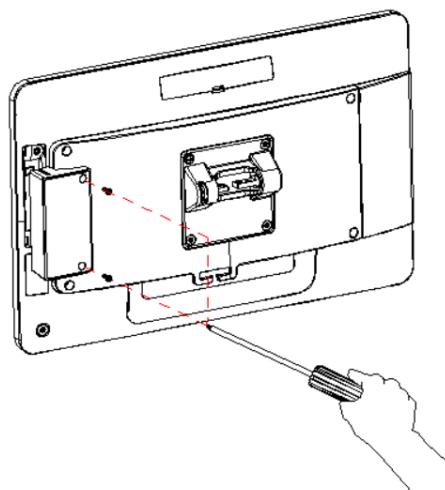


Figure 10

## 4. Fingerprint reader installation

1.10 Remove Fingerprint reader cover

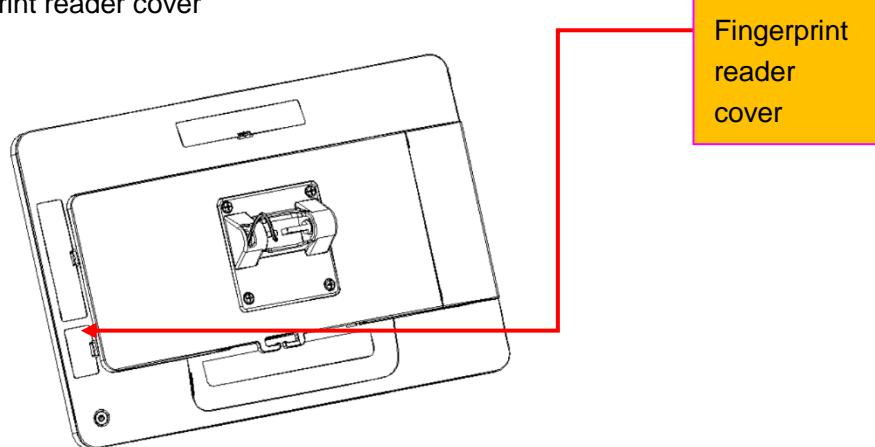


Figure 11

1.11 Insert the reserved cables in the host into the terminal base of the Fingerprint reader

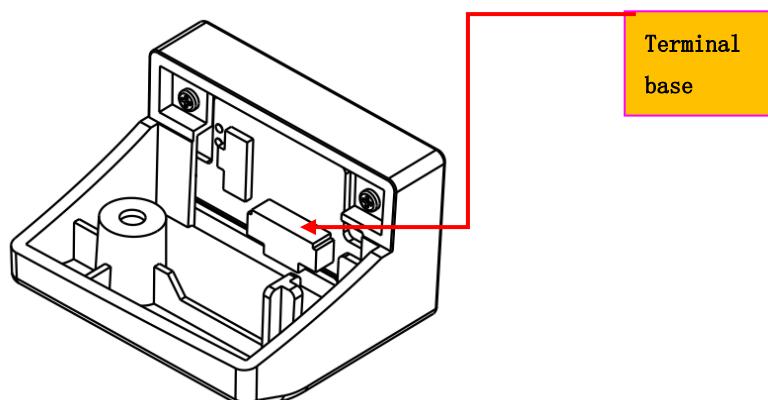


Figure 12

1.12 The Fingerprint reader is installed in the graphical direction and fixed by locking an M3\*8 screw.

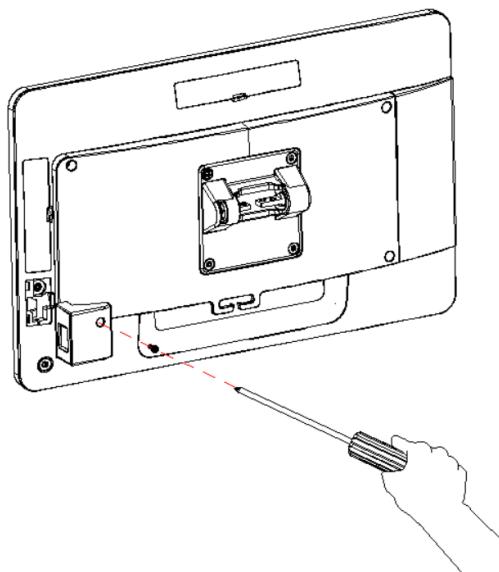


Figure 13

## Part III System Installation

### 1. Inspection of installation environment

It is important to choose a safe and reliable place to install the terminal.

Choose a table or table large and strong enough to support the weight of the system and peripherals.

Choose a flat, hard surface. Carpet areas can generate static electricity to replace memory or damage system components.

Make sure that the system is installed in a well ventilated area and that the space is free.

Choose appropriate environmental conditions, such as cool and dry places. Avoid damp and dusty places.

At the same time, avoid direct sunlight, rapid temperature change, or place the system near the heat source.

Choose the appropriate voltage. Connect all devices to an isolated socket to prevent static electricity and short circuit.

Make sure printers and other peripherals have enough power outlets.

Do not install near electromagnetic and electrical equipment, such as telephones and motors, which may cause system damage.

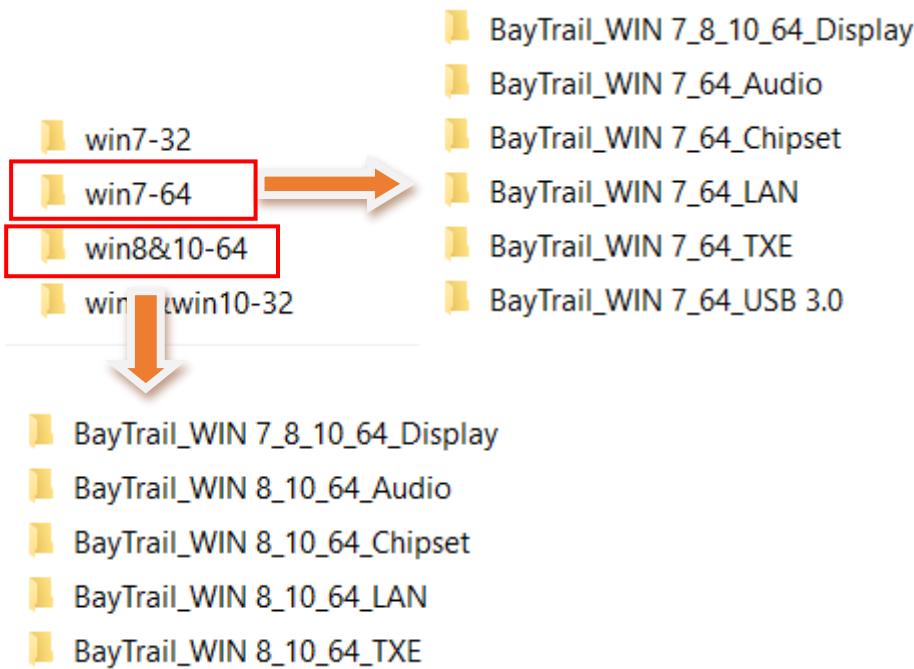
The socket should be installed near the equipment and should be accessible.

### 2. System software installation

#### 1. Mainboard Driver installation and Usage

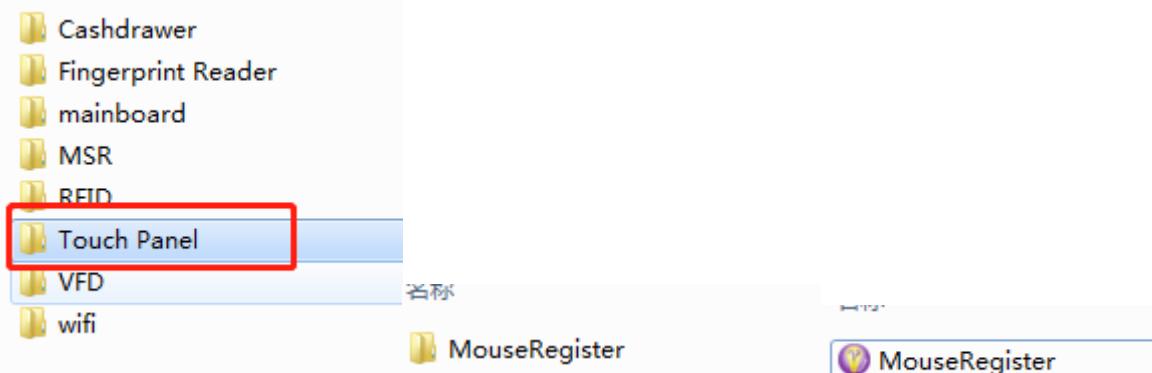
Driver

Mainboard

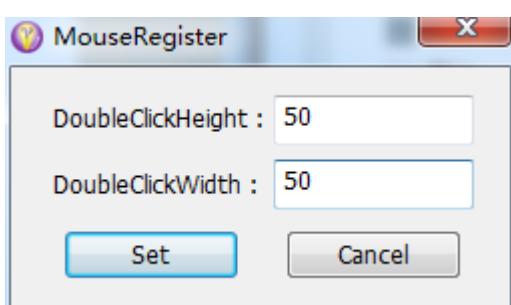


## 2. Touch screen setting

find MouserRegister software in Touch Panel

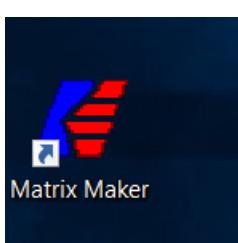


Double-click to run, set the value to 50, click set, set up.

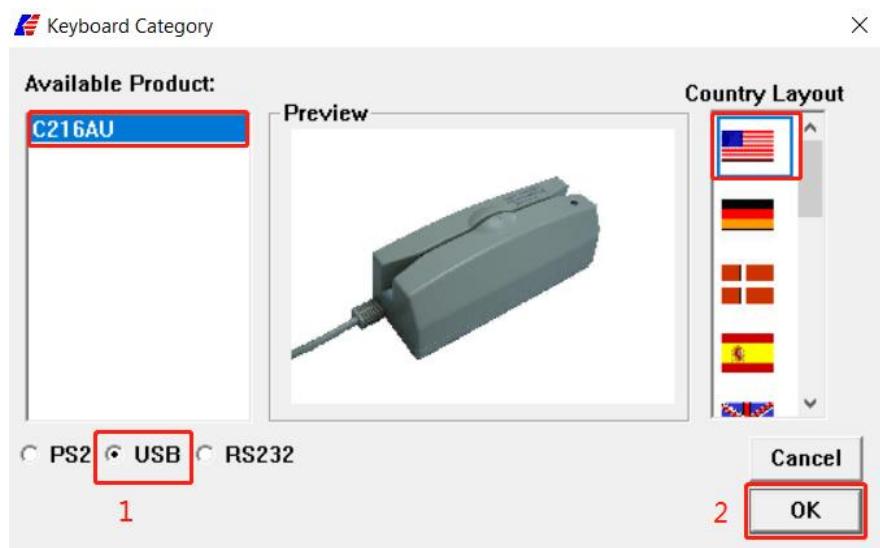


## 3. MSR setting

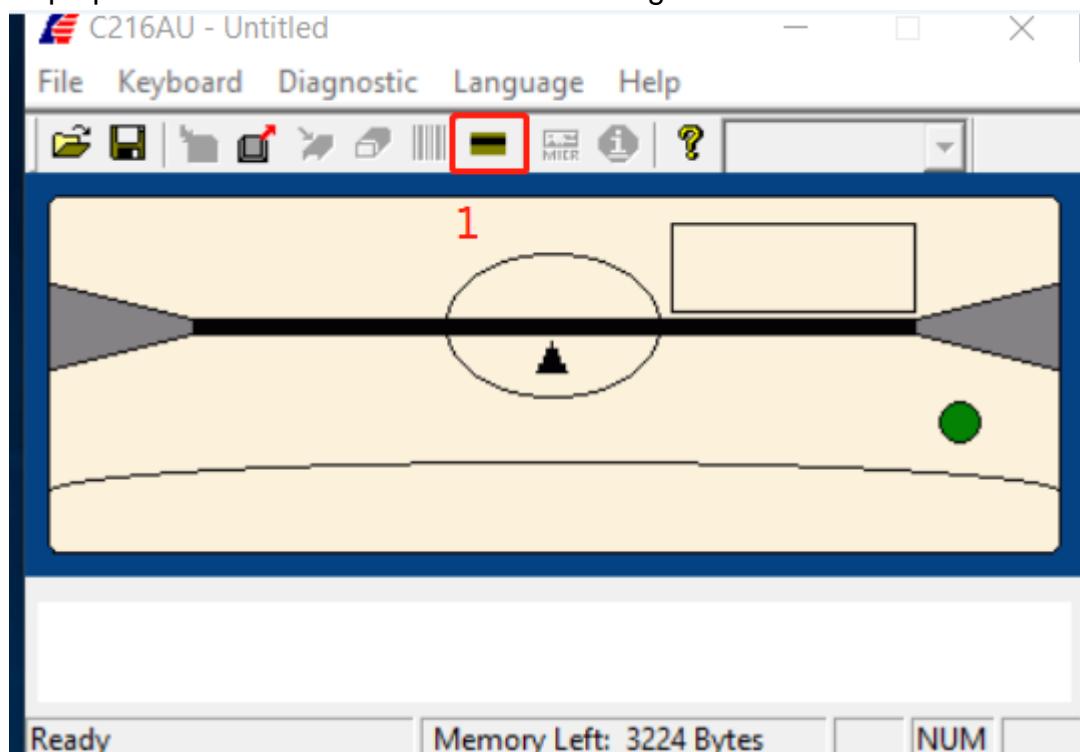
Install 



open and select USB



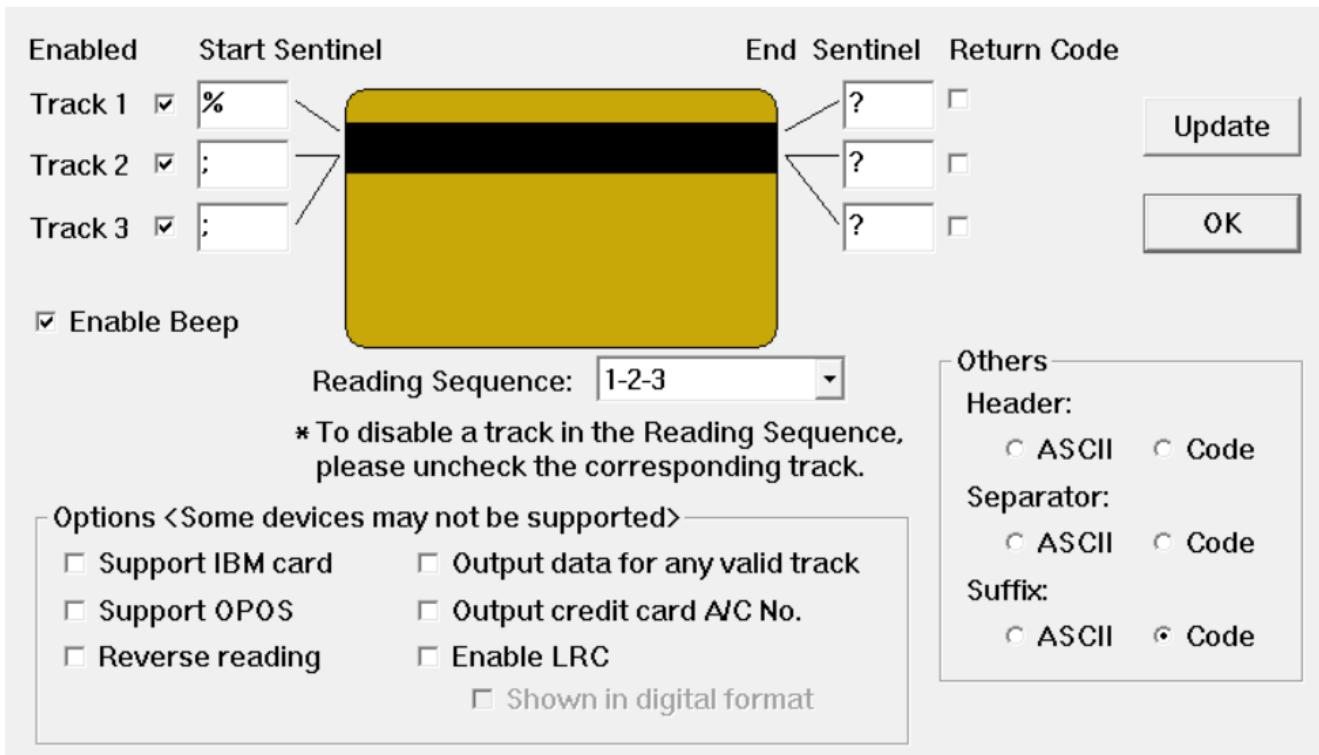
Pop up the lower interface and click on the tag location



In this interface, you can select the settings that need to be modified, click Update, and then update the modified settings to the card switcher.

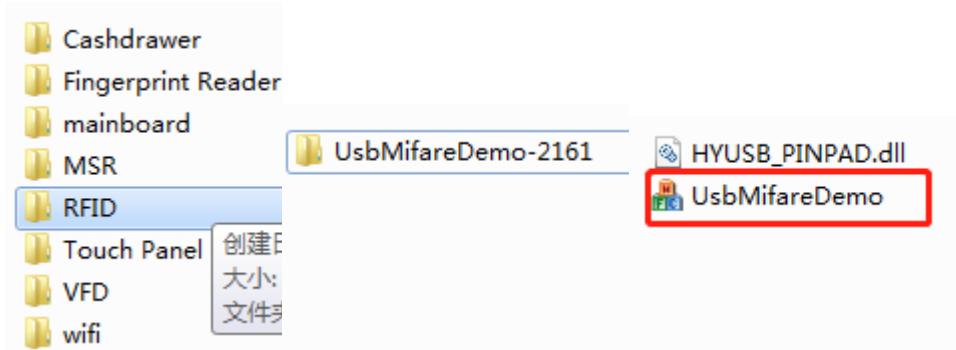
### Magstripe Card Reader Setting

X

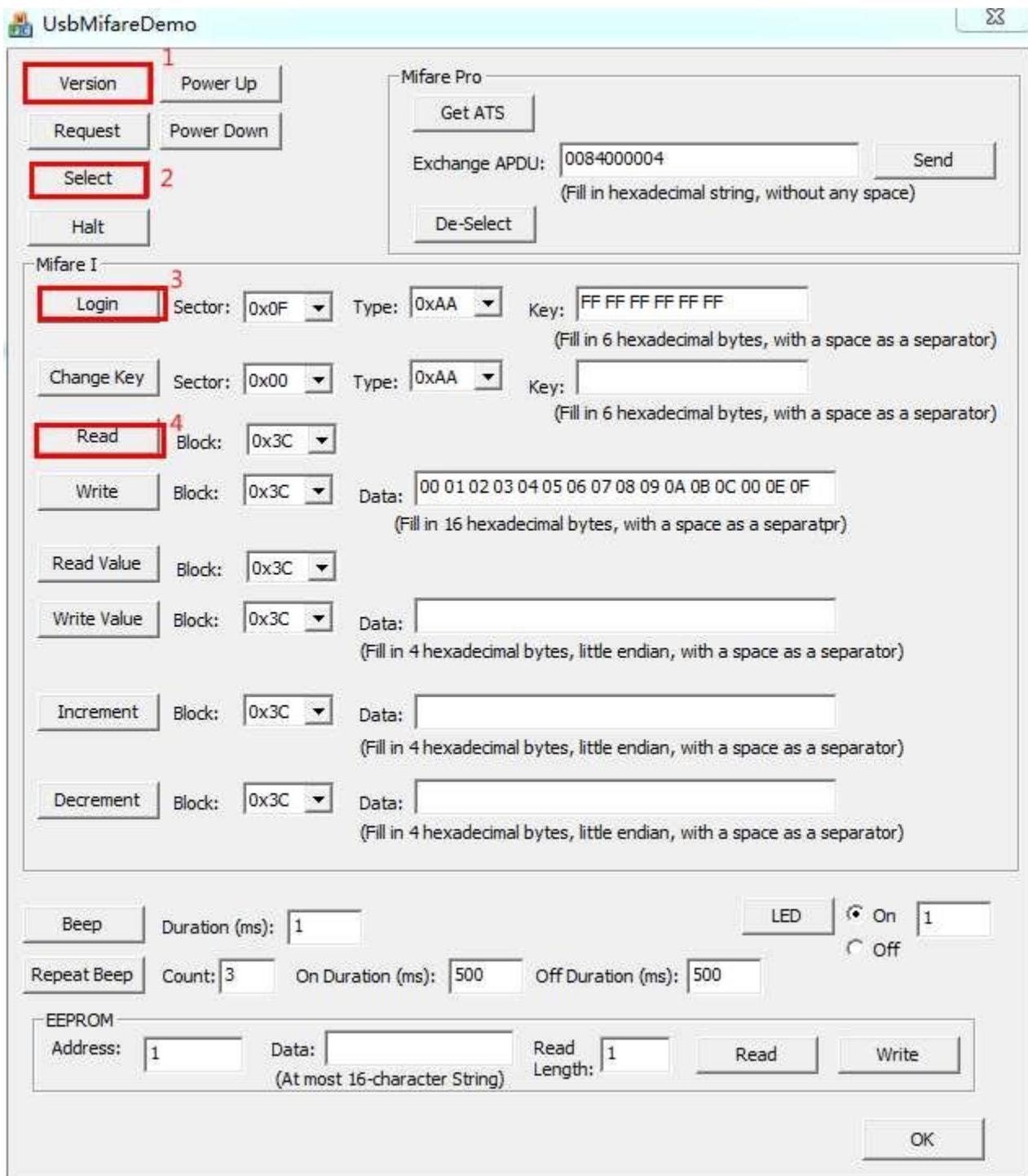


#### 4. RFID test

Open demo

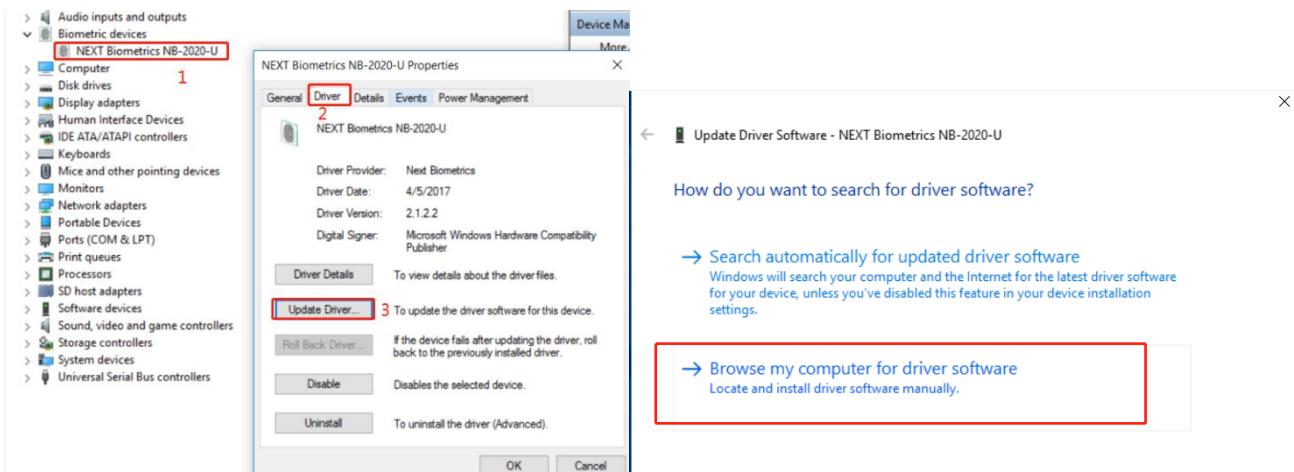


The operation steps are as follows:

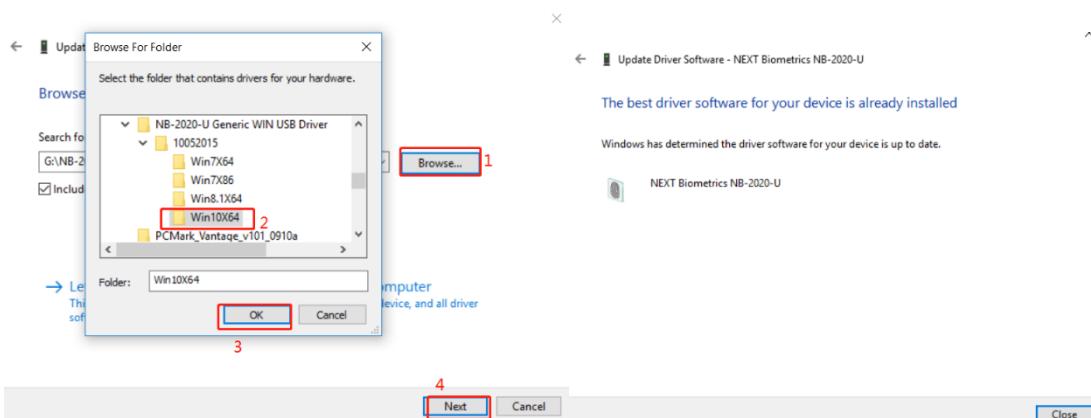


## 5. Fingerprint reader driver installation and testing

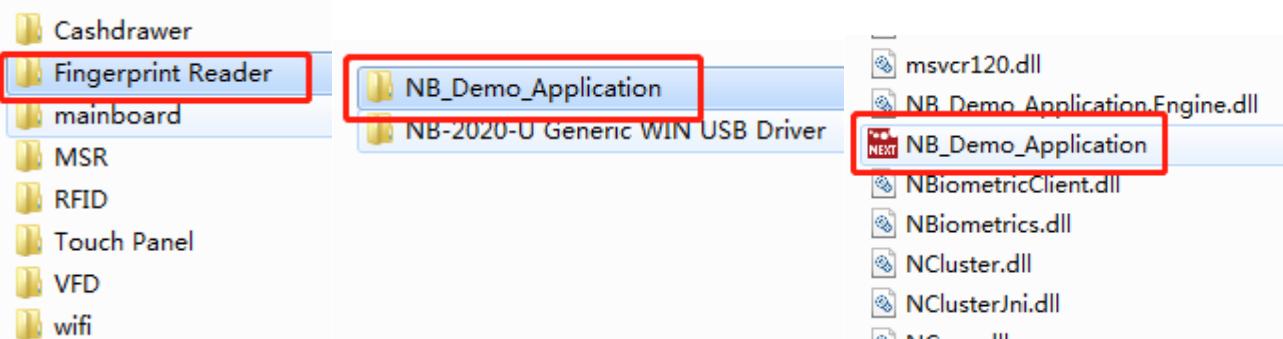
Find the device that needs to install driver in the Device Manager. Double-click to Open. The update steps are as follows:



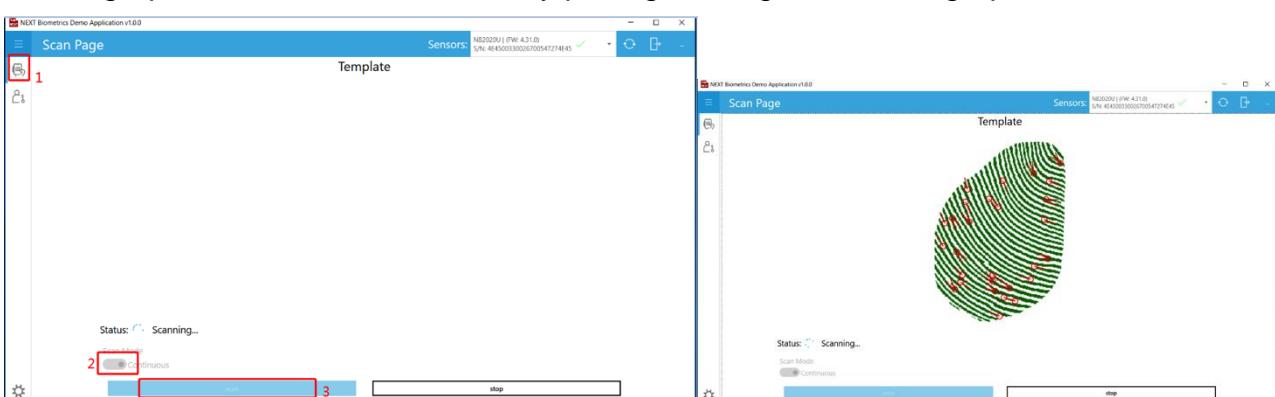
Find the driver storage location, update completed



Find the test demo, double-click to open

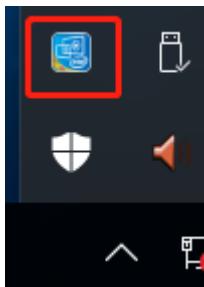


The fingerprint data can be read out by putting the finger on the fingerprint reader after 1-2-3.

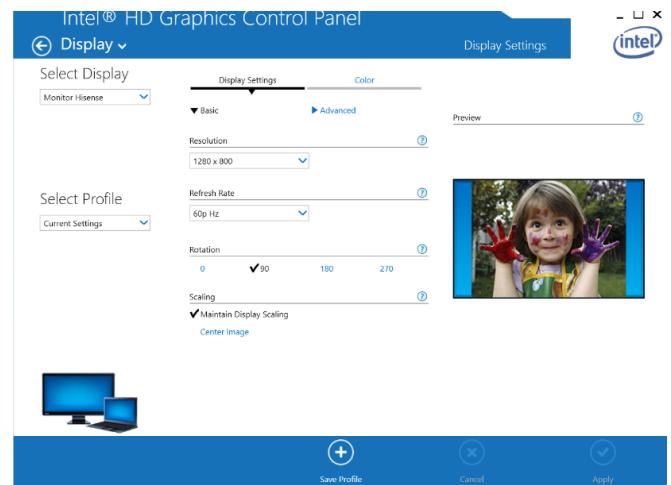
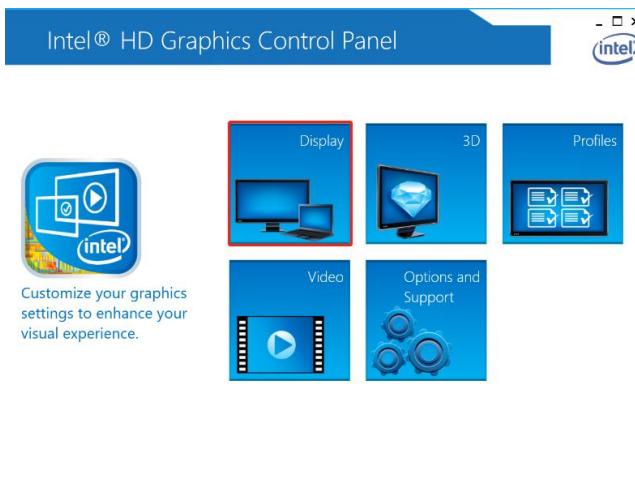


## 6. 10 inch second screen settings

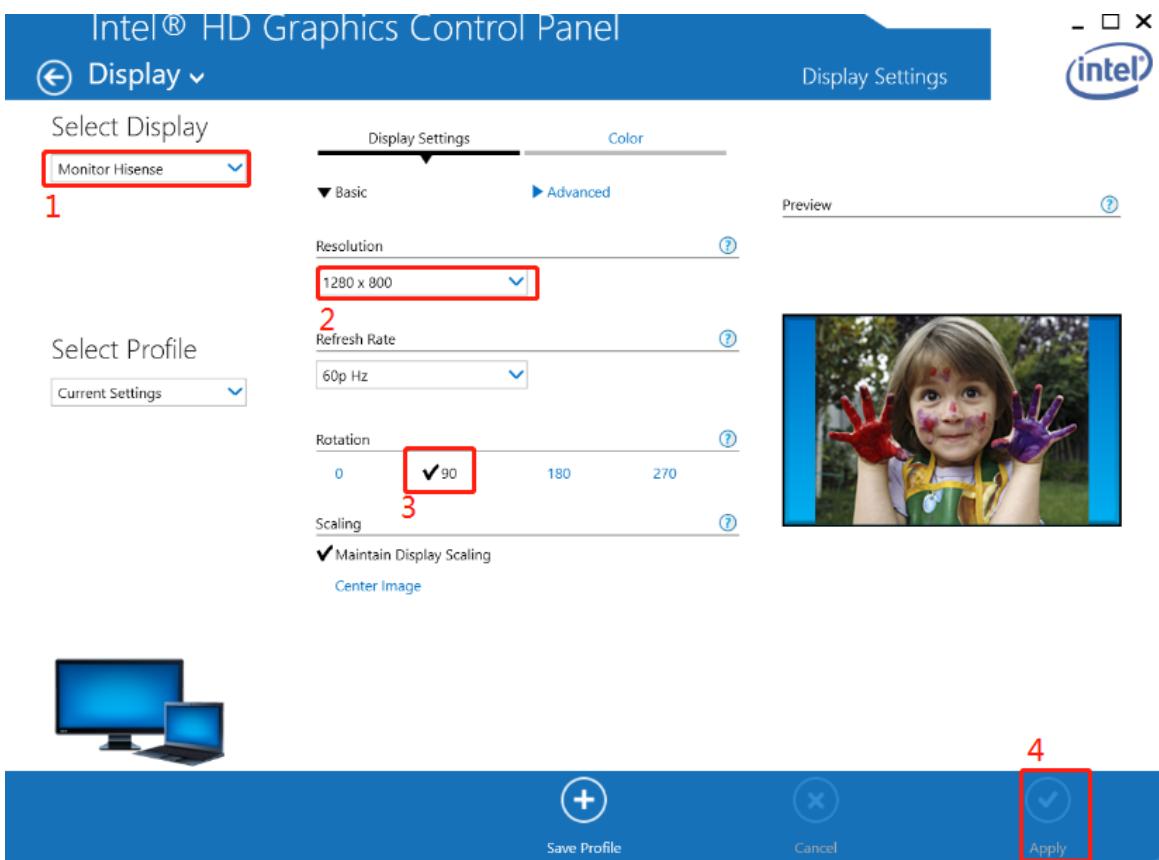
Click on the lower right corner to open the graphics card control software



After you run it, click Display icon as below



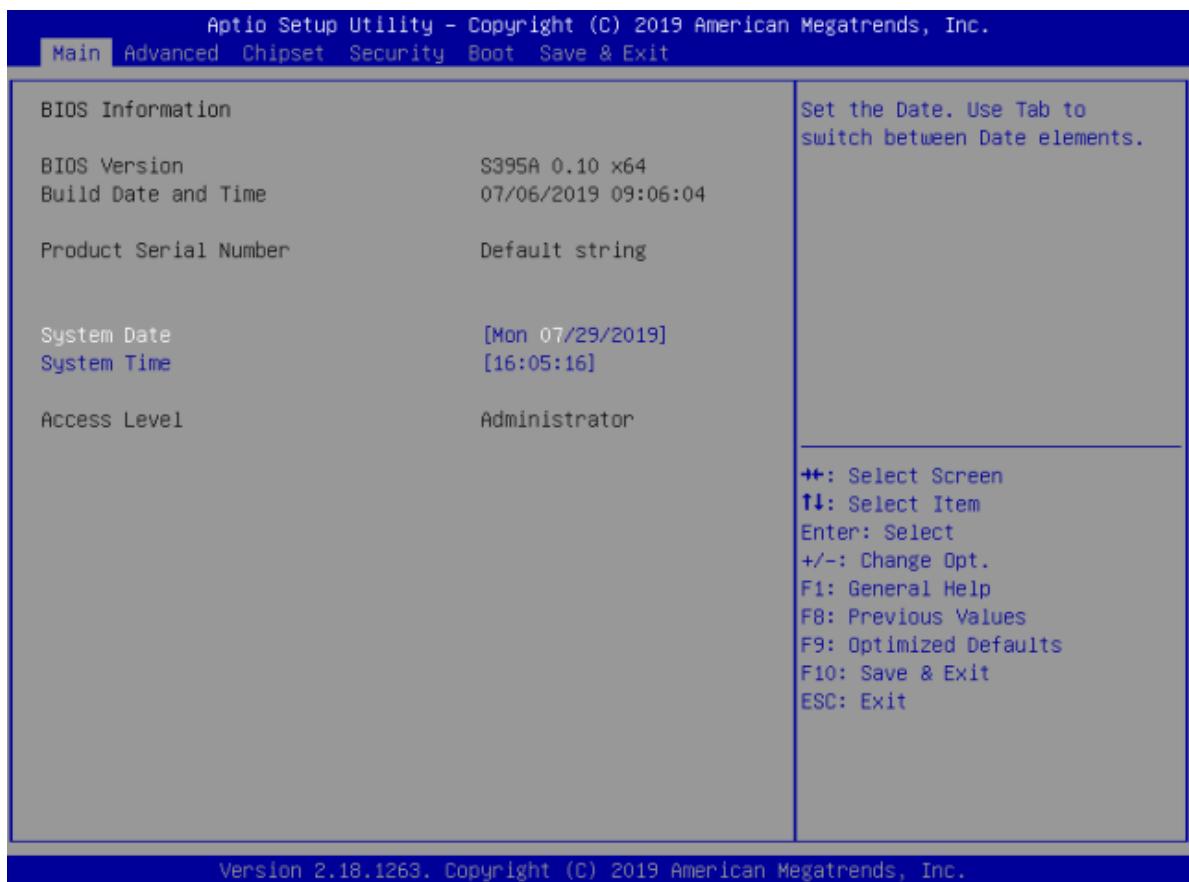
Monitor Hisense is selected in blank 1, resolution can be adjusted in blank 2, rotation direction of secondary screen can be adjusted in blank 3, and setting can be saved in blank 4.



### 3. BIOS

## 1. Main

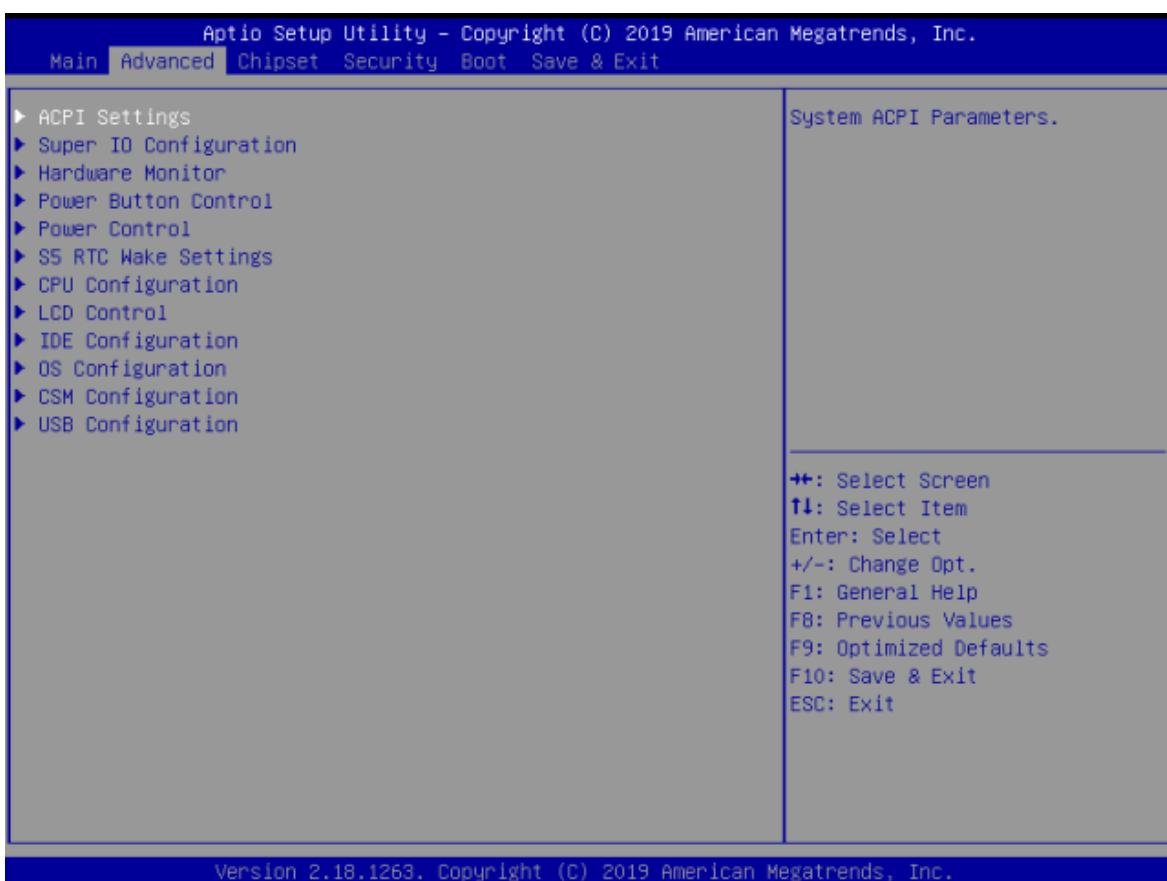
This topic introduces the basic information of the basic input/output system (BIOS) on the main page.



Parameter	Description
BIOS Information	BIOS Version: S395A 0.10 x64 Build Date and Time:- MM/DD/YEAR hh:mm:ss Product Serial Number: The Product Serial Number of the Mainboard
System Date	Current system date. A system date is in the format of MM/DD/YEAR. Press Enter or Tab to switch among the month, day, and year. Change a date value using the following methods: Press + to increase a value by 1. Press - to decrease a value by 1. Press a numeric key to change a value.
System Time	Current system time. A system time is in the format of HH:MM:SS on a 24-hour clock. Press Enter or Tab to switch among the hour, minute, and second. Change a time value using the following methods: Press + to increase a value by 1. Press - to decrease a value by 1. Press a numeric key to change a value.
Access Level	Show the current user access level

## 2. Advanced

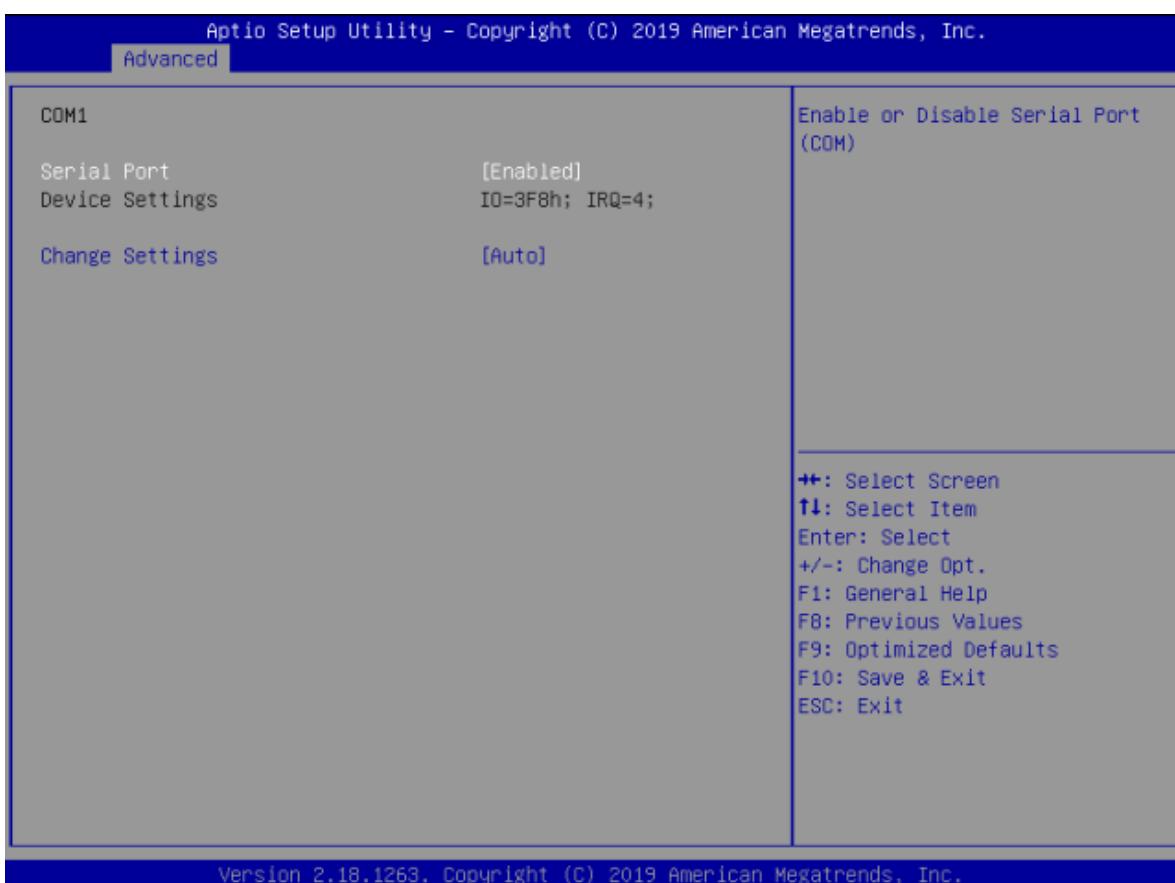
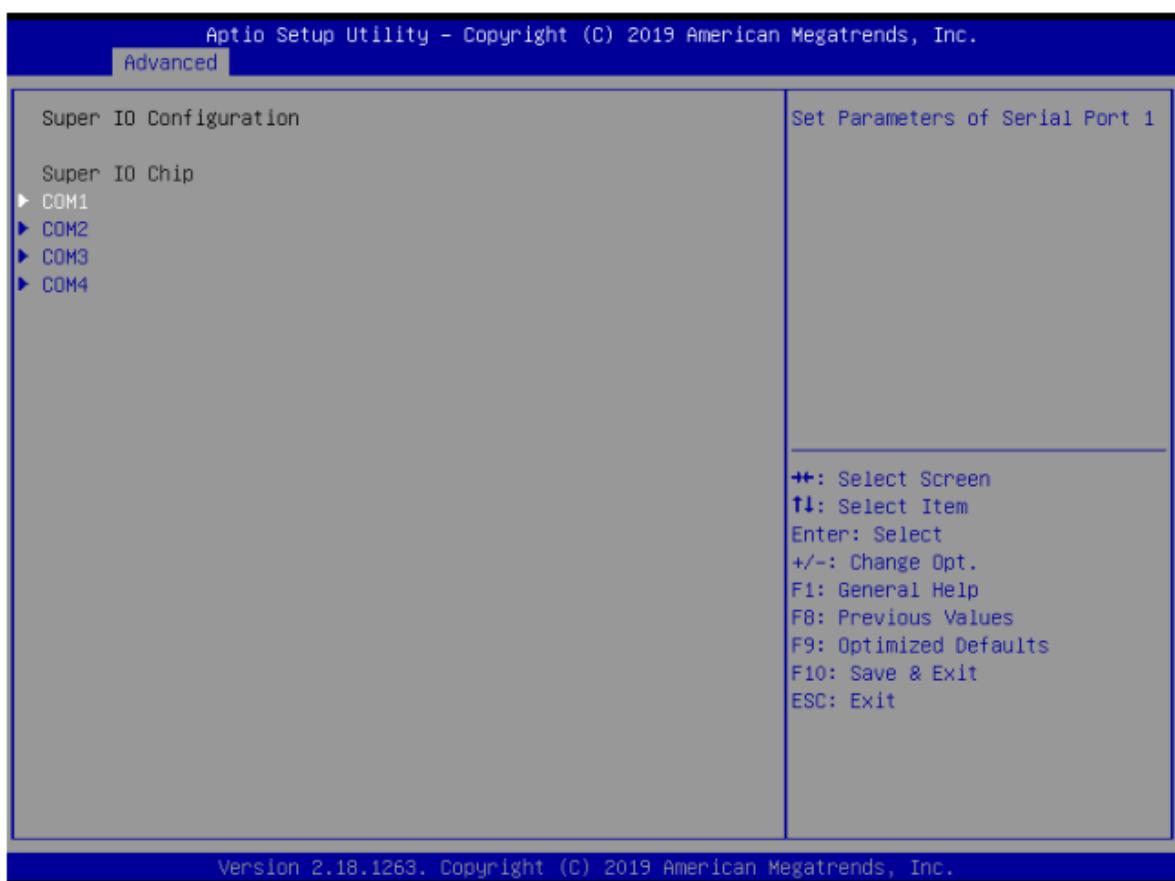
This topic introduces the system parameters and related functions on the "Advanced" page. Users can view advanced configuration items of basic input/output system (BIOS), such as ACPI, USB and serial port.



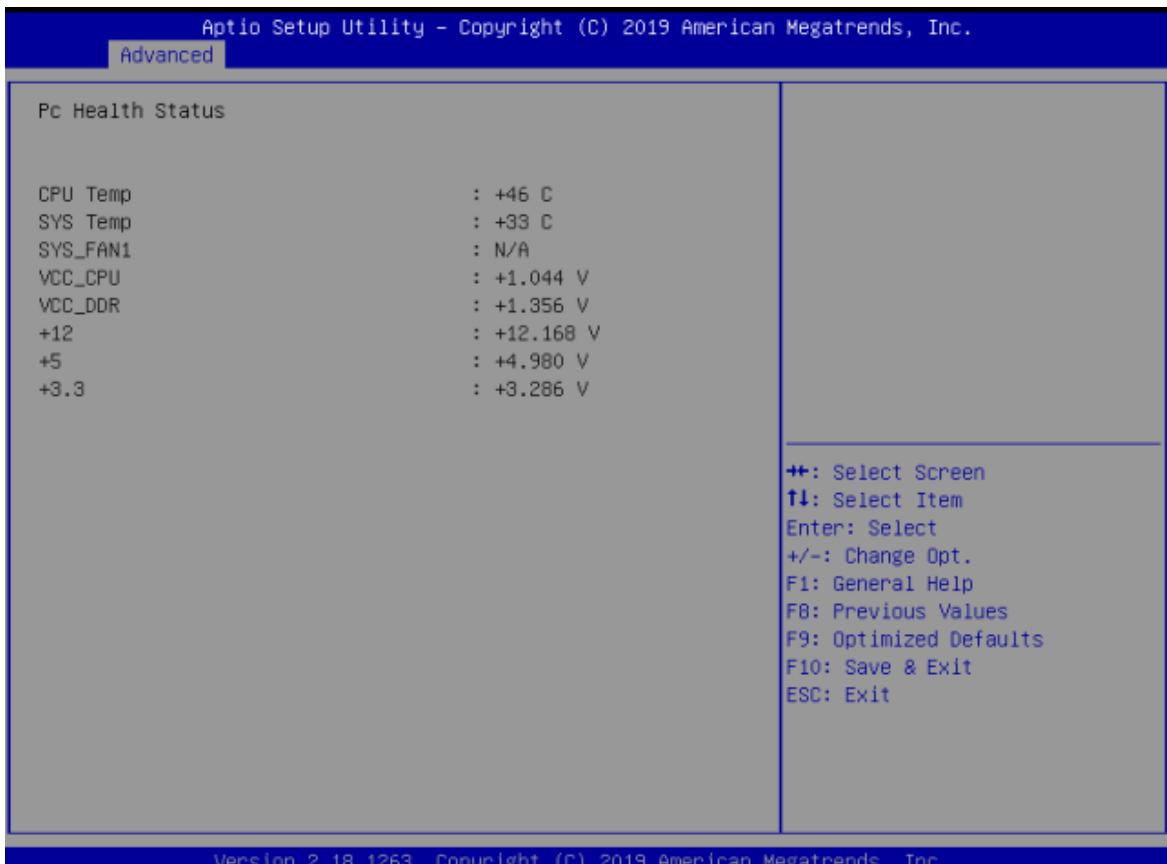
Parameter	Description
ACPI Settings	System ACPI Parameters
Super IO Configuration	System Super IO Chip Parameters
Hardware Monitor	Monitor hardware status
Power Button Control	Power Button Control Settings
Power Control	COM2-3 Pin9 Settings
S5 RTC Wake Settings	S5 RTC Wake Settings
CPU Configuration	CPU Configuration Parameters
LCD Control	LCD Control Parameters
IDE Configuration	SATA Configuration Parameters
OS Configuration	Select Operating System On this Computer
CSM Configuration	CSM Configuration Settings
USB Configuration	USB Configuration Parameters

## Super IO Configuration

The switch of COM1-COM4 and its IO and IRQ are controlled here.



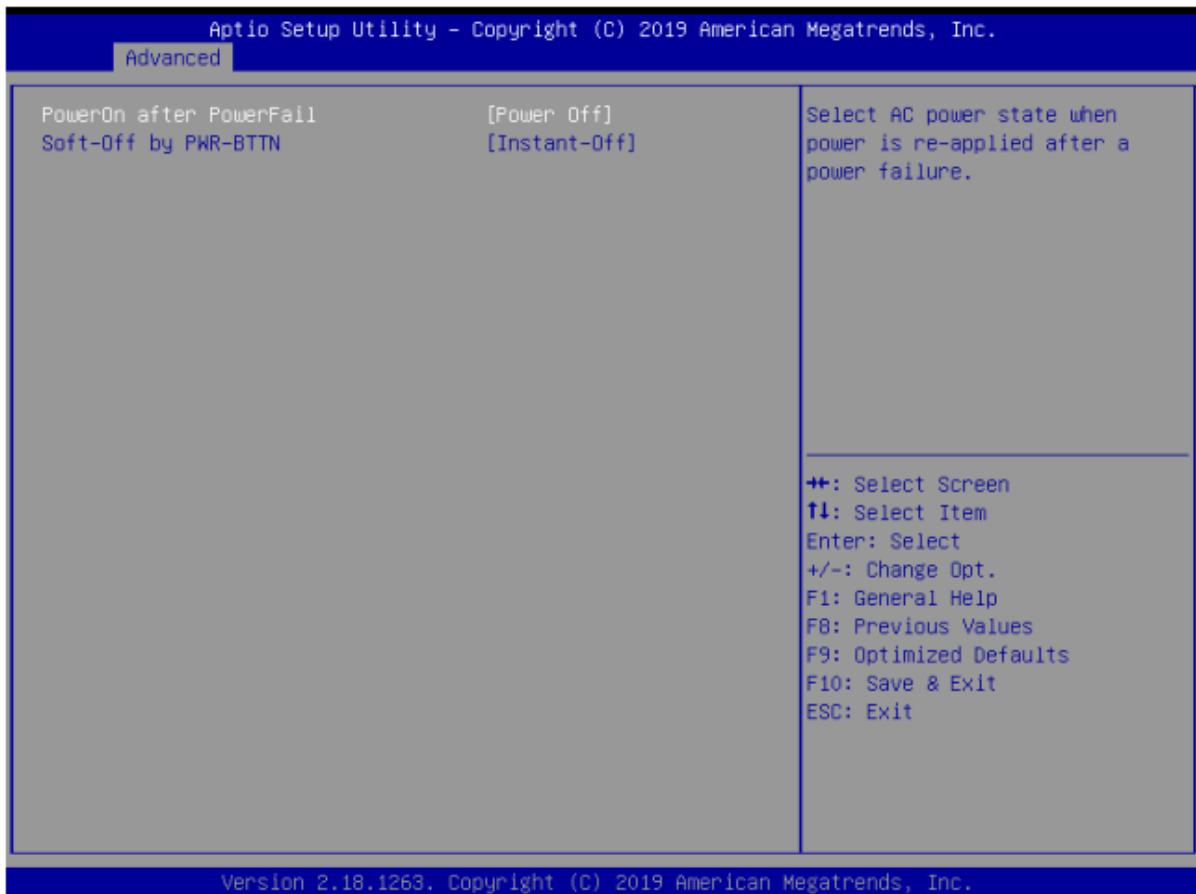
## Hardware Monitor



Version 2.18.1263. Copyright (C) 2019 American Megatrends, Inc.

Parameter	Description
CPU Temp	The temperature of CPU
SYS Temp	The temperature of Environment
SYS_FAN1	The speed of SYS_FAN1
VCC_CPU	The Voltage of CPU
VCC_DDR	The Voltage of DDR
+12	The Voltage of +12
+5	The Voltage of +5
+3.3	The Voltage of +3.3

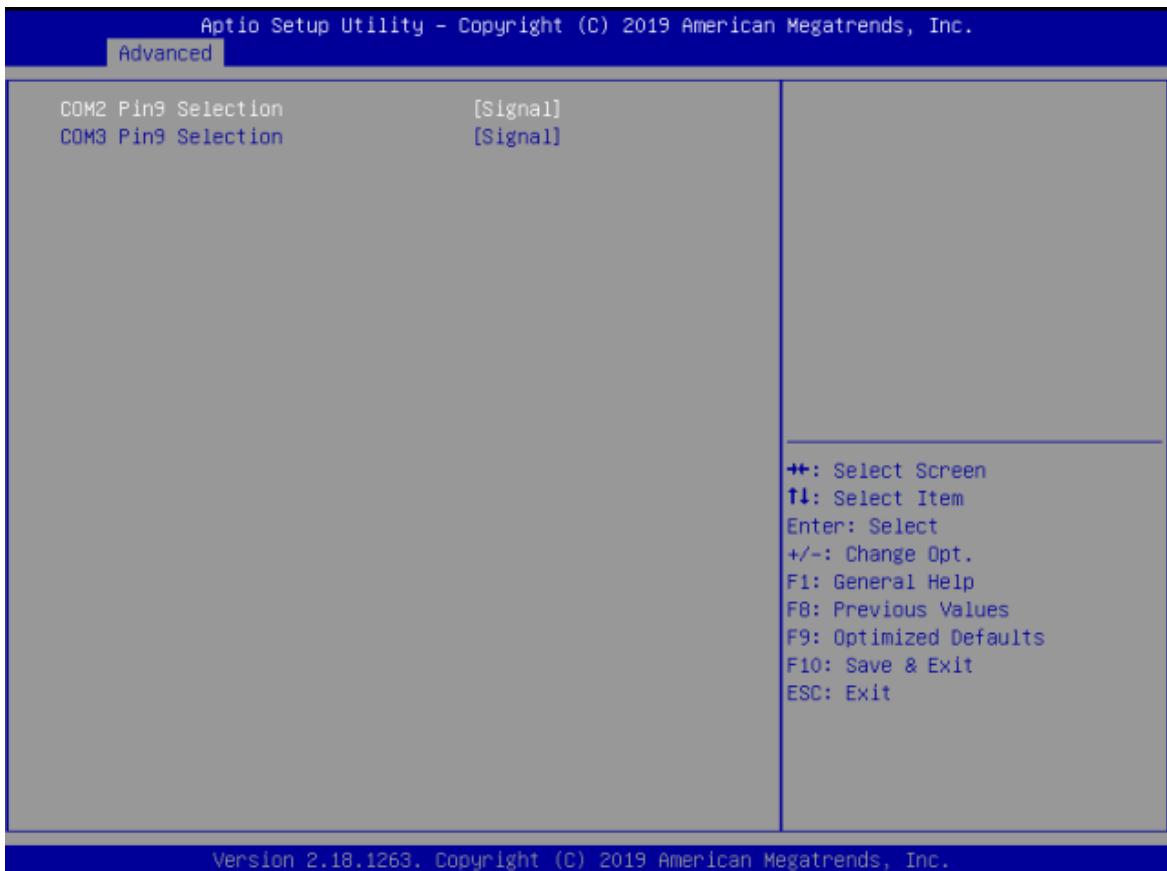
## Power Button Control



Version 2.18.1263. Copyright (C) 2019 American Megatrends, Inc.

Parameter	Description
PowerOn after PowerFail	Select AC Power state to when power is re-applied after a power failure Power Off: When the current is restored, the computer is shut down. Power On: When the current is restored, the computer is in the boot state. Last State: The last state, that is, when the power is off.
Soft-Off by PWR-BTTN	Choose Power Button Function

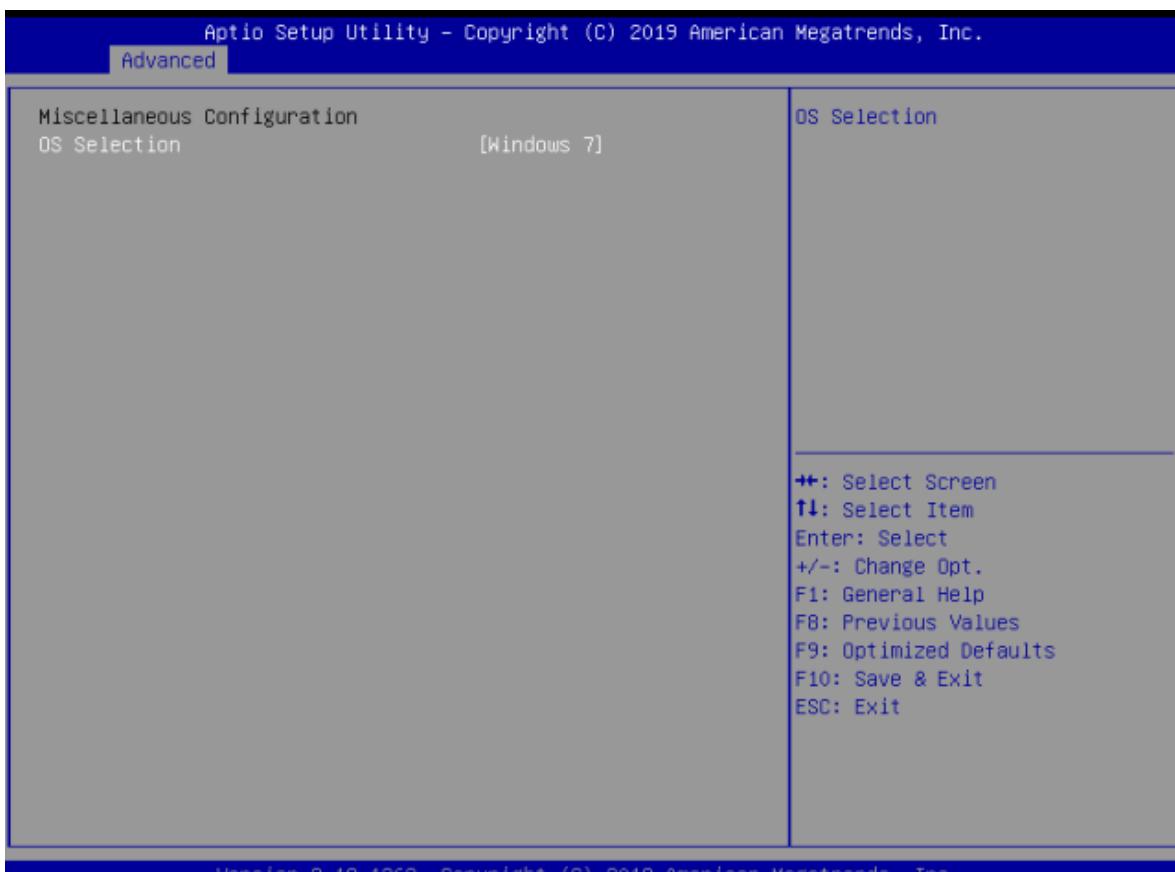
## Power Control



Parameter	Description
COM2	Pin9 Selection Set the definition of the Pin9 of COM2(Signal,5V,12V)
COM3	Pin9 Selection Set the definition of the Pin9 of COM3(Signal,5V,12V)

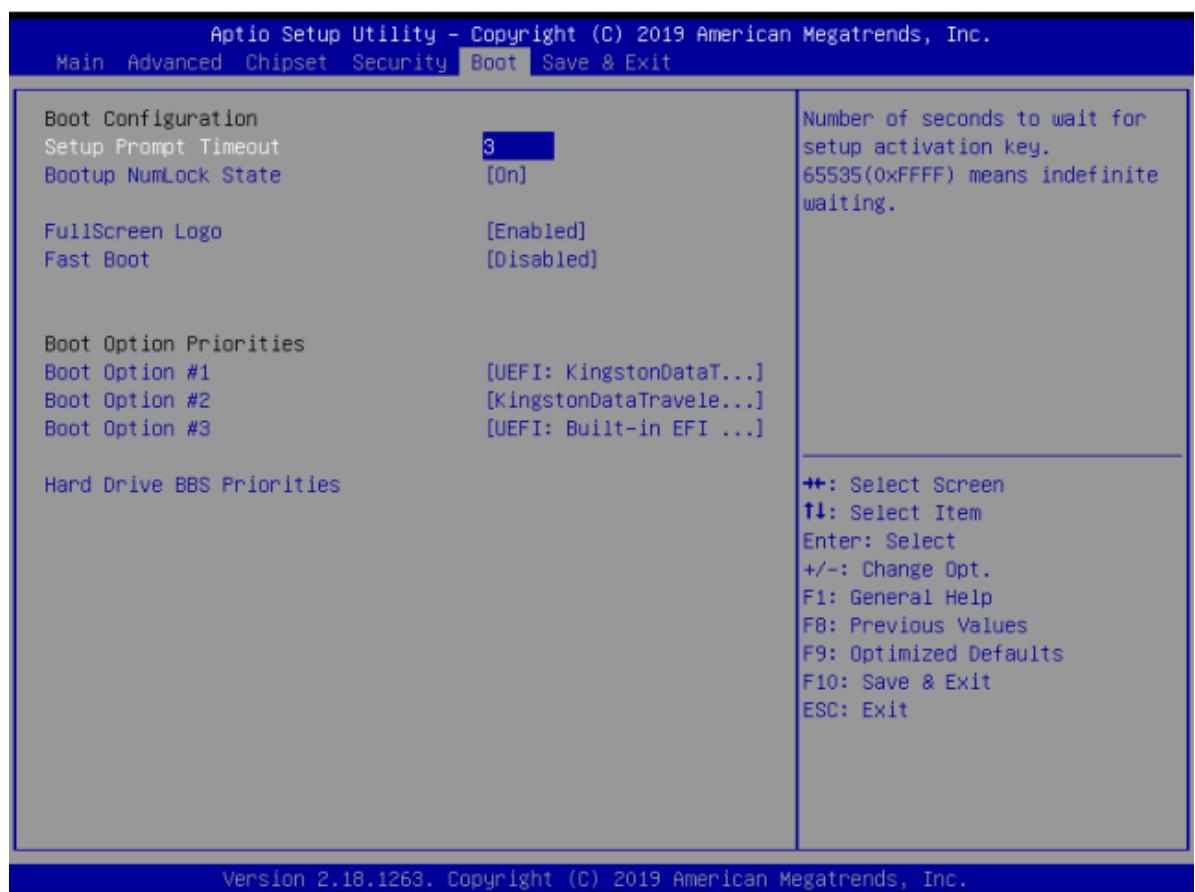
## OS Configuration

Select Windows 7 & Android & Windows 8.x and 10, default Windows 10 for US



### 3. Boot

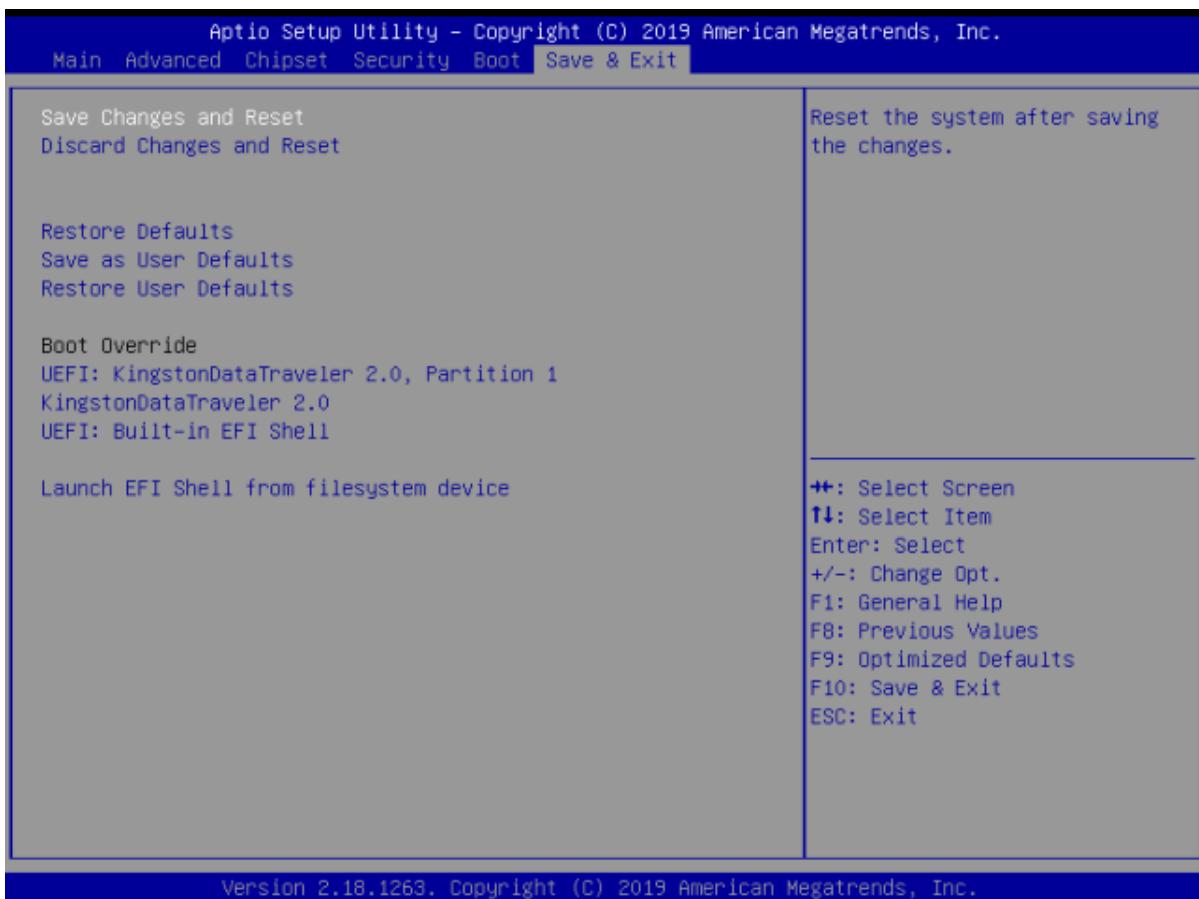
This topic introduces the configuration of bootstrap functions.



Parameter	Description
Boot Configuration	
Setup Prompt Timeout	Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.
Bootup NumLock State	Select the keyboard NumLock state
FullScreen Logo	Enable or disable Full Screen Logo
Fast Boot	Enable or disable Fast Boot
Boot Option Priorities	
Boot Option #1	Sets the system boot order
Boot Option #2	Sets the system boot order
Boot Option #3	Sets the system boot order
Hard Drive BBS Priorities	Set the order of the legacy devices in this group

### 4. Save & Exit

This topic describes how to save BIOS parameter modifications on save and exit pages and exit BIOS.



Version 2.18.1263. Copyright (C) 2019 American Megatrends, Inc.

Parameter	Description
Save Changes and Reset	Reset system setup after saving the changes.
Discard Changes and Reset	Reset system setup without saving any changes.
Restore Defaults	Restore/Load Default Values for all the setup options.
Save as User Defaults	Save the changes done so far as User Defaults
Restore User Defaults	Restore the User Defaults to all the setup options
<b>Boot Override</b>	
Launch EFI Shell from filesystem device	Attempts to Launch EFI Shell application (Shell.efi) from one of the available filesystem devices

## Part IV Instructions for Usage

### 1. Switching Instruction

Start-up: When the adapter is connected, press the Power button on the right back side of the bottom of the machine, see the button indicator light on, and hear a "beep" prompt sound, then start-up can be achieved.

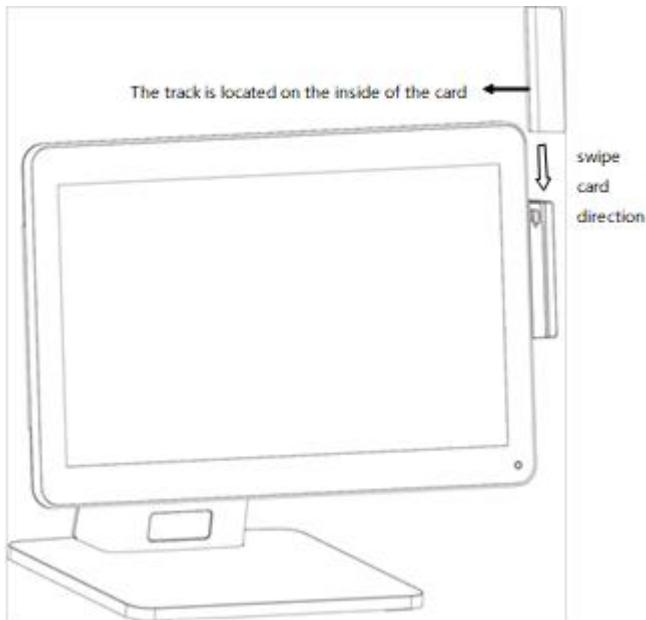
Shutdown: Select the shutdown item under the Windows system, and then shut down automatically.

### 2. Instructions for using magnetic stripe cards

- When swiping the card, the machine should be placed on a hard horizontal plane.
  - Please scratch the magnetic strip of the magnetic strip card inward from the swipe slot.
- The card swiping process should be smooth and uniform.

### 3. Instructions for using RFID contactless cards

The RFID contactless card reader module is located behind the right side of the Host. When the induction card is not received, please place the card above the induction area.



## Part V Accessories Annexes

No.	Item	Qty	Note
1	POS	1	
2	Adaptor	1	
3	Power cable	1	

## Appendix A

### BIOS Set Up

1. Copy all files in the file directory of the compressed package to the U-disk root directory.
  2. Connect only U-disk, not other storage devices, press F11 to boot, pull out the startup menu, select "UEFI: Built-in EFI Shell" to enter the shell interface, and return.
  3. Enter up to refresh BIOS on return.
  4. When the refresh is completed, shut down and power off for 10 seconds.
  5. Turn on the power and press F2 to enter BIOS Setup interface, then press F9 and F10 to optimize and save.
- Note: Do not cut off the power supply, shut down or restart during BIOS refresh, otherwise the power will not be able to start.

## Appendix B

### Super IO Information (BIOS default)

COM1: 3F8h/4

COM2: 2F8h/3

COM3: 3E8h/6

COM4: 2E8h/6

### Cash Drawer

```
/*
This Demo program for POS box
CD_SENSE GP23
CD_OPEN GP36
*/
#include <stdio.h>
#include <conio.h>
#include <graphics.h>
#include <string.h>
#include <io.h>
#define BIT0 0x01
#define BIT1 0x02
#define BIT2 0x04
```

```

#define BIT3 0x08
#define BIT4 0x10
#define BIT5 0x20
#define BIT6 0x40
#define BIT7 0x80
#define IO_Base 0xA00
#define CDS_PORT IO_Base+1
#define CDO_PORT IO_Base+2
void Init_DIO_Default()
{
}
/*-----
@brief : Set CD_OPEN power level
@Input : Level-- 0:Low 1: High
-----*/
void Set_CD_OPEN(int Level)
{ int t;
if(Level)
{ outportb(CDO_PORT,inportb(CDO_PORT)|BIT6);
printf(" CD_OPEN is High \n");
}
else
{ outportb(CDO_PORT,inportb(CDO_PORT) &~BIT6);
printf("CD_OPEN is Low\n");
}
}
/*-----
@brief : Get CD_SENSE low active
@Return : 1:Low active with no jitter
-----*/
int Get_CD_SENSE_Status()
{
if(inportb(CDS_PORT)&BIT3)
{ delay(100);
if(inportb(CDS_PORT)&BIT3)
{
printf("CD_SENSE is Low level stability.\n");
return 1;
}
}
else
printf("CD_SENSE is High level\n");
return 0;
}
main()
{
printf("System ready\n ");

```

```
/*Set_CD_OPEN High */
Set_CD_OPEN(1);
/*Set_CD_OPEN Low */
Set_CD_OPEN(0);
while(1)
{
Get_CD_SENSE_Status();
}
}
```