Hisense

HK570

Touch Terminal

User's Manual

Document Version 1.0

Copyright Statement

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Part 1. System Introduction

01. 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. Absolute Ratings of Environment：
   Operating Temperature：0～40℃
   Operating Humidity：10%～85%RH
   Storage Temperature：-10～50℃
   Storage Humidity：10%～90%RH
2. Main plug on the power supply was used as disconnected device. The socke

t-outlet shall be installed near the equipment and shall be easily accessible

3. If any damage to the power supply or the equipment, please contact local service person for help.
4. Static may damage to the integrated circuit in the host machine.
5. If a replaced battery is not right, this may cause explosion or serious damage.Must replace the same type of batteries or similar ones recommended by the manufacturer
6. Used only with attached AC/DC power supply.

The manufacturer has the right to modify contents of the instruction book but without prior announcements!

02. System Introduction

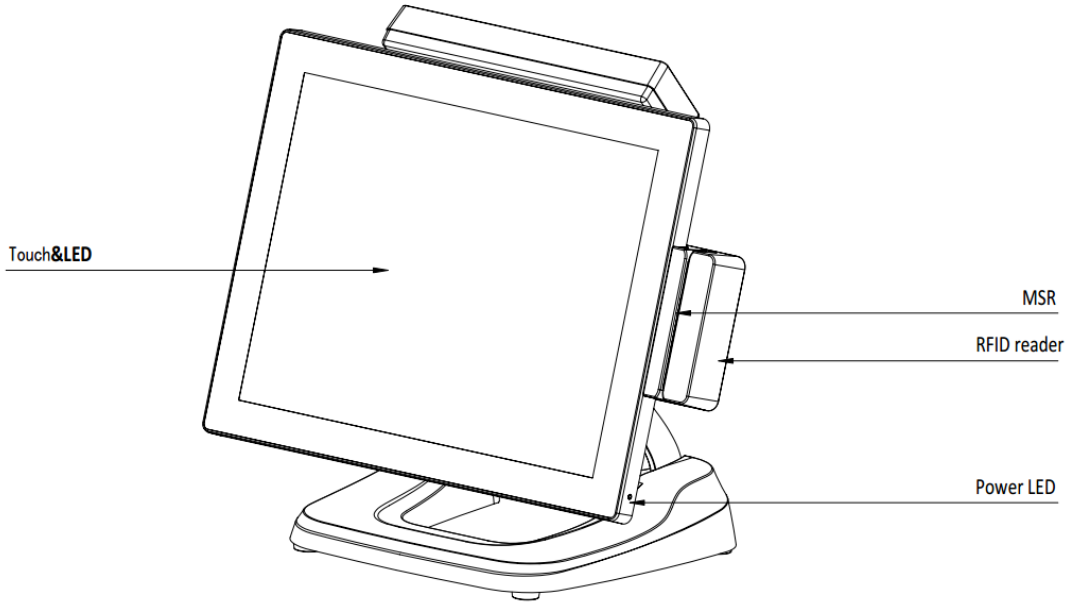
The exterior design and specifications of product can be changed without prior notice in order to improve quality.

03. General Specifications

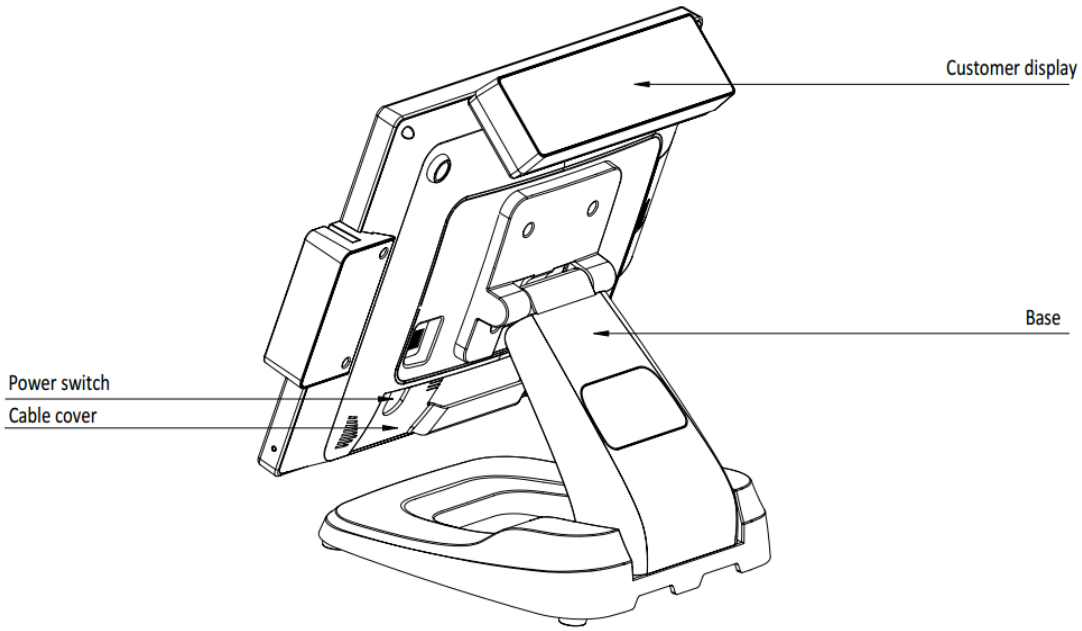
Item		Description
System	CPU	Intel® Celeron®process (Baytrail-D) J1800 two Core, clock speed 2.41 GHz up to 2.58GHz, TDP 10W Intel® Celeron®process (Baytrail-D) J1900Quad Core, clock speed1.99GHz up to 2.42GHz, TDP 10W
	Memory	DDRIIIL 2G (Up to 8G)
LCD Touch Panel	LCD Size	15 inch
	Brightness	420 cd/m²
	Resolution	1024×768
	Touch Screen	5 wire resistive touch (single touch) True flat projected capacitive technology(optional)
Storage	Msata	Msata 64Gb
	SSD	64Gb 2.5inch SSD (larger capacity optional)
I/O Ports	Serial Ports	3* standard RS-232 COM; COM3 is alternative to 5V/12V power(COM3 5V power default) COM4 is alternative to 5V/12V power default 5V power for VFD
	USB	7* USB 2.0 (1 Back,6 Rear),1*USB3.0
	VGA	1 * VGA reserved for 2nd display
	LAN	1 * RJ-45 (1000Mbps Gigabit LAN)
	Audio	1 Line-out
	Cash Drawer	1 * RJ-11 24V for cash drawer
	DC 12V out	1 *1.5A MAX
Power	Power Adapter	Adapter (DC 24V, 2.5A)
Peripheral	MSR	3 Tracks (USB, option)
	Fingerprint Reader	Digital Persona module(USB, option)
	RFID	RFID Reader (USB, option)

	Customer Display	2×20 characters VFD (RS232, option)
Environment	Operating Temperature	5℃ - 40℃
	Operating Humidity	40% - 90%

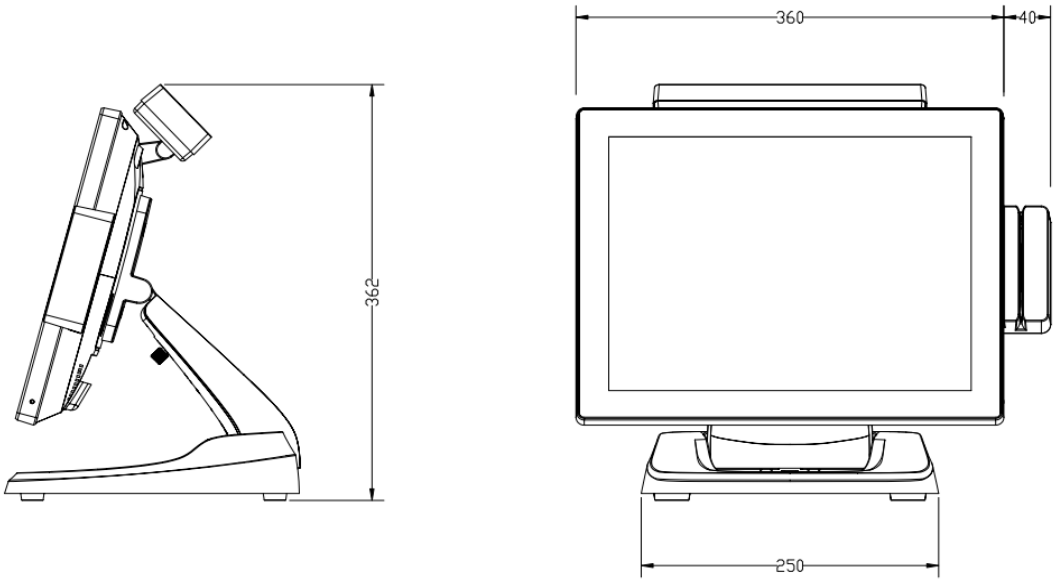
04. Front View



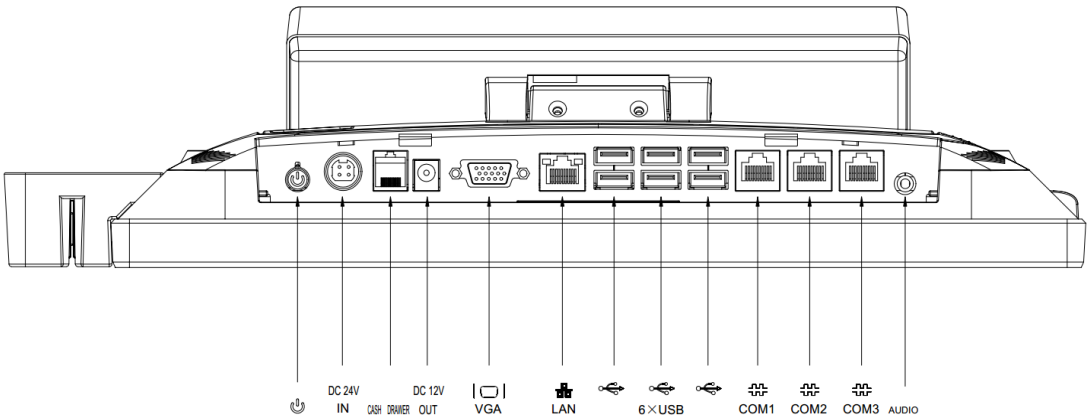
05. Back View

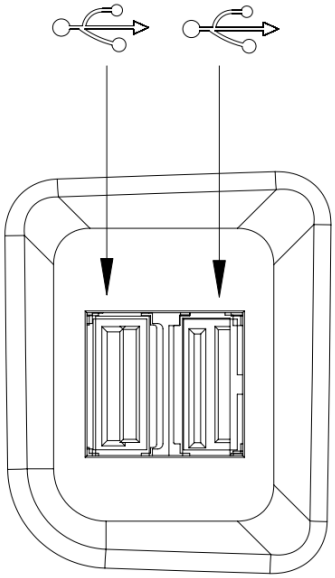


06. Dimension



07. I/O View





Part 2. System Installation

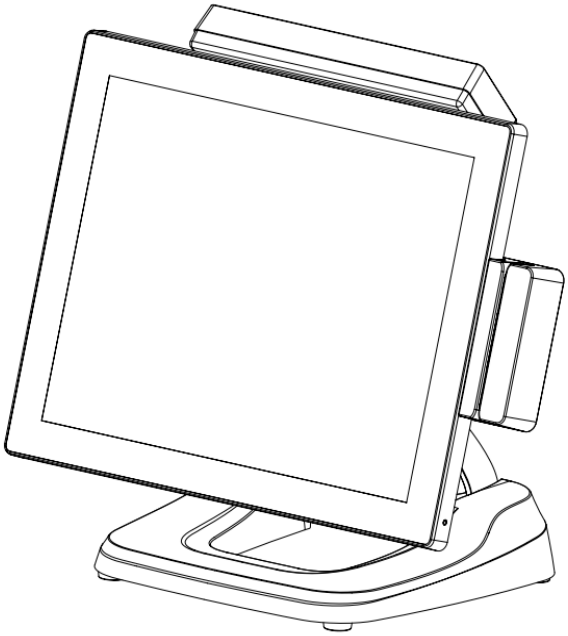
01. Checking the Location for Installation

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

•• Choose a desk or table big and strong enough to support the weight of the system and peripherals.

•• Choose a flat, hard surface. Carpeted area can generate static electricity that can alter memory or damage system components.

•• Make sure a system installed in a well-ventilated place and keep the space free around the system.
•• Choose appropriate environmental conditions such as cool and dry places. Avoid humid and dusty places. Also avoid direct sunlight, rapidly changing temperatures, or placing the system near heat sources.
•• Select the appropriate voltage. Connect all the equipment into an isolated outlet to prevent static electricity and short circuit.
•• where sufficient power outlets are available for printers and other peripheral devices.
•• Do not install near electromagnetic and electrical devices, such as phones and electric motors, that can cause system damage.
•• The socket-outlet shall be installed near the equipment and shall be easily accessible.

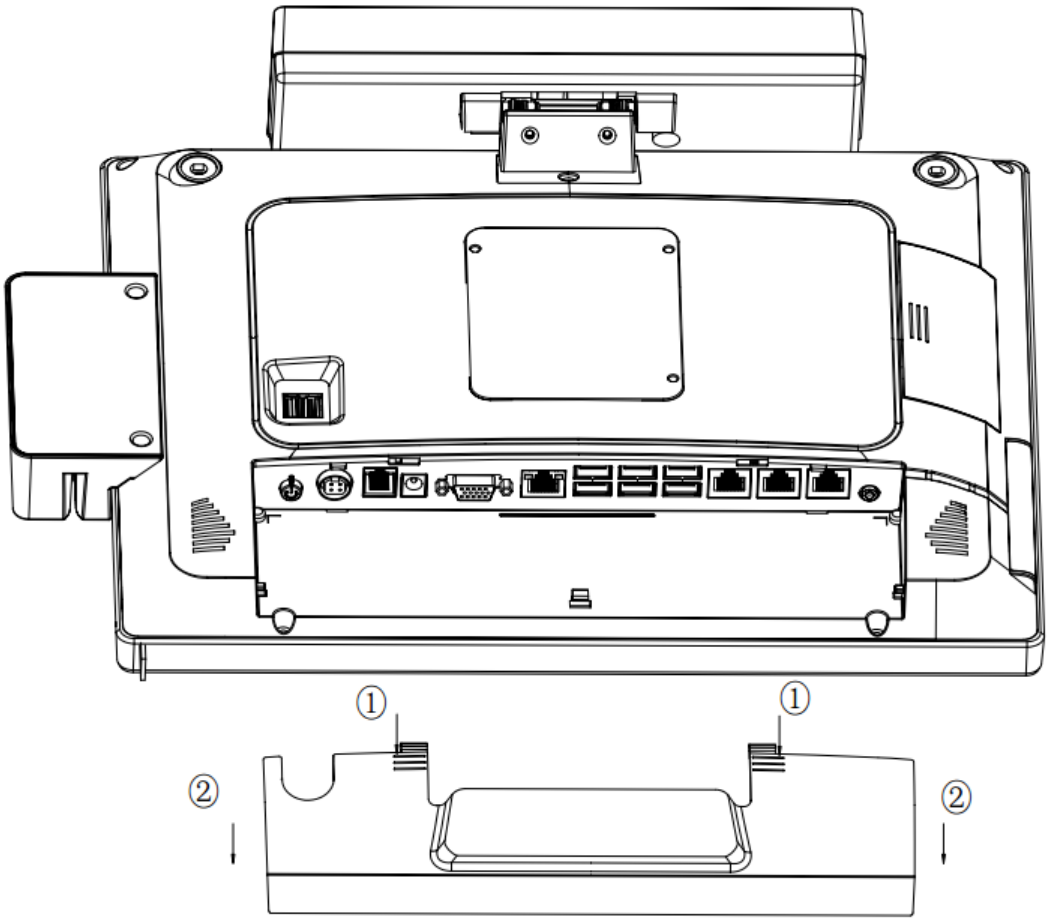


02. Before Connecting Peripherals

To connect peripherals first remove the 'Interface cover', which is in the bottom of the system, after that remove the 'Cable arrange cover' which is in the rear of the system.

Interface cover remove

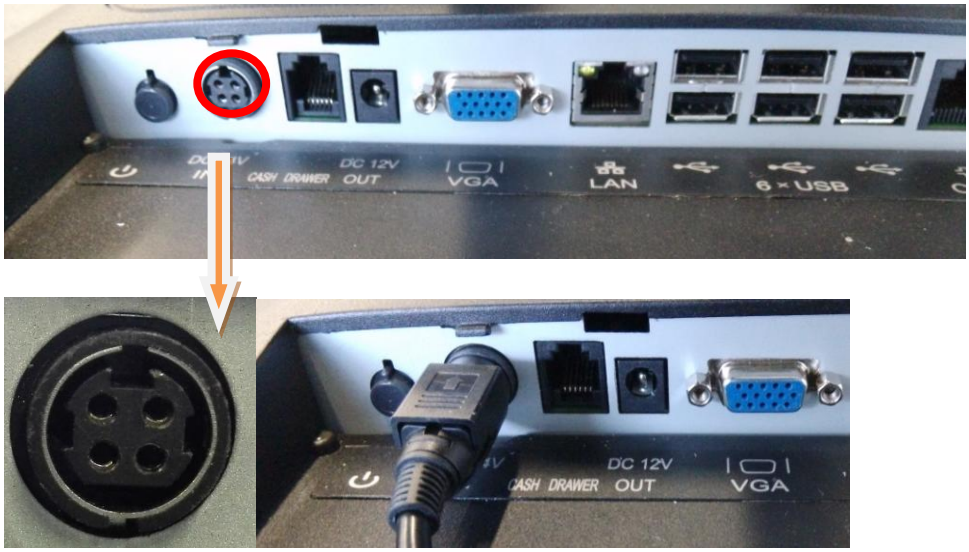
As it shown in the picture pull the cover in the direction of the arrow.



03. Connecting DC power supply cable

Connect the DC power cable to the DC power input connector at the bottom of the system. (Adapter 100V - 240V free voltage of the system can be used.)

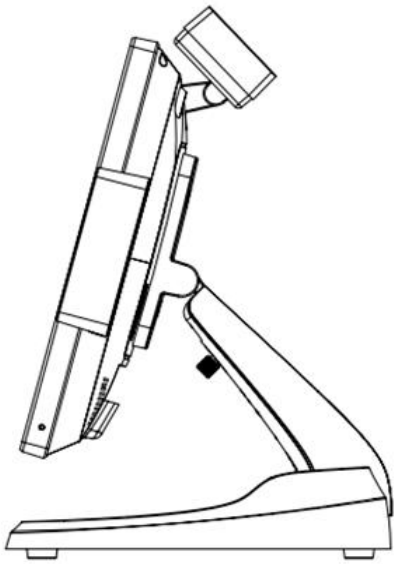
Cautions
- Only manufacturer adapter should be used for this system.
- Manufacturer wont take responsibility for damages caused by using products which not made by manufacturer.



04. **Tighten the tool-less screw**

When you need not adjust the angles with the hinge of base, you can tighten the tool-less screw of the base.

Step1: Insure the base located in the max angles;



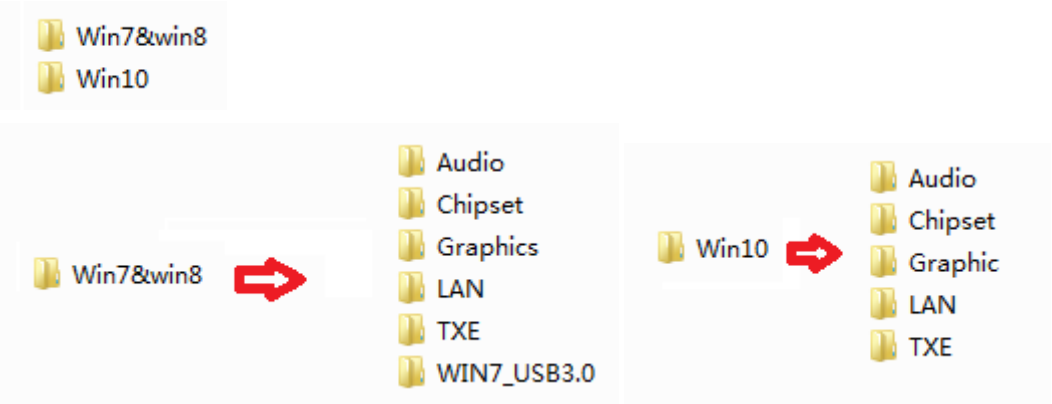
Step2: tighten the screw.

Part 3. System Utilization

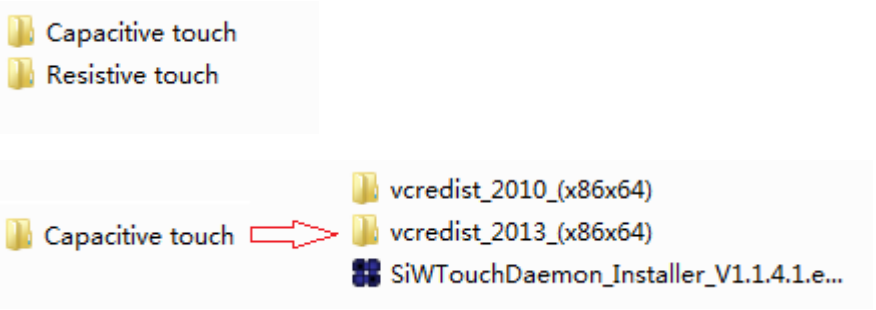
01.POS Driver and Utility Introduction

POS Drivers & Other utilities are located in CD

Motherboard



Touch panel

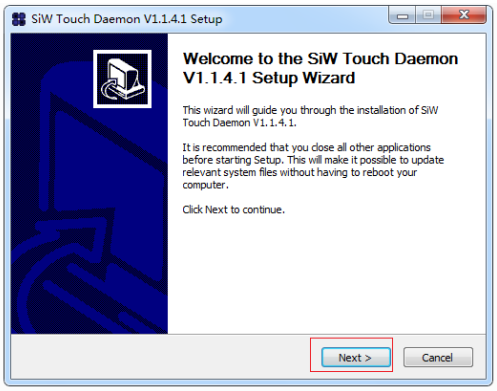


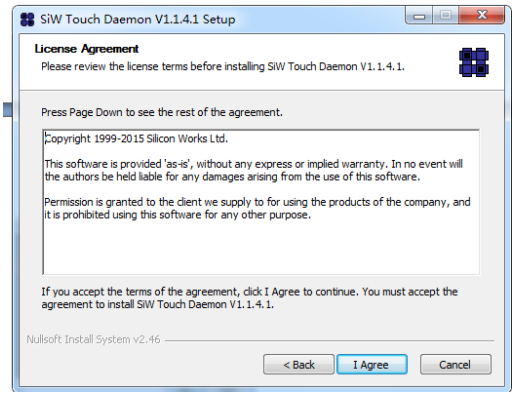
vcredist_2010 should be insatalled for capacitive

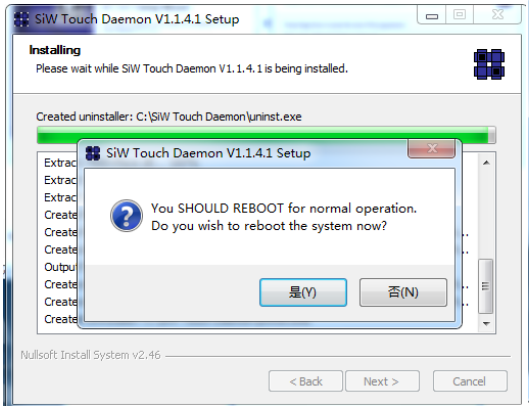
a.For 32bit OS only install vcredist_2010 x86

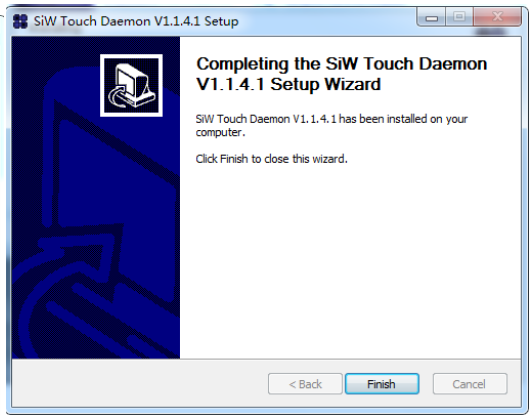
b.For 64bit OS should install vcredist_2010 x86 andvcredist_2010 x64

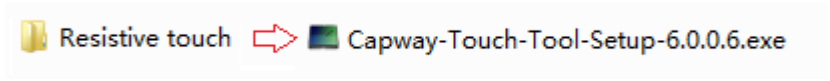
Next install SiwtouchDaemon

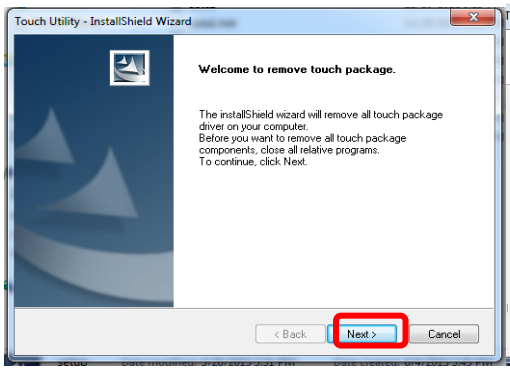

SiW Touch Daemon V1.1.4.1 Setup
Welcome to the SiW Touch Daemon V1.1.4.1 Setup Wizard
This wizard will guide you through the installation of SiW Touch Daemon V1.1.4.1.
It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
Click Next to continue.
Next >
Cancel

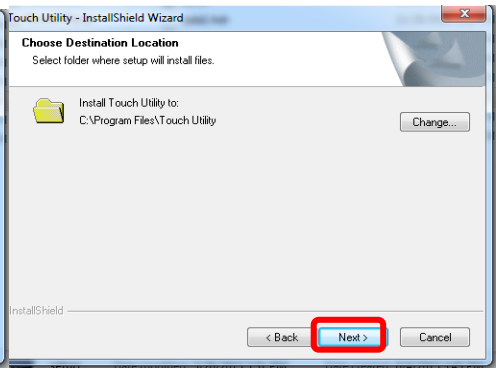

SiW Touch Daemon V1.1.4.1 Setup
License Agreement
Please review the license terms before installing SiW Touch Daemon V1.1.4.1.
Press Page Down to see the rest of the agreement.
Copyright 1999-2015 Silicon Works Ltd.
This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.
Permission is granted to the client we supply to for using the products of the company, and it is prohibited using this software for any other purpose.
If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install SiW Touch Daemon V1.1.4.1.
Nullsoft Install System v2.46
< Back
I Agree
Cancel

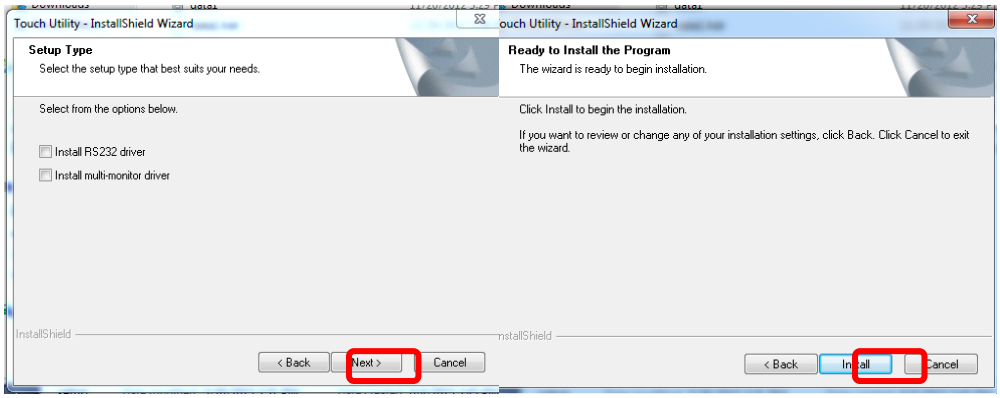

SiW Touch Daemon V1.1.4.1 Setup
Installing
Please wait while SiW Touch Daemon V1.1.4.1 is being installed.
Created uninstaller: C:\SiW Touch Daemon\uninst.exe
SiW Touch Daemon V1.1.4.1 Setup
You SHOULD REBOOT for normal operation.
Do you wish to reboot the system now?
是(Y)
否(N)
Nullsoft Install System v2.46
< Back
Next >
Cancel

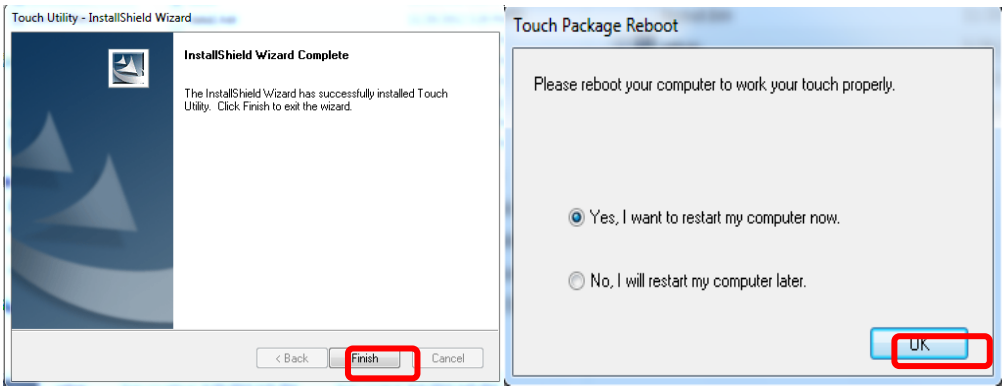

SiW Touch Daemon V1.1.4.1 Setup
Completing the SiW Touch Daemon V1.1.4.1 Setup Wizard
SiW Touch Daemon V1.1.4.1 has been installed on your computer.
Click Finish to close this wizard.
< Back
Finish
Cancel

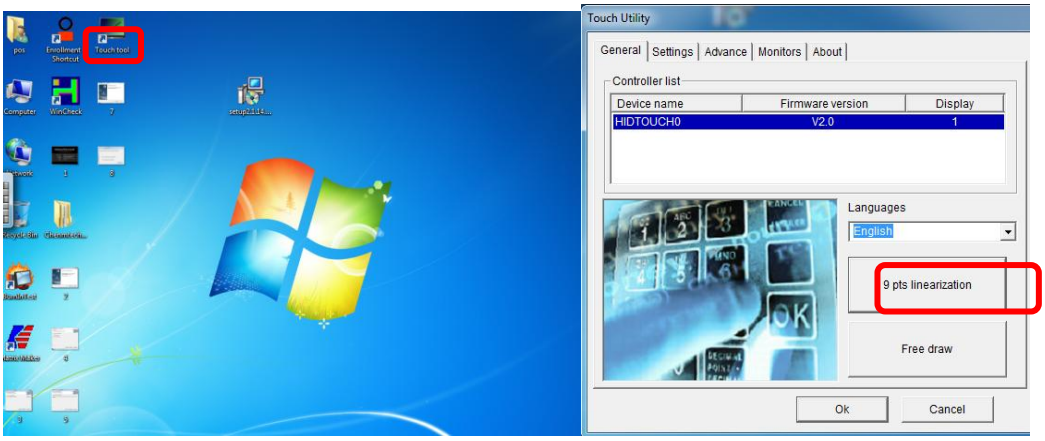

Resistive touch
Capway-Touch-Tool-Setup-6.0.0.6.exe


Touch Utility - InstallShield Wizard
Welcome to remove touch package.
The installShield wizard will remove all touch package driver on your computer.
Before you want to remove all touch package components, close all relative programs.
To continue, click Next.
< Back
Next >
Cancel


Touch Utility - InstallShield Wizard
Choose Destination Location
Select folder where setup will install files.
Install Touch Utility to:
C:\Program Files\Touch Utility
Change...
InstallShield
< Back
Next >
Cancel


Touch Utility - InstallShield Wizard
Setup Type
Select the setup type that best suits your needs.
Select from the options below.
Install RS232 driver
Install multi-monitor driver
InstallShield
< Back
Next >
Cancel
ouch Utility - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Cancel



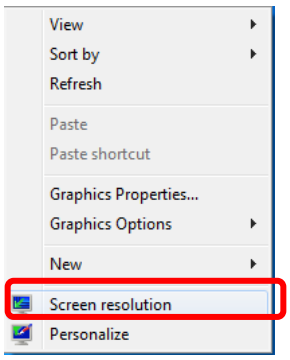


02. Dual Monitor Usage

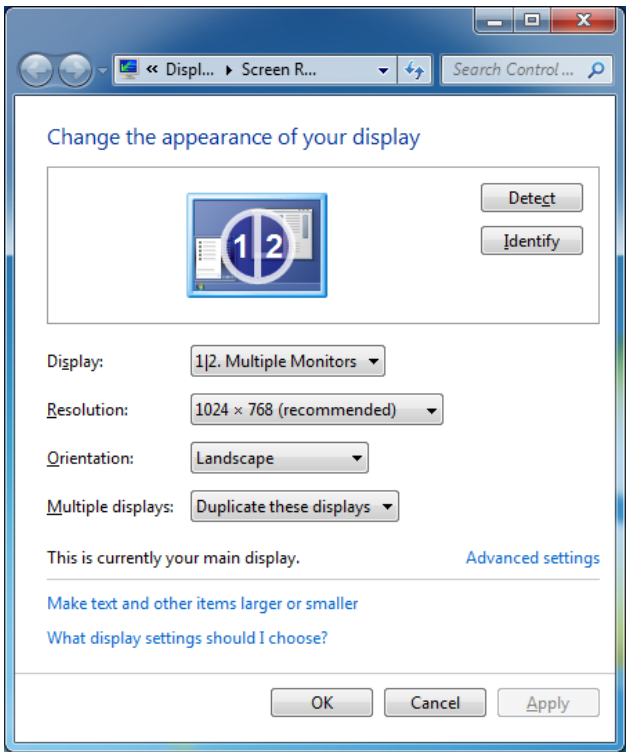
Additional monitor can be connected to the VGA connector. This content is written based on Windows 7.

The system supports dual monitor system, which is using two monitors for one system. Sub-monitor's screen can be displayed as a duplication of the main monitor or as an extended screen. (Windows desktop)

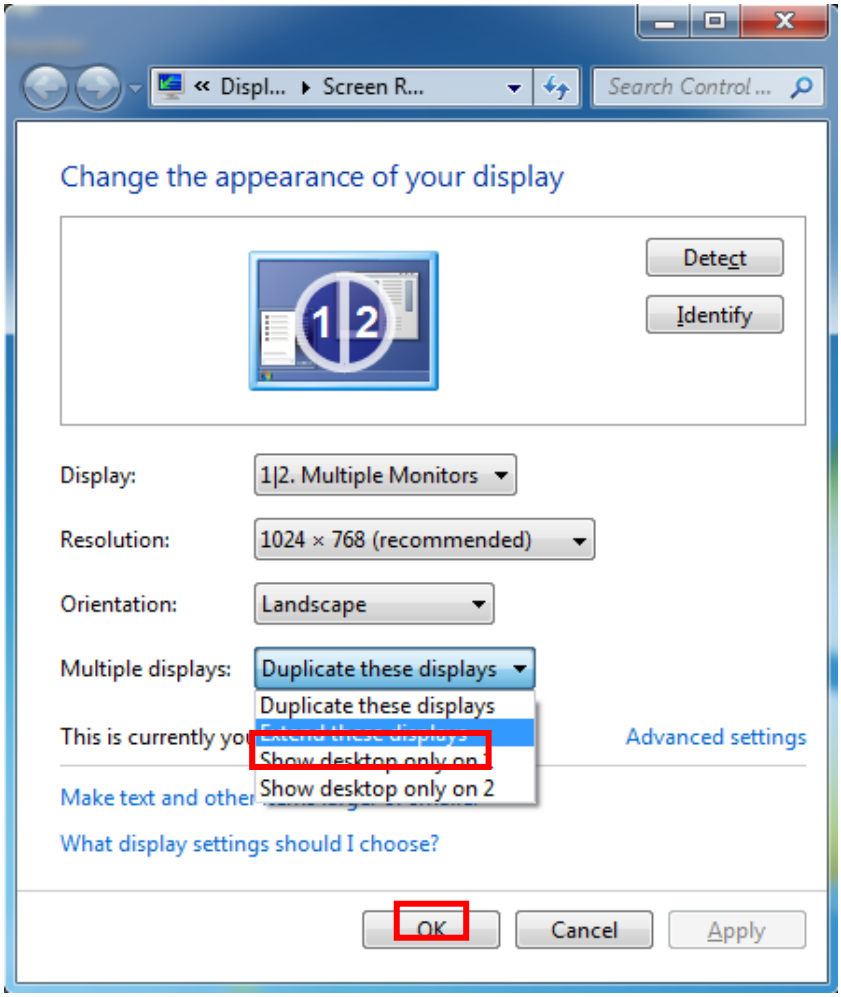
1. Connect the external monitor when the system is off. (Remove the 'Interface cover' at the top of the system and you will see a VGA connector.)
    1) Connect the external monitor when the system is off.
    2) Connect a power cable to external monitor
2. Press a power button of the system
3. Click the right button of mouse on Windows desktop screen and select 'Screen resolution' from a popup menu.



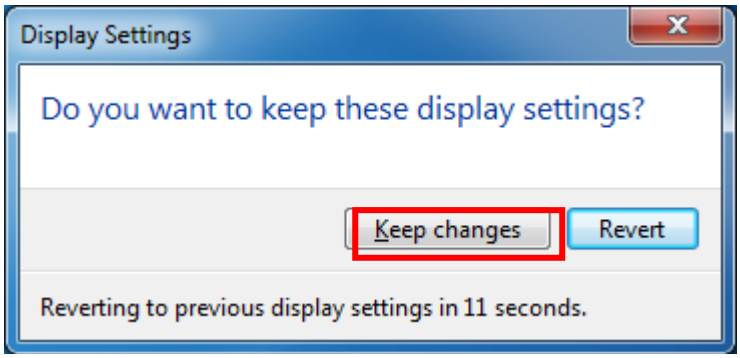
4. On The following dialog window ‘Change display appearance of your display’ ‘Display’ option is set as ‘1|2. Multiple Monitor’ and ‘Multiple display (M) option is set as duplicate these displays. (In this case, the dual monitor shows a duplicated screen.)



5. If you want to change to an extended screen, set ‘Multiple displays’ option as ‘Extend these displays’ on ‘Change the appearance’ of you display dialog window.and click “ok” (In this case, two different extended screen monitors are shown.)

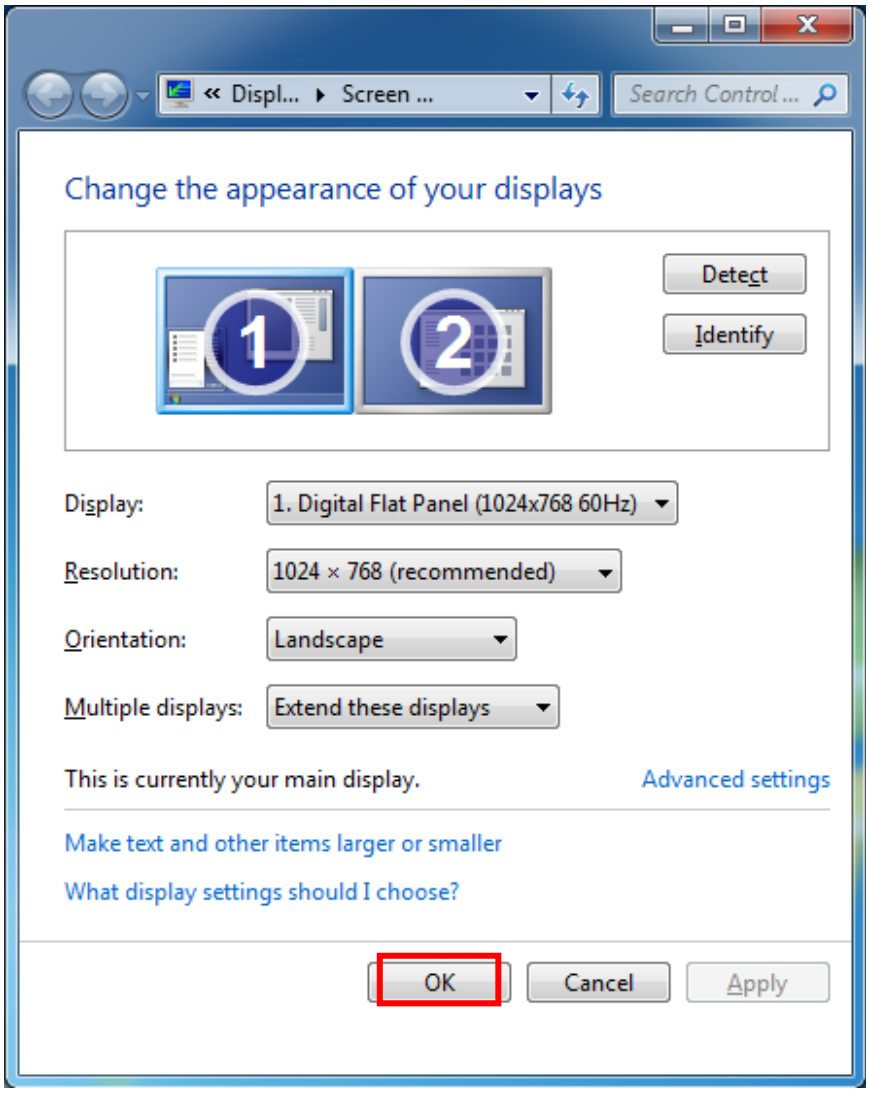


6. Select <Keep changes> button on 'Display Settings' dialog to keep the current settings.



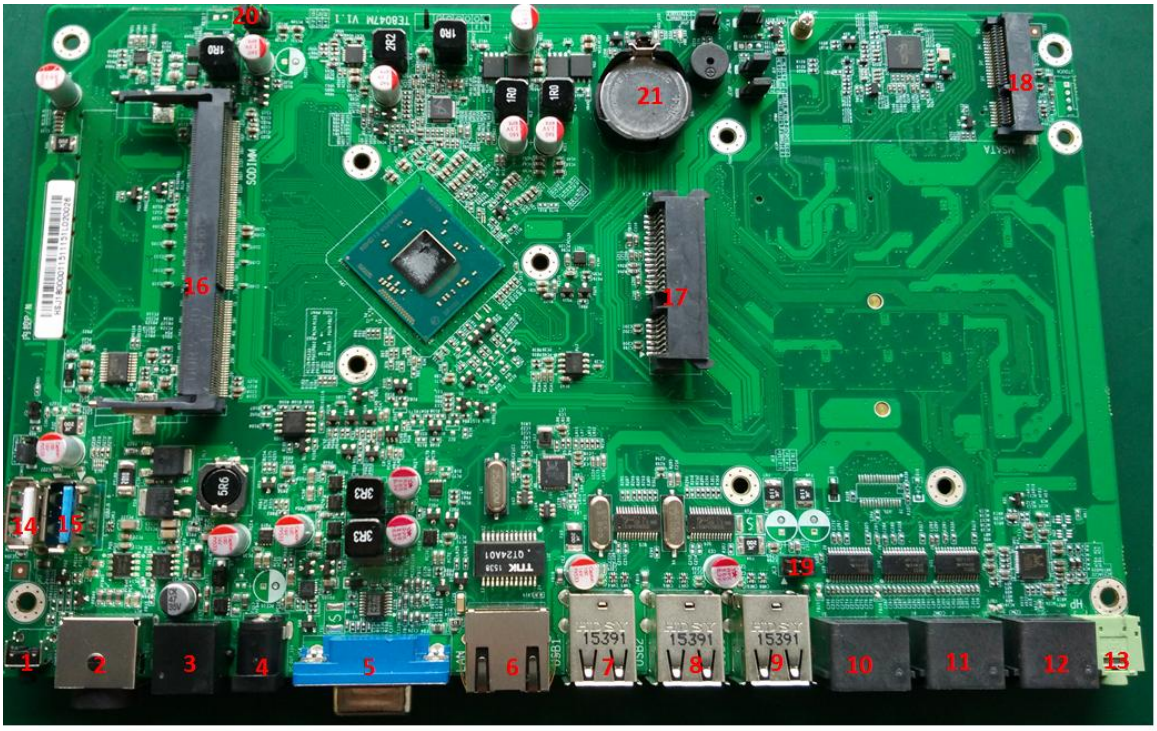
8. If the configuration is finished, click <OK> button to close the 'Change the

appearance of your displays' dialog window.



Part 4. Motherboard

01. Motherboard Layout



02. Connectors& Functions

Connectors	Function
1.PWRT	POWER BUTTON
2.DC_IN_24V	DC 24V power connector
3. CASH	RJ11 connector
4.DC_OUT_12V	DC 12V power output
5. VGA	VGA connector
4. IVCN	LVDS Inverter power connector
6.LAN	LAN connector
7. USB1	USB connector
8.USB2	USB connector
9.USB3	USB connector
10.COM1	Serial port connector
11.COM2	Serial port connector
12.COM3	Serial port connector
13. HP	Headphone connector
14.USB4	USB2.0 connector
15.USB3.0	USB3.0 connector
16.SODIMM	1*204pin SO-DIMM Socket
17.MINISATA	SATA connector
18 MSATA	Min-PCIE SATA
19. JC3	COM3 Ring function selector
20. JC4	COM4 Ring function selector
21. BAT	CMOS Battery
22.LVDS1	Low Voltage Differential Signaling Transmitter Interface
23. IVCN	LVDS Inverter power connector
24.MINI-PCIE	1*MINIPCIE
25.TOUCH	Resistive touch connector
26.F_SPK	1*4Pin 2.0mm wafer box
27.LED	POWER LED header
28. COM4	Serial port connectors
29.J_USB1	USB header
30.J_USB2	USB header

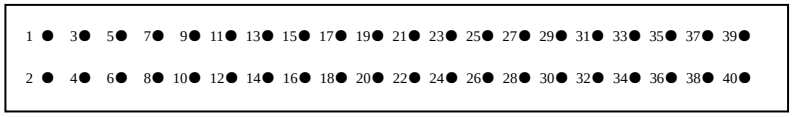
1. Commonly Jumper Description

Jumper	pin	function	Setting
JCMOS	3-pin	Clean C**MOS**	1-2 Normal 2-3 Clear CMOS
JC3 JC4	6-pin	Setting COM3,COM4 Voltage	1-2 12V 3-4 5V 5-6 RI
JPWM	3pin	LCD Backlight voltage	1-2 +5V 2-3 +3.3V
JLV	3pin	LVDS voltage select	1-2 +3.3V 2-3 +5V

2.Display

<table>
<tr><th colspan="2">Display</th><th>Description</th></tr>
<tr><td rowspan="2">Interface</td><td>VGA</td><td>1*DB15</td></tr>
<tr><td>LVDS</td><td>2*20Pin, 24bit</td></tr>
<tr><td>Display Mode</td><td>Dual display</td><td>Support Colon and extended display</td></tr>
<tr><td colspan="2">Interface defined</td><td>2*20 PIN LVDS CONNECTOR
PIN Defined：
<table>
<tr><th>Pin No.</th><th>Function</th><th>Pin No.</th><th>Function</th></tr>
<tr><td>1</td><td>VCC</td><td>21</td><td>LVDS0_P2</td></tr>
<tr><td>2</td><td>VCC</td><td>22</td><td>LVDS1_P2</td></tr>
<tr><td>3</td><td>GND</td><td>23</td><td>GND</td></tr>
<tr><td>4</td><td>GND</td><td>24</td><td>GND</td></tr>
<tr><td>5</td><td>VCC</td><td>25</td><td>LVDS0_CLKN</td></tr>
<tr><td>6</td><td>VCC</td><td>26</td><td>LVDS1_CLKN</td></tr>
<tr><td>7</td><td>LVDS0_N0</td><td>27</td><td>LVDS0_CLKP</td></tr>
</table></td></tr>
</table>

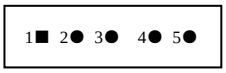
8	LVDS1_N0	28	LVDS1_CLKP
9	LVDS0_P0	29	GND
10	LVDS1_P0	30	GND
11	GND	31	DDC_CLK
12	GND	32	DDC_DATA
13	LVDS0_N1	33	GND
14	LVDS1_N1	34	GND
15	LVDS0_P1	35	LVDS0_N3
16	LVDS1_P1	36	LVDS1_N3
17	GND	37	LVDS0_P3
18	GND	38	LVDS1_P3
19	LVDS0_N2	39	N.C
20	LVDS1_N2	40	N.C



LVDS work voltage（1*3 2.54mm）：

Pin	Define
1-2	3.3V （default）
2-3	5V

backlight control defined (1*5 2.0mm wafer box)

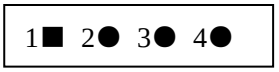


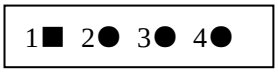
1.V12S 2.GND 3.BKLT on 4.BKLT PWM 5.V5S

Backlight control voltage select（1*3 2.54mm）：

Pin	Define
1-2	3.3V （ default ）
2-3	5V

3.Audio

<table>
<tr><th>Audio</th><th>Description</th></tr>
<tr><td>Audio Codec</td><td>Realtek ALC269</td></tr>
<tr><td>Rear IO Type</td><td>HP Connector</td></tr>
<tr><td rowspan="2">Onboard audio pin</td><td>PIN defined
<table>
<tr><td>1</td><td>XOUTA-</td><td>2</td><td>XOUTA+</td></tr>
<tr><td>3</td><td>XOUTB+</td><td>4</td><td>XOUTB-</td></tr>
</table>


</td></tr>
<tr><td>PIN defined
<table>
<tr><td>1</td><td>MIC-R</td><td>2</td><td>MIC-JD</td></tr>
<tr><td>3</td><td>MIC-L</td><td>4</td><td>GND</td></tr>
</table>


</td></tr>
<tr><td>PIN Type</td><td>1*4Pin 2.0mm wafer box</td></tr>
</table>

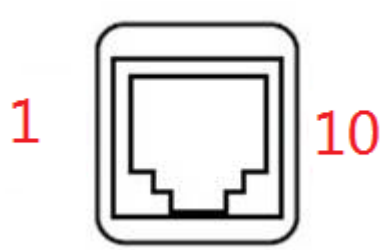
4.LAN

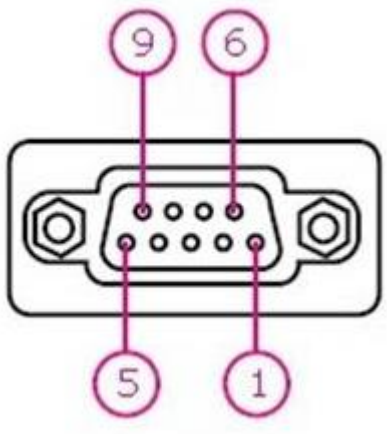
LAN	Description
LAN IC	RTL811E 10M/100M/1000M
PIN TYPE	RJ45

5.**USB**

<table>
<tr><th>USB</th><th>Description</th></tr>
<tr><td>Connector type</td><td>USB2.0 / usb3.0</td></tr>
<tr><td>Rear connector</td><td>7X USB2.0 ,1x usb3.0</td></tr>
<tr><td>Onboard connector</td><td>USB2.0 PIN defined（2*5pin Wafer Header 1.25mm）：
<table>
<tr><td>1</td><td>VCC：Power</td></tr>
<tr><td>2</td><td>D-：Data-Signal</td></tr>
<tr><td>3</td><td>D+：Data+Signal</td></tr>
<tr><td>4</td><td>GND</td></tr>
<tr><td>5</td><td>GND</td></tr>
</table>
</td></tr>
<tr><td>PIN type</td><td>2X5pin Wafer Header 1.25mm</td></tr>
</table>

6.COM

<table>
<tr><th>COM</th><th>Description</th></tr>
<tr><td>connector type</td><td>4x COM，COM3-COM4 jumper selectable 5V/12V（1A）/RI，other standard</td></tr>
<tr><td>COM pin</td><td>
COM1-COM2RJ48


<table>
<tr><td>1</td><td>NC</td><td>2</td><td>DCD</td></tr>
<tr><td>3</td><td>DSR</td><td>4</td><td>RXD</td></tr>
<tr><td>5</td><td>RTS</td><td>6</td><td>TXD</td></tr>
<tr><td>7</td><td>CTS</td><td>8</td><td>DTR</td></tr>
<tr><td>9</td><td>GND</td><td>10</td><td>RI</td></tr>
</table>
COM3 RJ48
<table>
<tr><td>1</td><td>NC</td><td>2</td><td>DCD</td></tr>
<tr><td>3</td><td>DSR</td><td>4</td><td>RXD</td></tr>
<tr><td>5</td><td>RTS</td><td>6</td><td>TXD</td></tr>
<tr><td>7</td><td>CTS</td><td>8</td><td>DTR</td></tr>
<tr><td>9</td><td>GND</td><td>10</td><td>RI/5V/12V</td></tr>
</table>
COM1-COM3 DB9


COM1-C0M2 DB9
<table>
<tr><td>1</td><td>DCD</td><td>2</td><td>RXD</td></tr>
<tr><td>3</td><td>TXD</td><td>4</td><td>RTD</td></tr>
<tr><td>5</td><td>GND</td><td>6</td><td>DSR</td></tr>
</table>
</td></tr>
</table>

	7	RTS	8	CTS
	9	RI		

COM3 DB9

1	DCD	2	RXD
3	TXD	4	RTD
5	GND	6	DSR
7	RTS	8	CTS
9	RI/5V/12V		

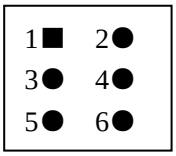
COM4 **2X5PIN 2.0mmwafer**

1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI/5V/12V	10	NC

Voltage select

COM3&com4 pin9 12V select

Pin	Define
1-2	12V
3-4	5V
5-6	RI



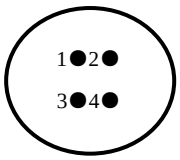
7. MINI-PCIE

MINI-PCIE	Description
Connectortype	1*Mini PCIe Port

8.CASH DRAWER

CASH DRAWER	Description
Connectortype	RJ11 +24V
PIN defined	1.GND 2.CD_OPEN 3.CD_SENSE 4.+24V 5.NC 6.GND

9.Power connector

24V DC	+24V 4 PIN DC JACK defined： 1. 24V 2. 24V 3. GND 4. GND	

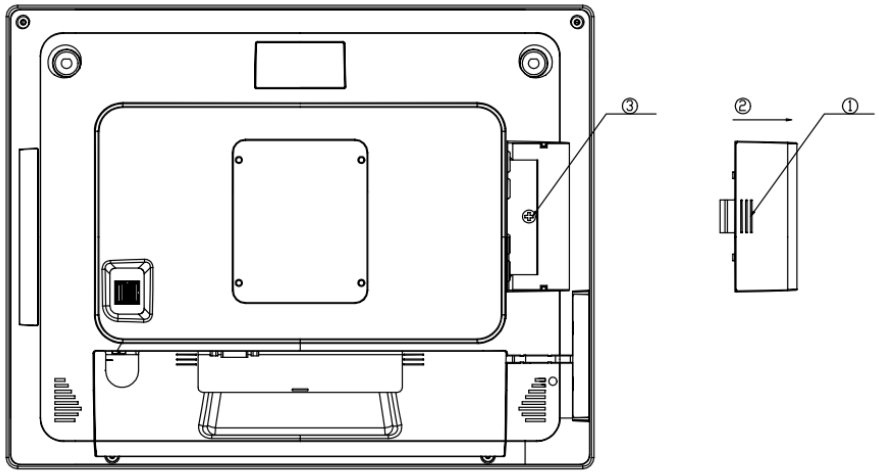
Part 4. System Assembly & Disassembly

01. HDD Replacement

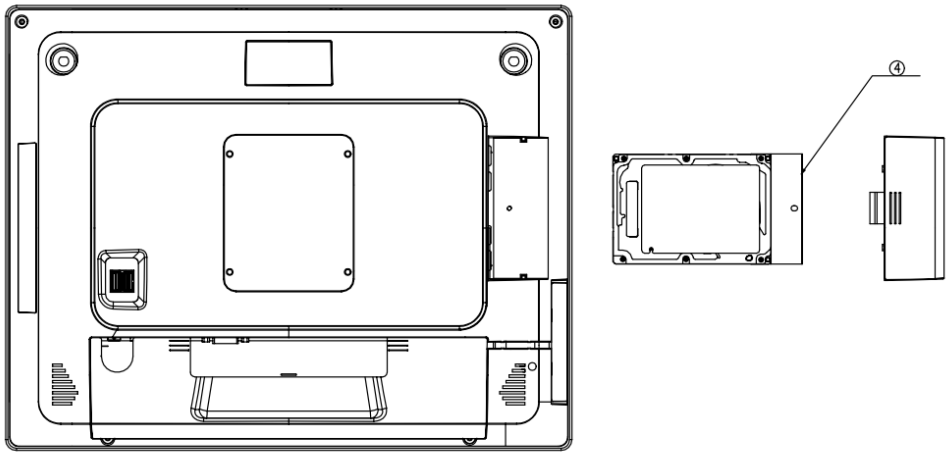
Step1: Press the place;

Step2: Move the HD cover along the arrow;

Step3: Release thescrew;



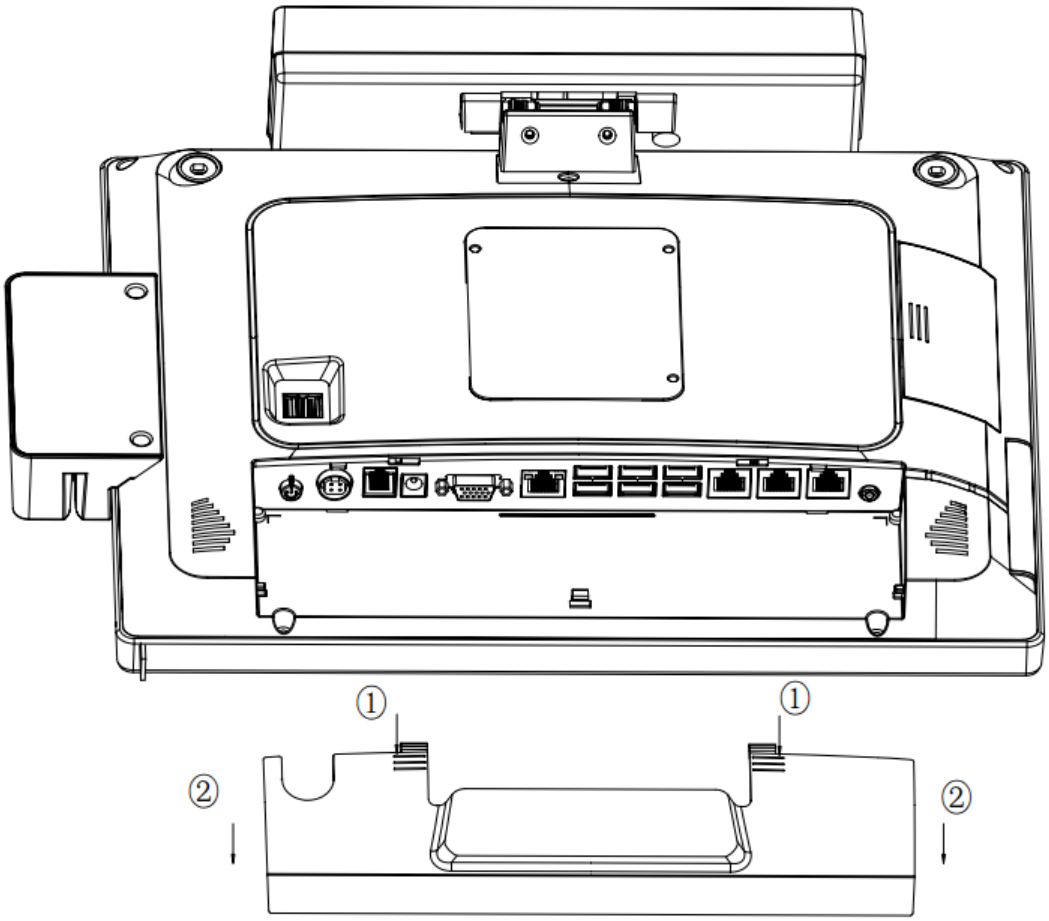
Step4: Pull the HD handle and remove the HD.



02. Remove cable cover

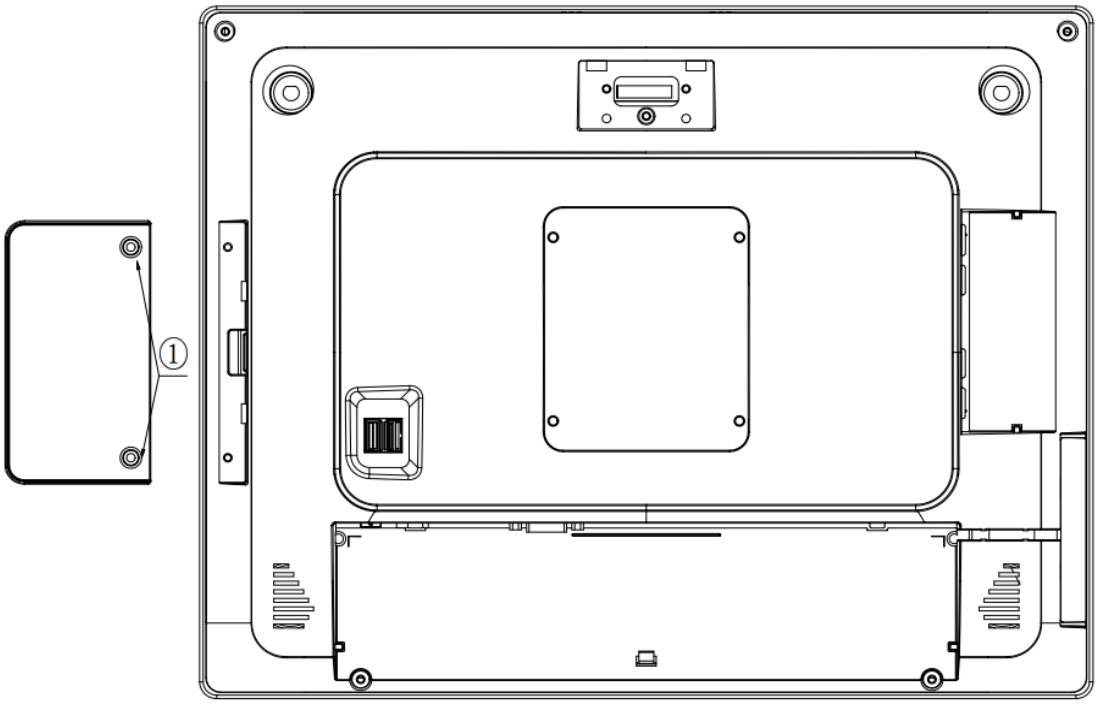
Step1: Press the switch

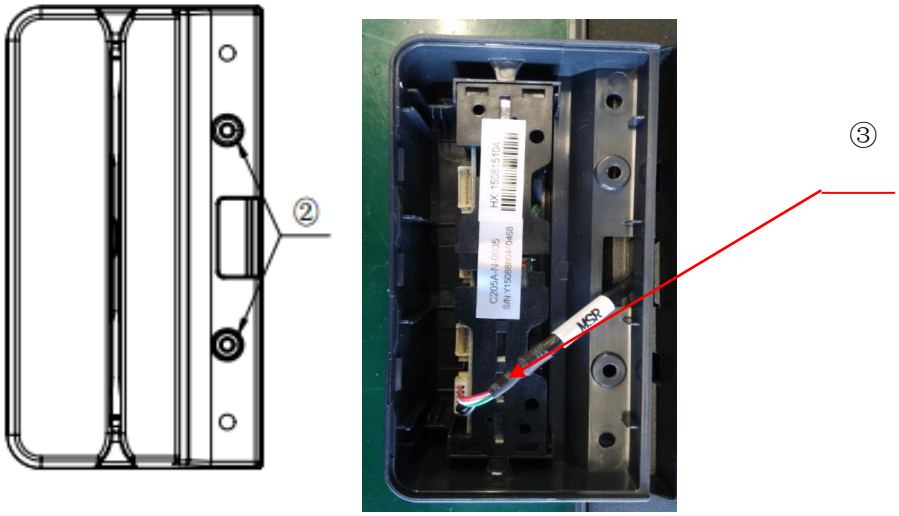
Step2: pull out cable cover



03. Remove Multi-function card reader

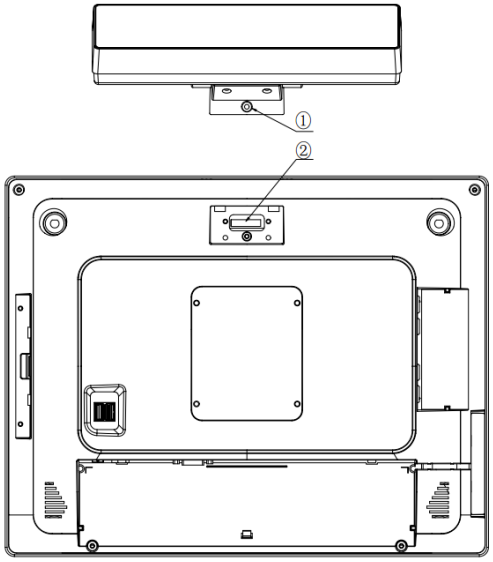
Step1: Release the 2 screws
Step2: Turn over the MSR, Release the 2 screws
Step3: separate the shell of MSR, then remove the cable.





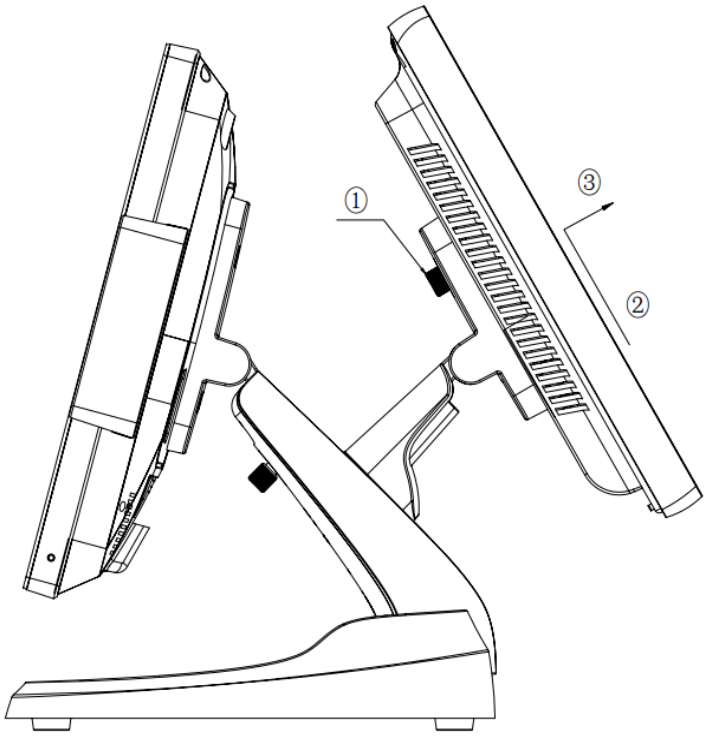
04. Remove customer display

Step1:Rotate customer display to the horizontal position and release thescrew;
Step2:Pull off cable terminal, Remove customer display.



05. Remove the second display

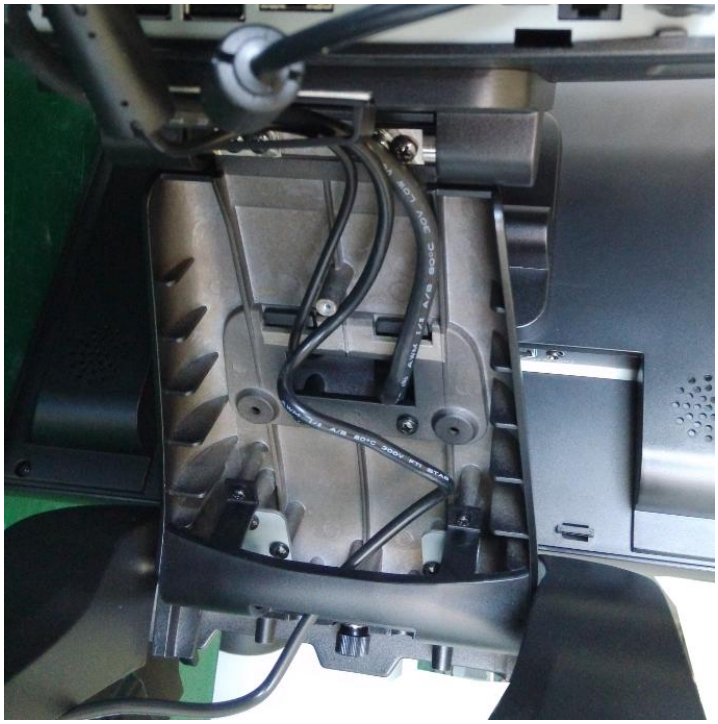
Step1: Loose the tool-less screw;
Step2: Move the display along the arrow;
Step3: Remove the display along the arrow.



06. The cable Assembly

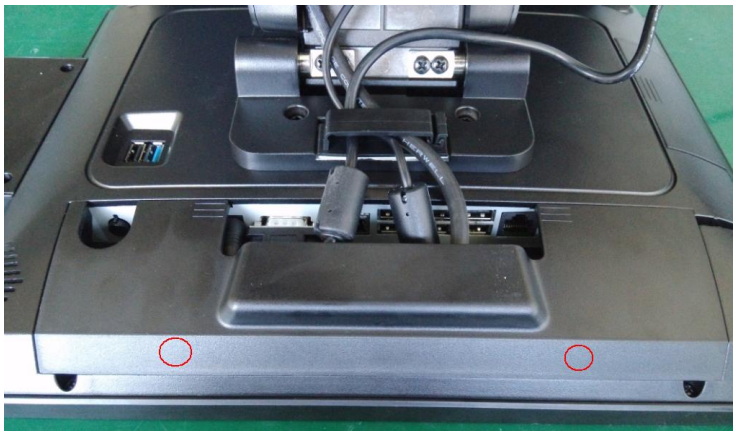
Step1: Loose the tool-less screw and remove the shell;

Step2: Let the cable into the base from the bottom of base ;



Step3: Connect the cables and tidy the cables;

Step4: Assemble the cable shell, push the position of the red dot with thumb ;



Step5: Assemble the base shell and tighten the tool-less screw;

Appendix A .BIOS Set Up

Understanding BIOS

BIOS provides configuration and set-up information for driving the main board. BIOS values are saved in CMOS ROM on the main board.

BIOS (Basic Input and Output System) Set-Up is a menu-oriented software utility which enables a user to configure the system's environmental set-up, system hardware, power saving functions, etc. BIOS Set-Up values can seriously affect how the system works. Therefore, users should determine all options regarding BIOS Set-Up and configure the system accordingly.

Entering the Setup

- •Turn on the system and the system Press <F2> to enter SETUP screen.
- •Turn on the system and the system Press <F11> to enter boot menu

Cases of BIOS Setup

- •• When checking HDD type and capacity after HDD replacement
- •• When changing booting sequence
- •• When reflecting users need on the setup

Appendix B .IO Information

Super IO Information (BIOS default)

COM1 : 3F8h/7
COM2: 3E0h/6
COM3 : 2E0h/11
COM4: 2E8/10

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();
  }

}
```