



## **SB9015T All-in-one True-flat Touch POS Terminal**



**USER MANUAL**

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# 1 Introduction

Thank you for purchasing the SB9015T all-in-one true-flat touch POS terminal. Bematech is committed to continuously improve product quality and provide better after-sales service. In order to take full advantage of our devices, we strongly recommend that you take the time to read this manual before diving into software solution.

*Note: Information in this manual may change without prior notice.*

## 1.1 Safety Information

- Before plug in the product, please make sure the power you provide meets the power requirements (such as voltage, frequency); Make sure the ground terminal of the power outlet is working properly.
- To avoid electric shocks, disconnect the power cord from the electrical outlet before relocating the system.
- Lightning may damage this product. During lightning storms, unplug the network cable, power cable and any other connections.
- Turn off power before connecting any devices (except USB devices) to the terminal.
- Do not attempt to open the chassis. You may be hurt by electric shock. For service, call your place of purchase.
- Do not spill liquid on the terminal. Do not place any objects into the ventilation holes of this product. It may cause short-circuit of the internal components and cause a fire or electric shock.
- After the terminal is stored below temperature of 10 ° C, please place it in room temperature (10-35 ° C) in the original packing for at least two hours to allow the terminal to restore to room temperature before operation. This is to avoid condensation that might cause electrical damage.
- Keep the terminal clean, dry, and away from dust, moisture and direct sunlight.

- Do not use harsh chemicals or strong cleaning solvents to clean the monitor screen. Wipe it clean with a soft terry cloth applied with a mild solution
- Do not share the same power outlet with high-power electrical appliances; keep distance from high level magnetic interference.
- Do not the use sharp pointed objects to work with the touch screen to avoid damage to the screen.

**When the following occurs:**

- Liquid gets inside the POS terminal;
- Accidental physical damage;
- The power cord or plug is damaged;
- POS terminal produces a burning smell;

Immediately disconnect the power supply, unplug the power cord, and contact a qualified service technician.

## **1.2 Electromagnetic compatibility statement**

### **FCC NOTICE**

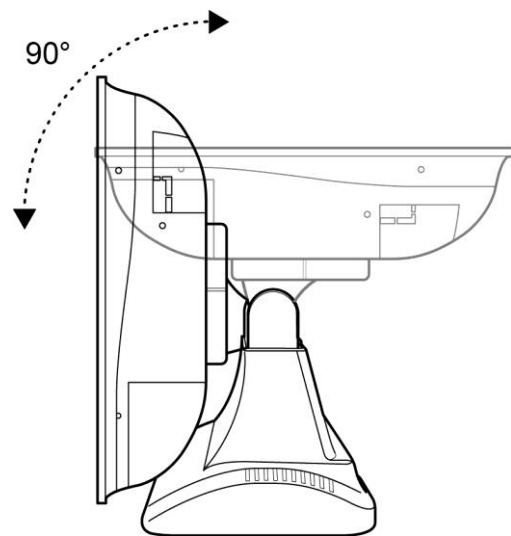
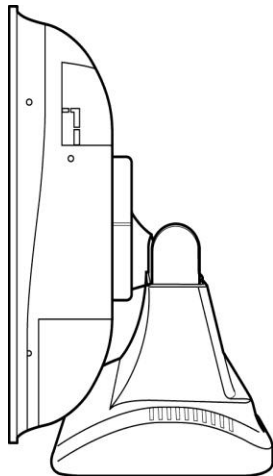
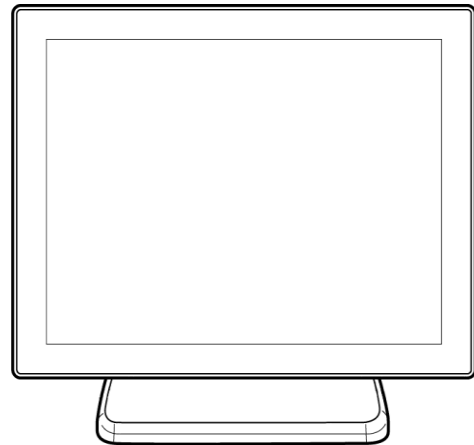
This device complies with Part 15 of FCC Rules. Operations are subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### **EUROPEAN COMMUNITY (CE) MARK OF CONFORMITY**

This product is in conformity with the protection requirements of EU Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. Logic Controls cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product. This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to CISPR 22 / European Standard EN 55022. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

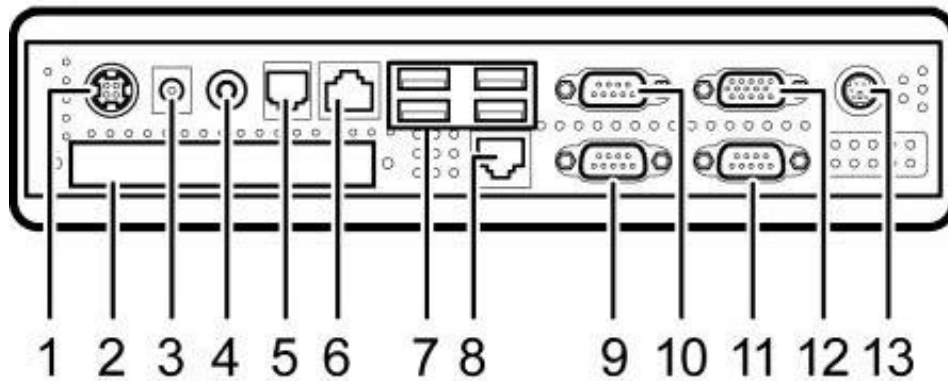
## 2 Overview

### 2.1 Appearances



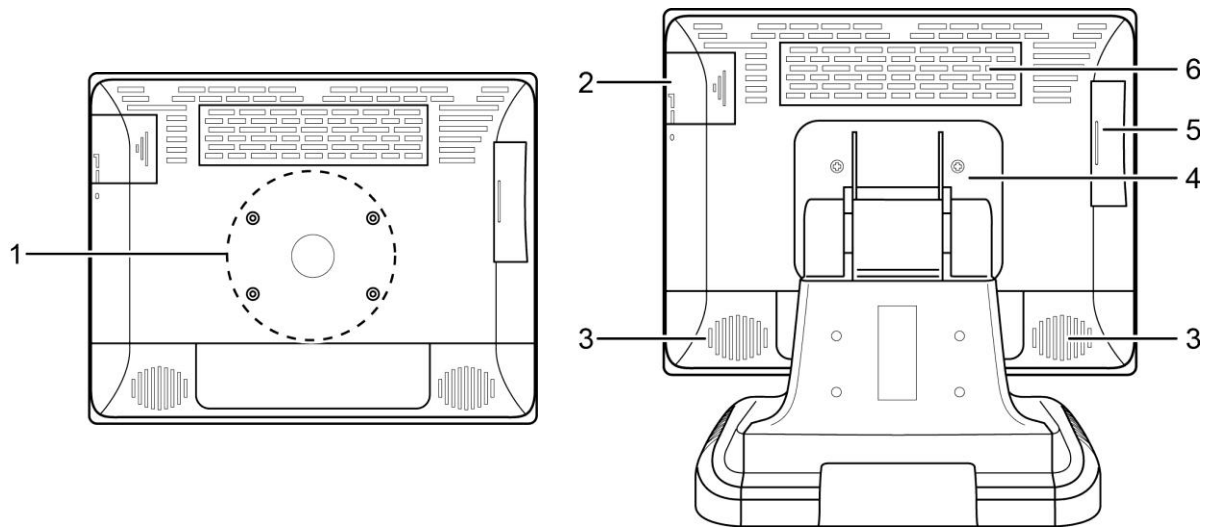
## 2.2 Rear panel I/O connectors

At the rear panel of the SB9015T is a row of external I/O device connectors detailed as follows:



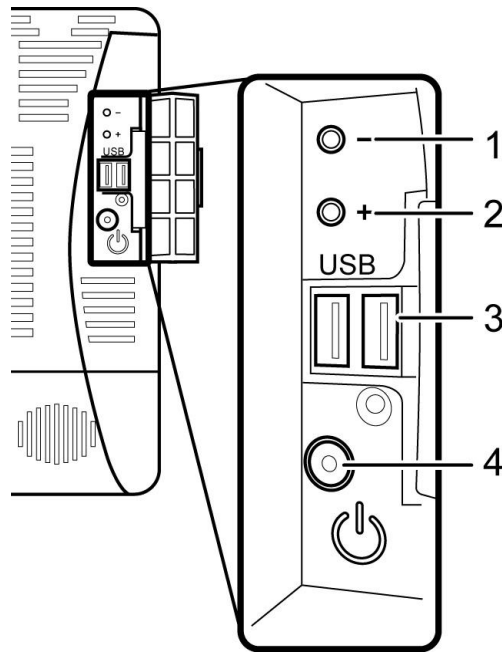
	System with D525 CPU	System with i3 CPU
1	DC in	DC in
2	HDD slot	HDD slot
3	DC out (for 2nd LCD)	DC out (for 2nd LCD)
4	Line out	Line out
5	Cash drawer port	Cash drawer port
6	COM5	COM4
7	USB port x 4	USB port x 4
8	LAN port	LAN port
9	COM3	COM1
10	COM4	COM2
11	COM1	COM6
12	VGA port	VGA port
13	PS/2 keyboard port	PS/2 keyboard port

## 2.3 Rear View



- 1 VESA mounting holes
- 2 MSR module compartment
- 3 Speakers
- 4 VESA routing plate
- 5 Control panel
- 6 Display module compartment (for Customer display or 2nd LCD)

## 2.4 Control Panel



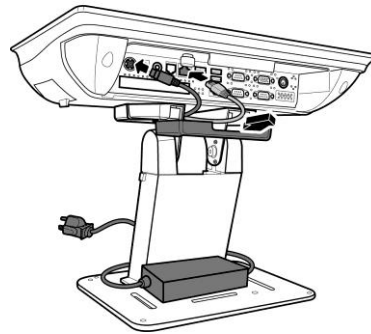
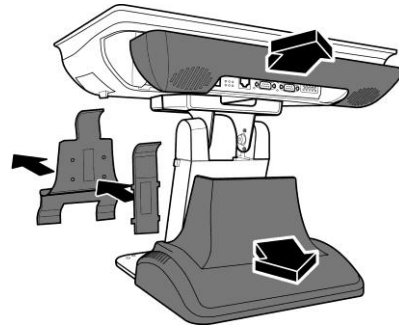
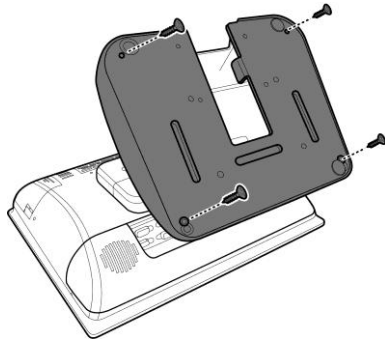
- |   |              |   |
|---|--------------|---|
| 1 | Brightness - | Press the “Brightness -” button to decrease brightness. The setting will be saved 6 seconds after releasing the button. |
| 2 | Brightness + | Press the “Brightness +” button to increase brightness. The setting will be saved 6 seconds after releasing the button. |
| 3 | USB ports    | Connect external peripherals such as a memory drive.  |
| 4 | Power Button | Press to turn the POS terminal on or off. The LED lights up blue when the power is on.                                  |

*Note: Press the “Brightness -” and “Brightness +” buttons at the same time to restore brightness to the factory default setting.*

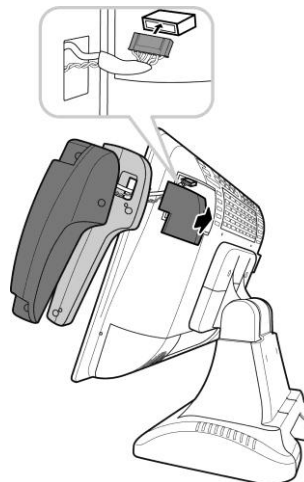
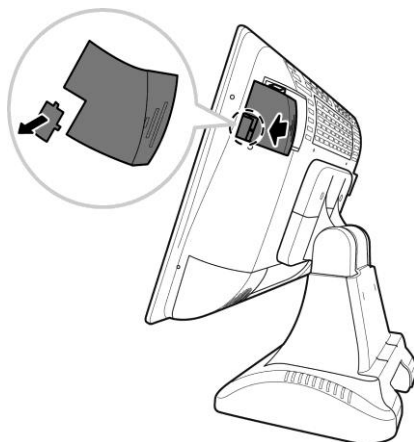


## 3 Hardware Installation

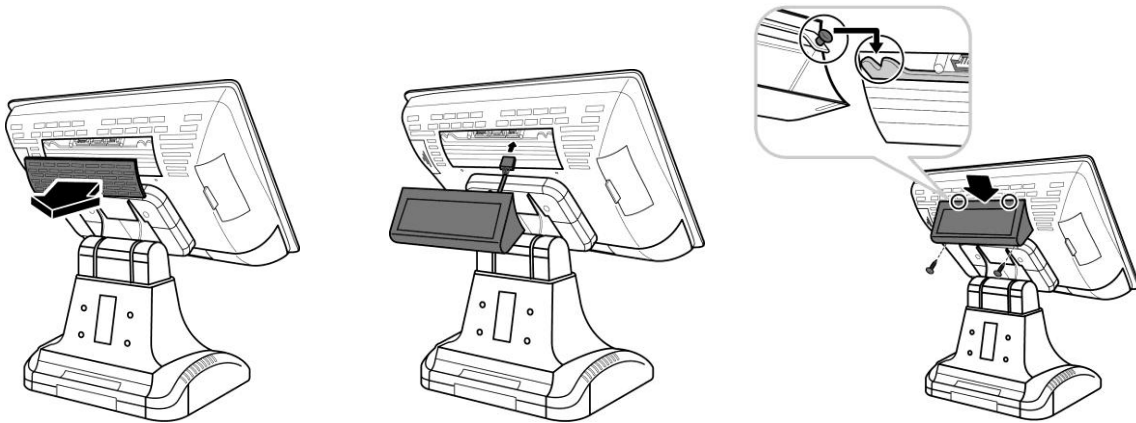
### 3.1 Cable Routing



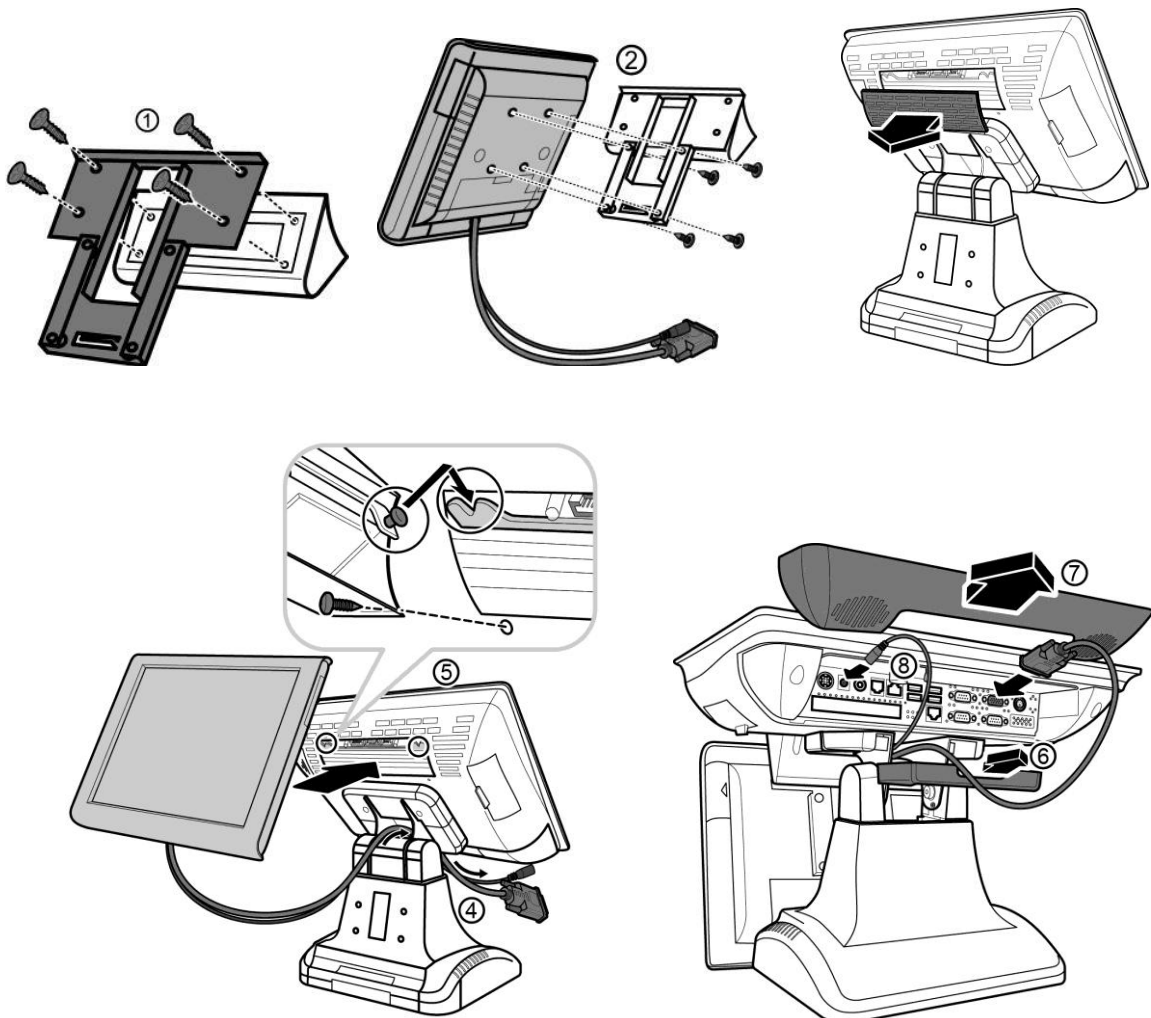
### 3.2 Installing MSR



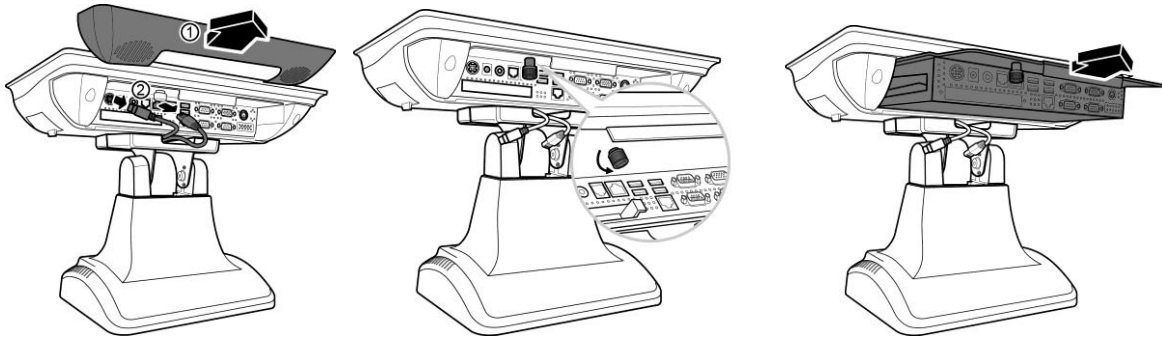
### 3.3 Installing Customer Display



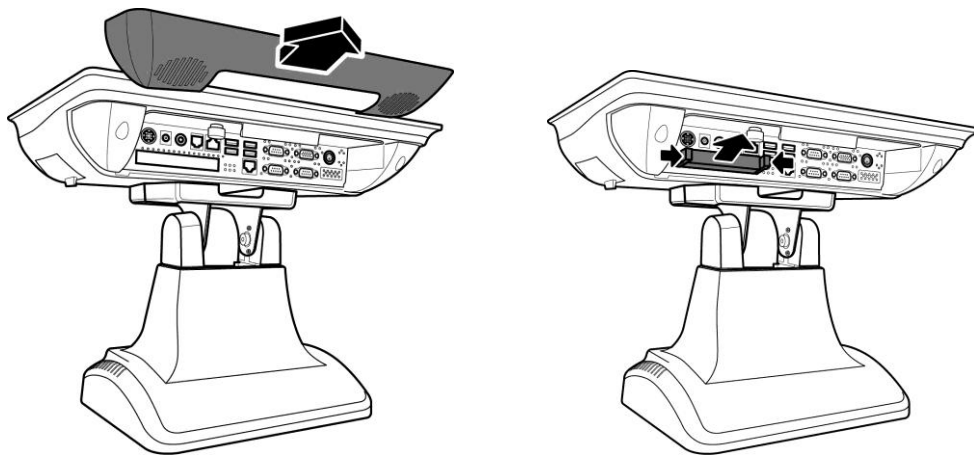
### 3.4 Installing Second LCD



### 3.5 Replacing System Core



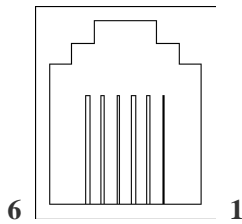
### 3.6 Replacing Hard Disk Drive



## 4 Setup and Driver Installation

### 4.1 Cash Drawer Port

Pin-out



Pin	System with D525	System with i3 CPU
1	Ground	Ground
2	Drive output	Drive output 1
3	Sense input	Sense input
4	+24V/+12V	+24V/+12V
5	None	Drive output 2
6	Ground	Ground

Operation

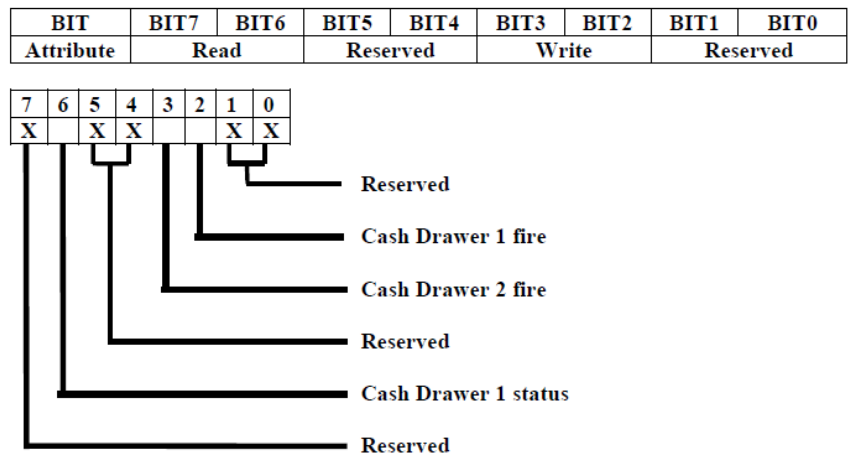
*System with D525 CPU*

COM port	COM6
Baud rate	1200
I/O address	288h
Open command	01h
Respond command	02h

*System with i3 CPU*

The Cash Drawer Controller use one I/O address to control the Cash Drawer.

I/O address	48Ch
Attribute	Read/Write
Size	8 bits



## 4.2 Serial Ports Configurations

### *System with D525 CPU*

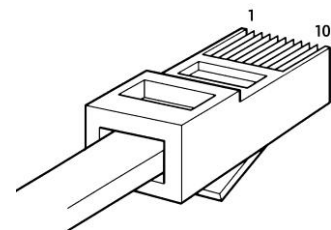
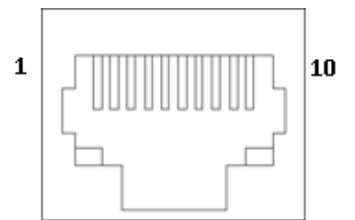
Connectors	Function	Pin 9 Power Support
COM1	External, RS232 (DB9)	+5V/+12V select by jumper
COM2	Touch controller	N/A
COM3	External, RS232 (DB9)	+5V/+12V select by jumper
COM4	External, RS232 (DB9)	+5V/+12V select by jumper
COM5	External, RS232 (RJ45)	+5V/+12V select by jumper
COM6	Cash Drawer	N/A
COM7	Customer Display	N/A

### *System with i3 CPU*

Connectors	Function	Pin 9 Power Support
COM1	External, RS232 (DB9)	+5V/+12V select by jumper
COM2	External, RS232 (DB9)	+5V/+12V select by jumper
COM3	Customer Display	+5V only
COM4	External, RS232 (RJ45)	+5V/+12V select by jumper
COM5	Touch controller	+5V only
COM6	External, RS232 (DB9)	+5V/+12V select by jumper

### COM5 RJ45 Socket Pin Assignment

RJ45-10 Pin No.	Signal Name
1	NC, or +5/+12 VDC
2	GND
3	DTR
4	CTS
5	TX
6	RTS
7	RX
8	DSR
9	DCD
10	NC




#### **Note:**


*Do not plug in or unplug any connector except USB devices when the power is on.*


*The current loading for all COM ports should not exceed DC 5V/3A and DC 12V/2A.*


## 4.3 Jumper settings


### *System with D525 CPU*


JP2 - Cash drawer voltage setting		
<b>123</b> 	1-2	24V
	2-3	12V
		Default=24V

JP4 - CMOS clear jumper		
<b>123</b> 	1-2	Normal
	2-3	CMOS clear
		Default=Normal


JP5 - COM4 DB9 pin 9 voltage select		
<b>246</b> 	1-2	0V
	3-4	+5V
	5-6	+12V
		Default=0V


JP6 - COM1 DB9 pin 9 voltage select		
<b>246</b> 	1-2	0V
	3-4	+5V
	5-6	+12V
		Default=0V


JP7 - COM3 DB9 pin 9 voltage select		
<b>246</b> 	1-2	0V
	3-4	+5V
	5-6	+12V
		Default=0V


JP8 - COM5 DB9 pin 9 voltage select		
<b>246</b> 	1-2	0V
	3-4	+5V
	5-6	+12V
		Default=0V


### *System with i3 CPU*


JP3 - Clear CMOS Contents		
<b>123</b> 	1-2	Normal
	2-3	Clear CMOS
		Default=Normal


JP6 - CN7 Cash Drawer Power Selection		
<b>123</b> 	1-2    +24V	Default=+24V
	2-3    +12V	


JP7 - CN1 USB Power Selection		
<b>123</b> 	1-2    +5VSB	Default=+5VSB
	2-3    +5V	


JP8 - CN4 USB Power Selection		
<b>123</b> 	1-2    +5VSB	Default=+5VSB
	2-3    +5V	

JP9 - COM4 RS232 pin 9 function select		
<b>246</b>  <b>135</b>	1-2    RI	Default=RI
	3-4    +5V	
	5-6    +12V	

JP10 - COM6 RS232 pin 9 function select		
<b>246</b>  <b>135</b>	1-2    RI	Default=RI
	3-4    +5V	
	5-6    +12V	

JP11 - COM2 RS232 pin 9 function select		
<b>246</b>  <b>135</b>	1-2    RI	Default=RI
	3-4    +5V	
	5-6    +12V	

JP12 - COM1 RS232 pin 9 function select		
<b>246</b>  <b>135</b>	1-2    RI	Default=RI
	3-4    +5V	
	5-6    +12V	

JP13 - PS/2 Keyboard Power Selection		
<b>123</b> 	1-2    +5VSB	Default=+5VSB
	2-3    +5V	

## 4.4 Motherboard BIOS settings

The POS terminal has a BIOS (Basic Input Output System) chip on the motherboard. Every time you start the terminals, the system will first run the BIOS self-test routine to check the main components of the system to ensure it is working properly.

The terminal is loaded with default BIOS settings in the factory. Please do not change the parameters in the BIOS unless necessary.

In the following situations, you need to run the BIOS setup:

- 1) Error message appears on the screen during the system self-test and requested to enter BIOS setup.
- 2) If you need to change the factory default settings to customized application requirements (for example, boot device priorities).

To enter the BIOS setting utility, during system boot up press <F2> on keyboard immediately after the beep sound.

### Control keys

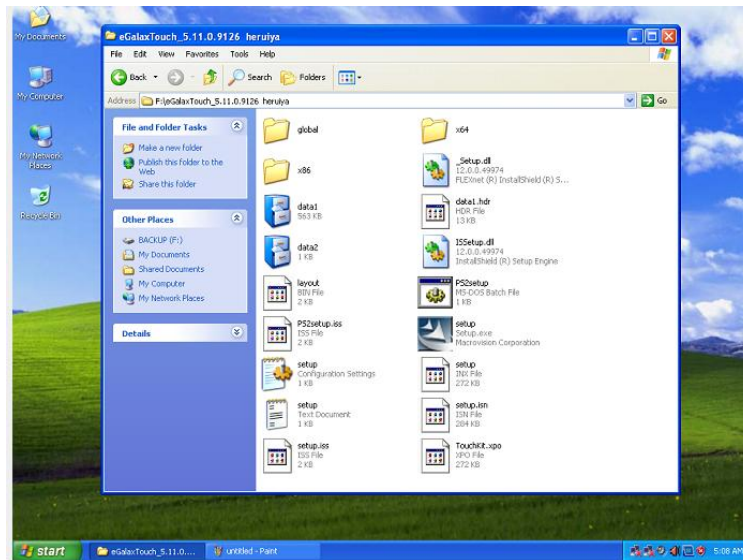
Function	D525 System	i3 System
Move up to previous item	<↑>	<↑>
Move down to next item	<↓>	<↓>
Move left to previous menu	<←>	<←>
Move right to next menu	<→>	<→>
Select this option/sub-menu	<Enter>	<Enter>
Exit the menu or to return to the main menu from the submenu	<Esc>	<Esc>
Increase the option value or change selection	<+>	<+>
Reduce the option value or change selection	<->	<->
Help	<F1>	<F1>
Restore previous values		<F2>
Load optimized default values	<F9>	<F3>
Save and Exit	<F10>	<F4>



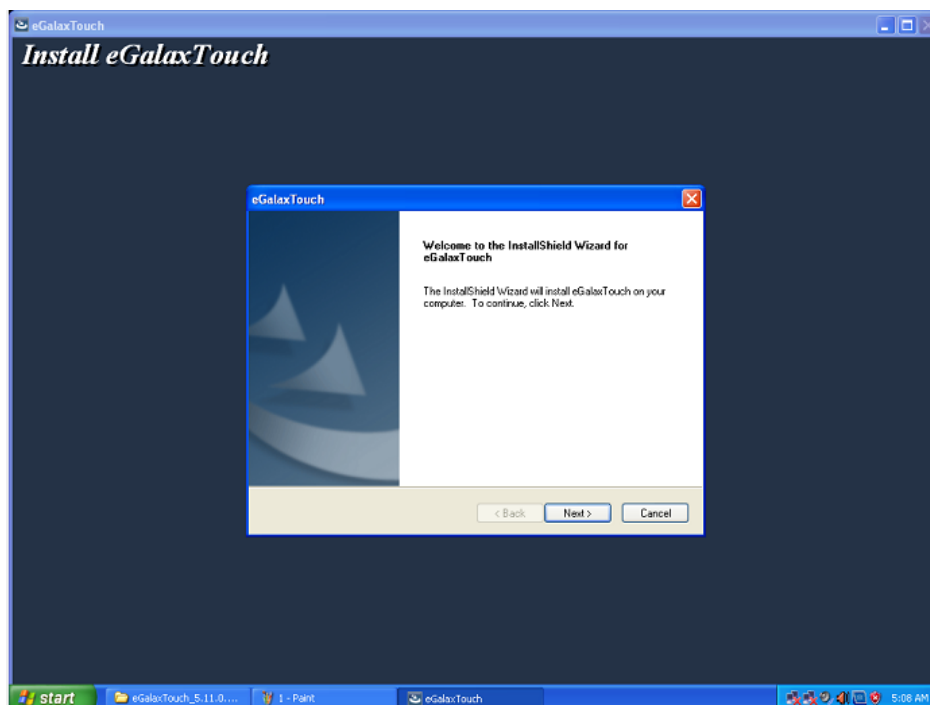
## 4.5 Touch screen driver installation

*For resistive touch versions, follow the driver installation and calibration steps below. For PCAP touch version, no driver installation/calibration is required.*

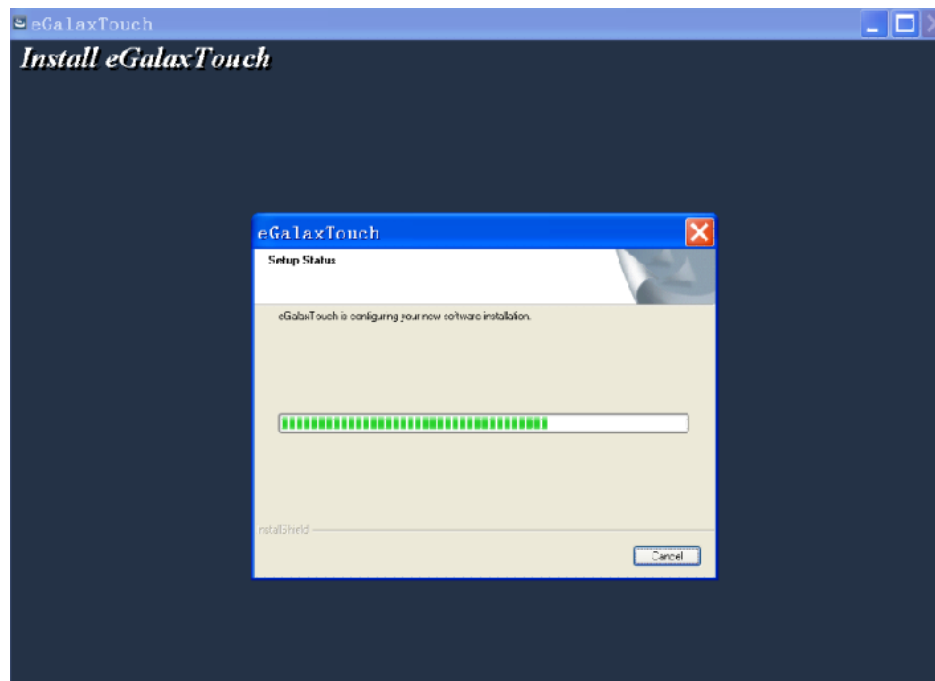
Step 1: Navigate to the installer directory to find the setup.exe file. Double-click on “setup.exe” to start installation.



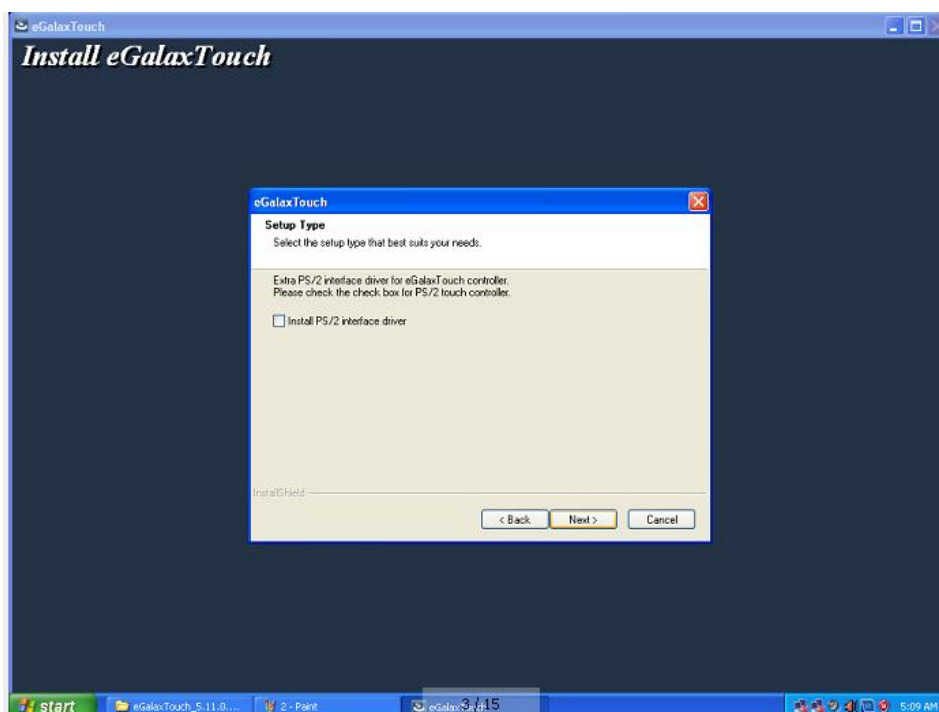
Step 2: When installation starts, click [Next] to proceed to the next step.



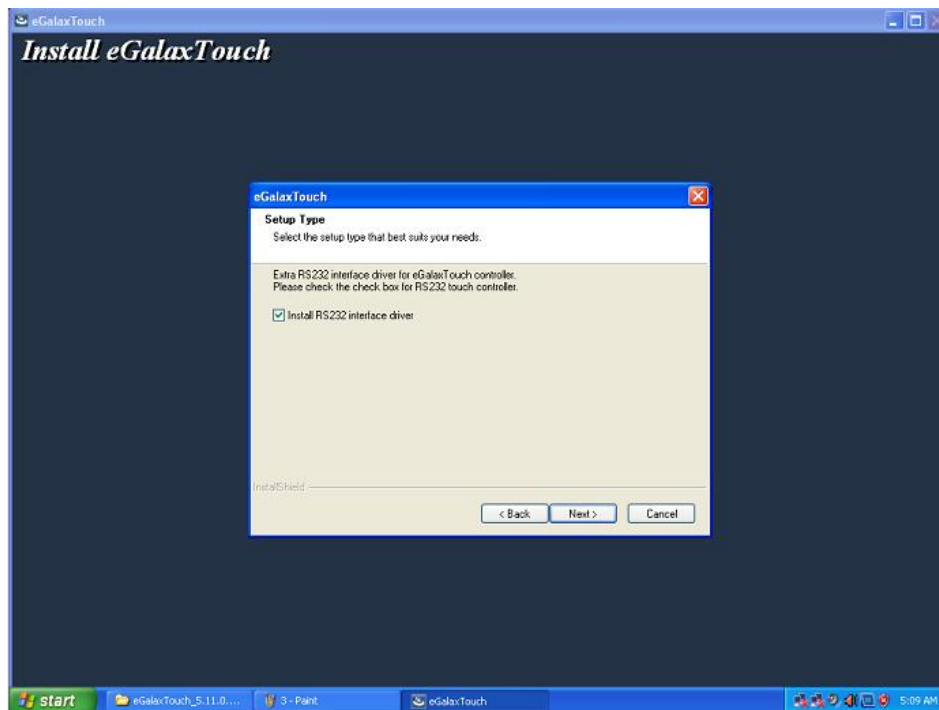
### Step 3: Installation in progress



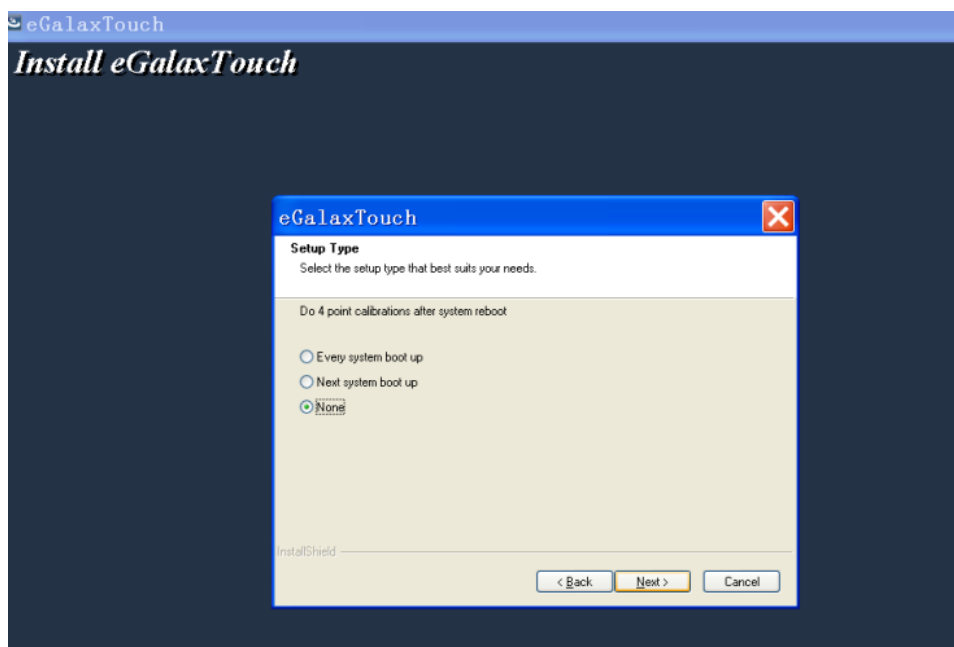
### Step 4: Uncheck "Install PS/2 interface driver" and click [Next] to continue installation.



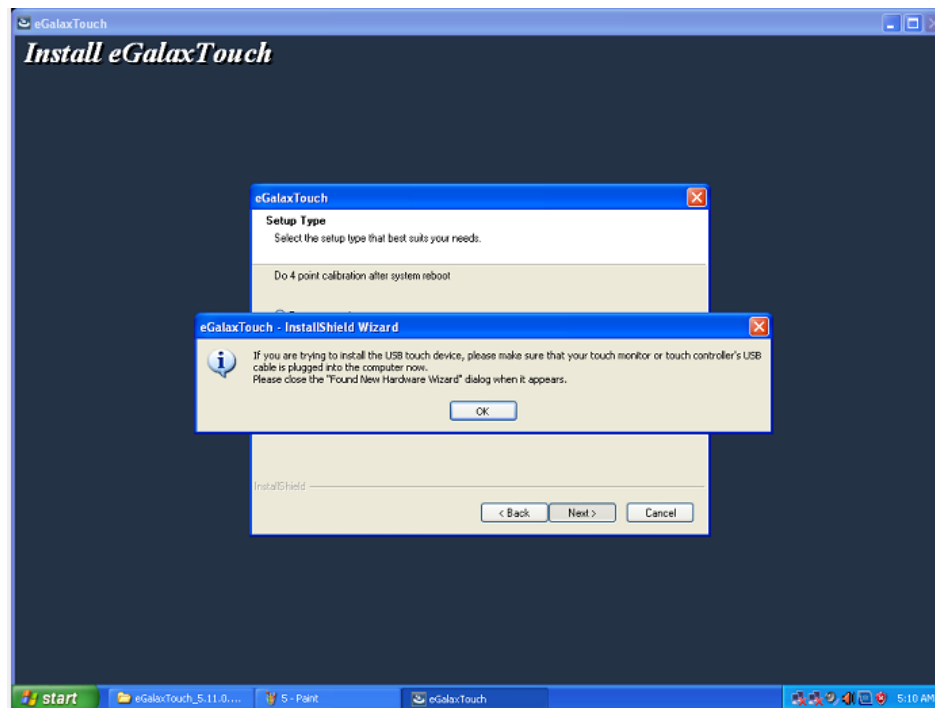
**Step 5:** Check “install RS232 interface driver” and click [Next] to continue installation.



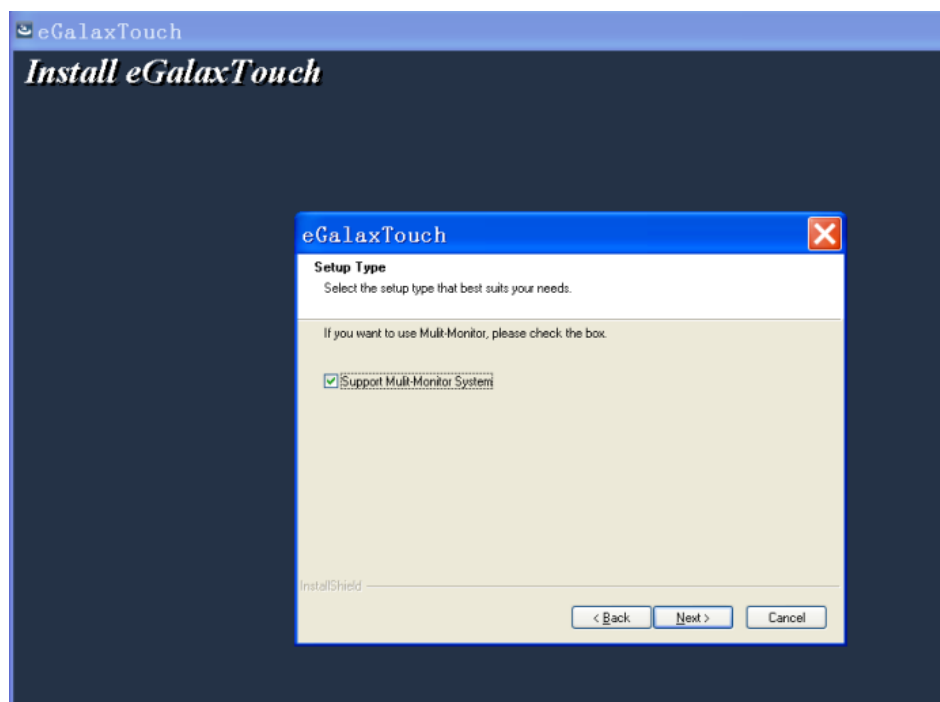
**Step 6:** Select option “NONE”, click [Next] to continue installation.



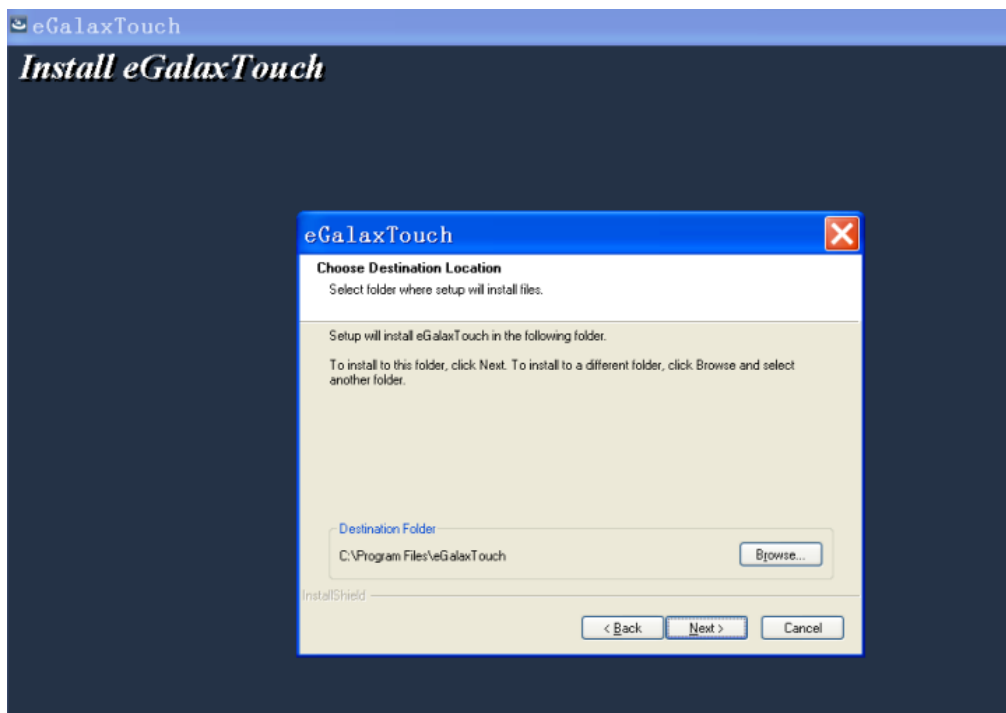
**Step 7:** When installing external USB touch monitor, please connect the USB controller and USB cable



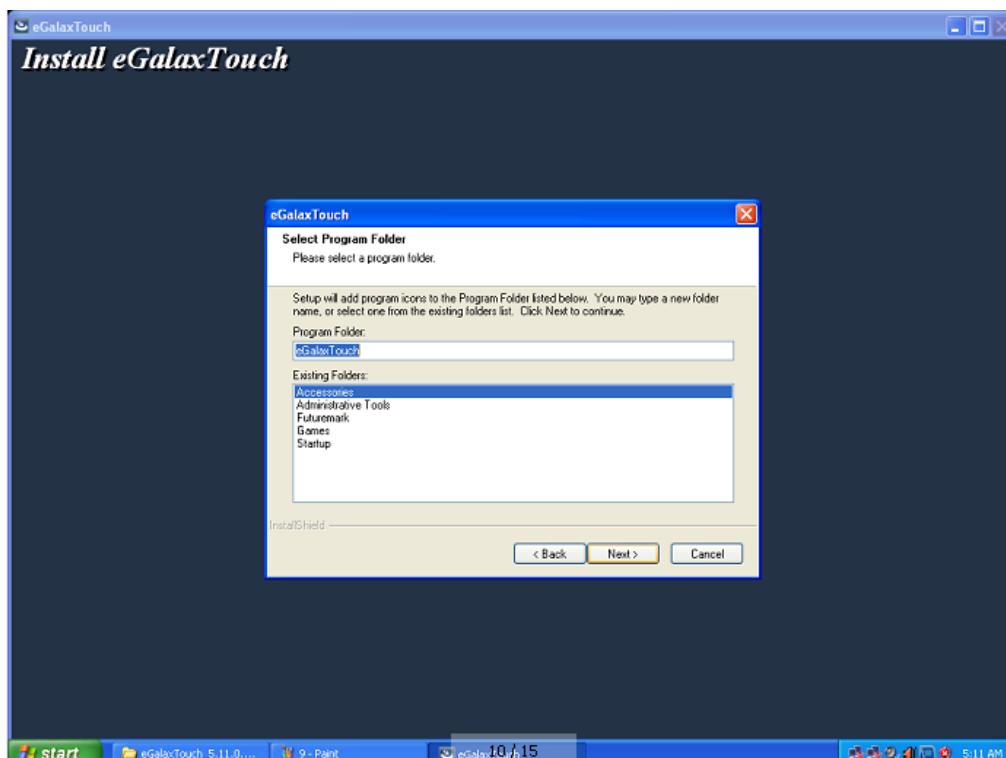
**Step 8:** If there are additional touch monitors connected, please check “Support multi-monitor system”.



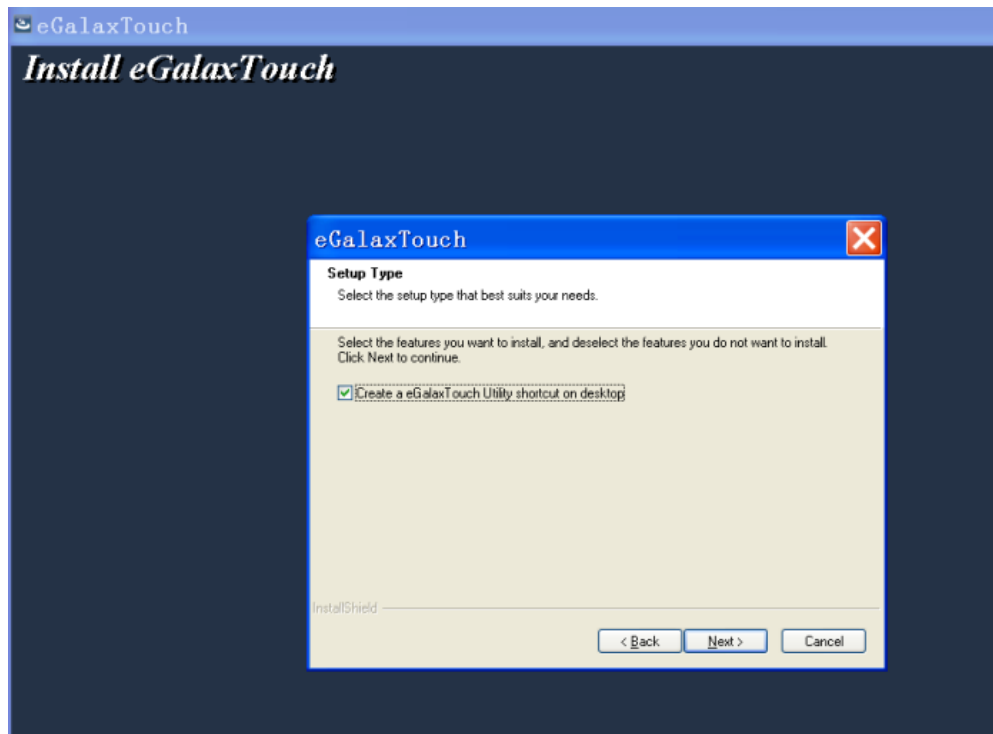
**Step 9:** Select the destination location to install the touch driver. The default path is “C:\Program Files\eGalaxtouch”. Click [Next] to continue installation.



**Step 10:** Select the Program Folder to install the utility. The default is “eGalaxtouch”. Click [Next] to continue installation.

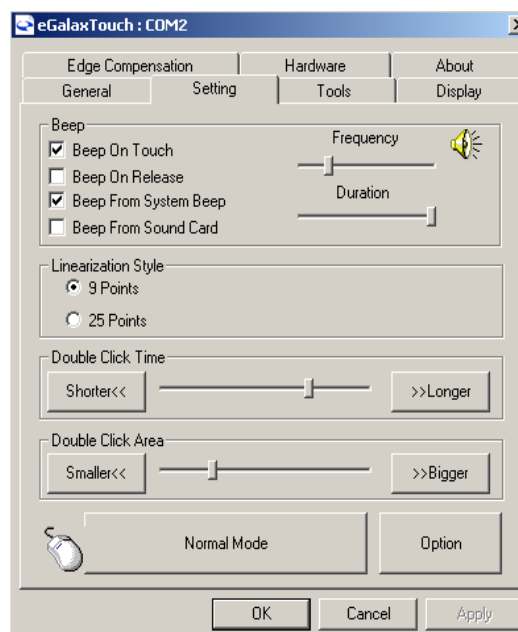


**Step 11:** Check the option to create a desktop shortcut icon and click [Next] to finish the installation.

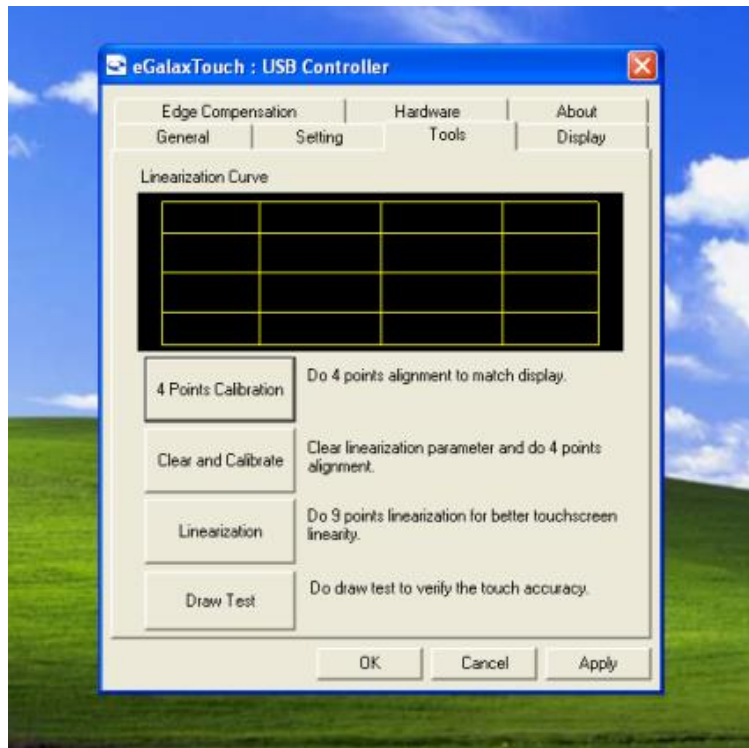


## Touch function settings

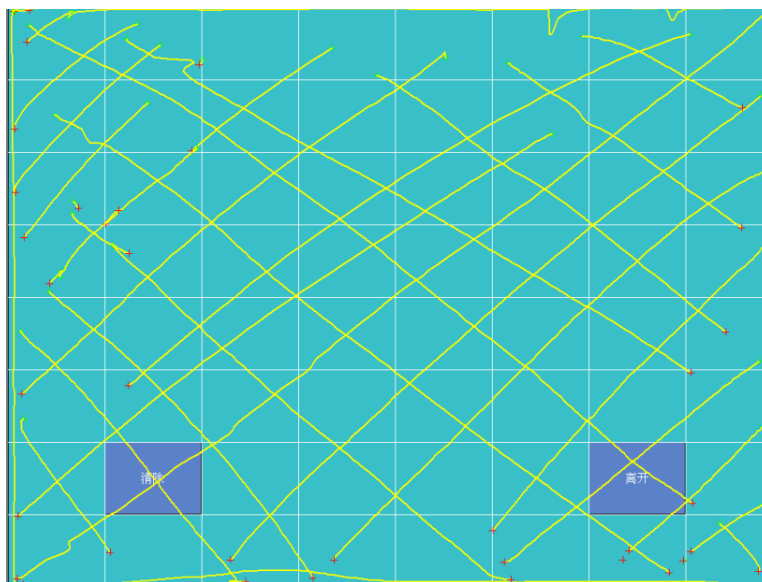
Invoke the Touch Utility software to set operation options and calibrate the touch monitor.



## Touch calibration



## Touch device line test



## 5 Troubleshooting

### 1) Terminal does not boot

If the terminal cannot boot after repeated pressing of the power switch when connect to the power, the terminal power light remains off, the fan does not operate, and the BIOS beeping is not heard, it might be power supply problems.

- (a) Check the power adapter is plugged in correctly to the power outlet.
- (b) Check the connection between the terminal and the power adapter, and then re-boot the machine.
- (c) If the terminal is working in high temperature environment that causes the terminal automatically shut down in protection mode, please disconnect the power of the machine. Wait until environment temperature has dropped and restart.
- (d) If the terminal does not boot after a sudden power failure or illegal shutdown, unplug the adapter from the terminal, and press the power button several times. Then plug in the adapter and boot again.
- (e) If the adapter light blinks or go off, unplug the adapter immediately and do not plugged in again. Contact with our products service center.

### 2) The terminal automatically restart (or shutdown)

If terminal is frequently automatic shutdown or auto-boot during operation (or boot up),

- (a) Check the power supply is connected properly; make sure the plug is not loose and contacts are in good condition;
- (b) Check if the AC line voltage is stable;
- (c) A sudden power failure or improper shutdown may cause this problem. Press F8 to boot system into safe mode and debug.
- (d) If any new hardware is added or replaced that caused this problem, remove the hardware and reboot;
- (e) If the above steps do not resolve this problem, reinstall the operating system.



### **3) The touch screen does not respond**

- (a) Remove the touch driver and then install it again.
- (b) Execute the "eGalaxTouch utility and check if the interface port is working.

### **4) When touching the screen, cursor always returns to a fixed position.**

- (a) Check if there is anything pressing on the touch screen.
- (b) Other high power or high frequency equipment may affect the screen or controller. Make sure that the touch screen is away from the high-voltage equipment.
- (c) The touch screen driver is not installed correctly, install the driver (please refer to the "Touch Screen Setup") and run a 25-point calibration.

### **5) Touch screen is not accurate**

Please run the touch screen calibration program with a 25-point recalibration, we also recommend you to do this after change the monitor resolution or refresh rate. When running the calibration, touch the center of calibration point to assure accuracy.

### **6) The cursor moves opposite to the touch movement**

- (a) Run the 4/9/25 point calibration.
- (b) The touch screen driver is not installed properly, reinstall the driver.

### **7) The cursor fixed at the edge of LCD**

- (a) Check if the edge of the screen is being pressed by something.
- (b) Check the edges of the LCD if there is anything jammed in the front bezel.
- (c) Make sure the touch screen is clean.

### **8) The cursor in the touch screen can only move in a small area or touch positions are inaccurate.**

- (a) This situation usually occurs first time after installing the driver. Please run the touch screen calibration program. We also recommend you to do this after changing monitor resolution.
- (b) Run the touch screen calibration program to do a 25-point recalibration.

## 6 Specifications

MODEL	SB9015T (D525 System)	SB9015T (i3 System)
Main Board		
CPU	Intel Atom Processor, D525 dual core 1.8GHz	Intel i3-2310E 2.1GHz / i3-3217U 1.8GHz dual core processor
System Chipset	D525 + ICH8M chipset	HM65
BIOS	Phoenix Award BIOS	AMI 64Mbit UEFI BIOS
System Memory	2 slots, DDR3 1066/1333, up to 4GB	2 slots, DDR3 1066/1333, up to 8GB
Graphics Memory	Shared memory up to 224MB	
Storage	SATA 2.5 inch Hard Disk Drive (standard 320GB)	
Display		
LCD panel	15" TFT LCD	
Resolution	1024x768	
Brightness	250cd/m <sup>2</sup>	
Touch Screen	5-wire resistive touch (COM2 )	5-wire resistive touch (COM5 )
I/O Ports		
PS/2 Port	1x PS/2 keyboard	
Serial Ports	3x DB9 (COM1/3/4), 1x RJ45 (COM5), DC5V/12V jumper option on pin 9	3x DB9 (COM1/2/6), 1x RJ45 (COM4), DC5V/12V jumper option on pin 9
VGA	1x DB15 2 <sup>nd</sup> video VGA connector	
LAN	1x RJ45, 10/100M/1Gbit	
USB	6x USB 2.0	
Cash Drawer Port	1x RJ11, 12V/24V jumper selectable, COM port control	1x RJ11, 12V/24V jumper selectable, GPIO control
Audio	1x audio out, 2x 1W built-in speakers	
DC Output	1x DC 12V output	
Environment		
Operating Temperature	0°C to 40°C	
Storage Temperature	-25°C to 70°C	
Relative Humidity	8% to 80% non-condensing	
Electrical (External Power Adapter mounted inside system base)		
Input	96V to 264VAC, 50 to 60Hz, 2.0A	
Output	DC 24V 5A	
Output Power	120W max	
Mechanical		
Dimensions (H x W x D)	384x360x213mm (15.1 x 14.2 x 8.4in)	
Weight	10Kg (22 lb)	

## **SB9015T All-in-one Touch POS terminal**



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