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1 Introduction

Thank you for purchasing the SB9015F all-in-one 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 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 SB9015F is a row of external I/O device connectors detailed as follows:

<table>
<thead>
<tr>
<th>Number</th>
<th>Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DC in</td>
</tr>
<tr>
<td>2</td>
<td>HDD slot</td>
</tr>
<tr>
<td>3</td>
<td>DC out (for 2nd LCD)</td>
</tr>
<tr>
<td>4</td>
<td>Line out</td>
</tr>
<tr>
<td>5</td>
<td>Cash drawer port</td>
</tr>
<tr>
<td>6</td>
<td>COM5</td>
</tr>
<tr>
<td>7</td>
<td>USB port x 4</td>
</tr>
<tr>
<td>8</td>
<td>LAN port</td>
</tr>
<tr>
<td>9</td>
<td>COM3</td>
</tr>
<tr>
<td>10</td>
<td>COM4</td>
</tr>
<tr>
<td>11</td>
<td>COM1</td>
</tr>
<tr>
<td>12</td>
<td>VGA port</td>
</tr>
<tr>
<td>13</td>
<td>PS/2 keyboard port</td>
</tr>
</tbody>
</table>
2.3 Rear View

1. VESA 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

<table>
<thead>
<tr>
<th>Pin</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ground</td>
</tr>
<tr>
<td>2</td>
<td>Drive output</td>
</tr>
<tr>
<td>3</td>
<td>Sense input</td>
</tr>
<tr>
<td>4</td>
<td>+24V/+12V</td>
</tr>
<tr>
<td>5</td>
<td>None</td>
</tr>
<tr>
<td>6</td>
<td>Ground</td>
</tr>
</tbody>
</table>

Operation

<table>
<thead>
<tr>
<th>COM port</th>
<th>COM6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baud rate</td>
<td>1200</td>
</tr>
<tr>
<td>I/O address</td>
<td>288h</td>
</tr>
<tr>
<td>Open command</td>
<td>01h</td>
</tr>
<tr>
<td>Respond command</td>
<td>02h</td>
</tr>
</tbody>
</table>

4.2  Jumper settings

<table>
<thead>
<tr>
<th>JP2 - Cash drawer voltage setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 24V</td>
</tr>
<tr>
<td>2-3 12V</td>
</tr>
<tr>
<td>Default =24V</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JP4 - CMOS clear jumper</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 Normal</td>
</tr>
<tr>
<td>2-3 CMOS clear</td>
</tr>
<tr>
<td>Default =Normal</td>
</tr>
</tbody>
</table>
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 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).

Control keys

↑ Move up to previous item
↓ Move down to next item
← Move left to previous menu
→ Move right to next menu
<Enter> Select this option/sub-menu
<Esc> Exit the menu or to return to the main menu from the submenu
<↑> Increase the option value or change selection
<↓> Reduce the option value or change selection
<F1> Help
<F9> Load default settings
<F10> Restore previous values
### Main Menu

System Time: [15:32:35]
System Date: [12/07/2014]

- IDE Primary/Slave: [Menu]
- IDE Primary/Slave: [Menu]
- SATA Port 1: [L0008: SATA1]
- SATA Port 2: [Menu]
- SATA Port 3: [Menu]

Boot Features:
- Installed memory
- Available to IDE
- Used by devices

### Advanced Menu

Setup Warning
Setting items on this menu incorrectly values may cause your system to malfunction.

- EDI Event Logging

- OS Selection: [Windows]
- Installed OS: [Other]
- Asset Configuration Data: [No]
- Large Disk Access Mode: [E0000]
- Enable ACPI Debug only: [Yes]
- Enable Multimedia Timer: [No]
- ACPI Suspend Type: [SS1]
- Port 80H Cycles: [LPC Bus]
- Legacy USB Support: [Enabled]

Item Specific Help
Select the operating system on your system which you will use most commonly for CMU port.

Select Windows for Windows base or Linux OS.
Select DOS for DOS base Embedded Linux or Unix O/S.

F1 Help  F2 Select Item  +/- Change Values  F9 Setup Defaults
F10 Previous Values
### Boot Menu

**Boot priority order:**

1. IDE 2: TOSHIBA MK1885G5XX-(S1)
2. USB HDD: JetFlash T880NY60-(USB 2)
3. 
4. 
5. 
6. 
7. 
8. 

**Excluded from boot order:**

- All IDE HDD
- All USB Floppy
- All USB KEY
- All USB HHD
- All USB CDROM
- All USB ZIP
- All USB LS120

---

### Exit Menu

**Exit Menu Options:**

- Exit Saving Changes
- Exit Discarding Changes
- Load Setup Defaults
- Discard Changes
- Save Changes

---

**Item Specific Help**

- Keys used to view or configure devices:
  - Up and Down arrows: select a device.
  - < and > moves the device up or down.
  - < and > specifies the device fixed or removable.
  - <x> exclude or include the device to boot.
  - Shift + <1> enables or disables a device.
  - <1 - 4> Loads default boot sequence.
4.4 Touch screen driver installation:

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

**Step 6:** Select option “NONE”, click [Next] to continue installation.
Step 7: When installing USB touch, 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.

After install the driver successfully, identify the USB controller is installed as shown below.
Touch function settings

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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SB9015F 15” All-in-one Touch POS Terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Board</strong></td>
<td></td>
</tr>
<tr>
<td>CPU</td>
<td>Intel Atom Processor, D525 dual core 1.8GHz</td>
</tr>
<tr>
<td>System Chipset</td>
<td>D525 +ICH8M chipset</td>
</tr>
<tr>
<td>Memory</td>
<td>2 slots, DDR3 1066/1333, up to 4GB</td>
</tr>
<tr>
<td>Storage</td>
<td>SATA 2.5 inch Hard Disk Drive, 160GB or higher</td>
</tr>
<tr>
<td><strong>Display</strong></td>
<td></td>
</tr>
<tr>
<td>LCD panel</td>
<td>15” TFT LCD</td>
</tr>
<tr>
<td>Resolution</td>
<td>1024x768</td>
</tr>
<tr>
<td>Brightness</td>
<td>250 cd/m²</td>
</tr>
<tr>
<td>Touch Screen</td>
<td>5-wire resistive touch (RS232 interface)</td>
</tr>
<tr>
<td>Tilting Angle</td>
<td>0 to 90°</td>
</tr>
<tr>
<td><strong>I/O Ports</strong></td>
<td></td>
</tr>
<tr>
<td>External DC Input</td>
<td>1x DC jack (connected to power adapter)</td>
</tr>
<tr>
<td>PS/2 Port</td>
<td>1x PS/2 keyboard</td>
</tr>
<tr>
<td>Serial Ports</td>
<td>3x DB9 with DC5V/12V on pin 9 (jumper option), 1x RJ45</td>
</tr>
<tr>
<td>Parallel Port</td>
<td>Optional 1x DB25 on cable</td>
</tr>
<tr>
<td>VGA</td>
<td>1x DB15 2nd video VGA connector</td>
</tr>
<tr>
<td>LAN</td>
<td>1x RJ45, 10/100M/1Gbit</td>
</tr>
<tr>
<td>USB</td>
<td>6x USB 2.0</td>
</tr>
<tr>
<td>Cash Drawer Port</td>
<td>1x RJ11, 12V/24V jumper selectable</td>
</tr>
<tr>
<td>Audio</td>
<td>1x audio out, 2x 1W built-in speaker</td>
</tr>
<tr>
<td>DC Output</td>
<td>1x DC 12V output</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0°C to 40°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-25°C to 70°C</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>8% to 80% non-condensing</td>
</tr>
<tr>
<td><strong>Electrical (External Power Adapter)</strong></td>
<td></td>
</tr>
<tr>
<td>Input</td>
<td>100V to 240VAC, 50 to 60Hz, 2.0A</td>
</tr>
<tr>
<td>Output</td>
<td>DC 24V 5A</td>
</tr>
<tr>
<td>Output Power</td>
<td>120W max</td>
</tr>
<tr>
<td><strong>Mechanical</strong></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>329x348x213mm</td>
</tr>
<tr>
<td>Weight</td>
<td>10Kg</td>
</tr>
</tbody>
</table>
SB9015F All-in-one Touch POS terminal