



# **Service Manual**

*MPOS 50 Series*

\*MPOS50-8B-LX800

*March 2007*

## **Copyright Notice**

The information in this document is subject to change without prior notice in order to improve reliability, design and function and does not represent a commitment on the part of the manufacturer.

In no event will the manufacturer be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or inability to use the product or documentation, even if advised of the possibility of such damages.

This document contains proprietary information protected by copyright. All rights are reserved. No part of this manual may be reproduced by any mechanical, electronic, or other means in any form without prior written permission of the manufacturer.

## **Trademarks**

AMD is a registered trademark of AMD Corporation. Award is registered trademarks of Phoenix Technologies LTD. Other product names mentioned herein are used for identification purposes only and may be trademarks and/or registered trademarks of their respective companies.

## Contents

Chapter 1 Troubleshooting .....	6
1.1 Symptoms and Solutions .....	6
1.2 BIOS Upgrade .....	10
Chapter 2: Disassembly, Assembly .....	16
2.1 Main Unit.....	16
2.1.1 Touch Panel + Touch Screen Holder.....	16
2.1.2 LCD, AUO 8.4” .....	21
2.1.3 LCD Chassis .....	22
2.1.4 M/B .....	23
2.1.5 EMI A/D Cover .....	24
2.1.6 Speaker Module.....	25
2.1.7 Inverter .....	26
2.1.8 Inverter Cover .....	27
2.1.9 51 I/O Board.....	27
2.1.10 LCD Rear Cover .....	28
2.1.11 I/O Cover .....	28
2.1.12 MSR Module Base+ Power Button.....	28
2.1.13 MSR Reader Module Cover .....	29
2.1.14 52 I/O Board.....	29
2.1.15 Battery Module.....	29
2.1.16 Handheld Belt .....	30
2.2 Cables .....	30
2.2.1 Cable, M/B to Inverter.....	30
2.2.2 Cable, M/B To LCD .....	31
2.2.3 Cable, M/B To LED.....	32
2.2.4 Cable, M/B To I/O Connector .....	33
2.3 Accessories .....	34
2.3.1 MSR.....	34
2.3.2 Smart Card .....	37
2.3.3 Barcode Scanner.....	41
2.3.4 WLAN IEEE.....	44
2.3.5 WLAN Bluetooth .....	45
2.3.6 Compact Flash.....	45
2.3.7 Memory .....	45
Chapter 3 Spare Parts .....	46
3.1 Main Unit.....	47

3.1.1	Explode of Main Unit.....	47
3.1.2	Main Unit Parts List & Quotation.....	47
3.2	Battery Module.....	49
3.2.1	Explode of Battery Module.....	49
3.2.2	Battery Module Parts List & Quotation.....	49
3.3	Recharge Cradle .....	50
3.3.1	Explode of Recharge Cradle .....	50
3.3.2	Recharge Cradle Part List & Quotation .....	50
3.4	Accessories .....	54
3.4.1	Power Cord .....	54
3.4.2	Memory .....	54
3.4.3	Compact Flash.....	55
3.4.4	MSR.....	55
3.4.5	Smart Card .....	55
3.4.6	Barcode Scanner.....	55
3.4.7	OS.....	55
3.4.8	Wireless LAN .....	55

CHAPTER

1

# Troubleshooting

## Chapter 1 Troubleshooting

### 1.1 Symptoms and Solutions

Error Code	Symptom	Check Points	Detail Steps
3200	NO BOOT with Power On	1. Battery 2. RAM 3. MB	<ol style="list-style-type: none"> <li>1. Check LED Light (Upper Left) should be on</li> <li>2. If yes to item 1, check if Battery is well plugged on the battery module</li> <li>3. If yes to item 2, replace with another Battery for testing</li> <li>4. If still fail, remove battery module/ remove MSR module base/ I/O Cover, open rear cover, open EMI chassis, remove inverter cable on M/B (CN1), check if RAM well plugged on the memory slot</li> <li>5. Check golden finger cleanness, if not clean, use pencil eraser to clean golden finger</li> <li>6. If fail, replace with another RAM for testing</li> <li>7. If fail, replace with another mother board for testing</li> <li>8. If fail, RMA system to manufacturer</li> </ol>
3100	NO POWER	1. Recharge cradle 2. Battery 3. Power button cable 4. 52 I/O board 5. M/B to I/O connector cable 6. MB	<ol style="list-style-type: none"> <li>1. Check if main unit is well plugged or not( The LED at right hand side will show orange/ green color if it is plugged correctly)</li> <li>2. If the LED is on, check if Battery is well plugged on the battery module</li> <li>3. If yes to item 2, push the power button to see if the LED light is on(Upper left)</li> <li>4. If the LED light is not on, check if power button cable is well plugged or not</li> <li>5. If yes to item 4, replace with another power button cable</li> <li>6. If fail, check if 52 I/O board is well plugged or not</li> <li>7. If yes to item 6, replace with another 52 I/O board</li> <li>8. If still fail, check if M/B to I/O cable if well plugged or not( MB CN32 and CN13)</li> <li>9. If yes to item 8, replace with another I/O cable</li> <li>10. If fail, replace with another mother board for testing</li> <li>11. If still fail, RMA system to manufacturer</li> </ol>

Error Code	Symptom	Check Points	Detail Steps
3201	System HANG Up	1. CF 2. RAM 3. MB	1. Shut Down Power, remove battery module/ remove MSR module base/ I/O Cover, open rear cover, check if CF is well plugged or not 2. If yes to item 1, open EMI chassis, remove inverter cable on M/B (CN1), check if check if RAM well plugged on the memory slot 2. Check golden finger cleanness, if not clean, use pencil eraser to clean golden finger 3. If fail, replace with another RAM for testing 4. If fail, replace with another MB for testing 5. If fail, System RMA to manufacturer
3300	LCD Blank	1. Inverter 2. MB 3. M/B to LCD cable	1. Shut Down Power, remove battery module/ remove MSR module base/ I/O Cover, open rear cover, open inverter cover, replace with another inverter for testing 2. If fail, check if LCD signal cable well connected on MB(CN2) 3. If yes to item 2, replace with another MB for testing 4. If fail, replace with another LCD signal cable for testing 5. If fail, System RMA to manufacturer
3301	LCD Turn Black	1. Inverter 2. Inverter Cable 3. MB 4. M/B to LCD cable 5. LCD	1. Shut Down Power, remove battery module/ remove MSR module base/ I/O Cover, open rear cover, open inverter cover, check if inverter to LCD cable is well plugged or not. 2. If yes to item 1, replace with another inverter for testing 2. If fail, is, remove EMI cover, check if inverter cable well connected between MB(CN1) and inverter 3. If yes, replace with another inverter cable for testing 4. If fail, check if LCD signal cable well connected on MB(CN2) 5. If yes, replace with another MB for testing 6. If fail, replace with another LCD signal cable for testing 8. If fail, replace another LCD for testing 9. If fail, System RMA to manufacturer

Error Code	Symptom	Check Points	Detail Steps
3601	Unable to detect CF / Unstable CF	1. CF Card 2. CF Slot 3. MB	1. Shut Down Power, remove battery module/ remove MSR module base/ I/O Cover, open rear cover, open EMI chassis, remove inverter cable on M/B (CN1), 3. Check if CF Card well connected with CF Slot 4. If yes to item 3, remove CF card, check if pins on CF slot located at the correct position 5. If CF slot is damaged, go to item 7; if CF slot is not damaged go to item 6 6. If yes to item 4, replace with another CF card for testing 7. If fail, replace with MB for testing 8 If fail, system RMA to manufacturer
3602	Data Can't read and write	1. CF 2. MB	1. Shut Down Power, remove battery module/ remove MSR module base/ I/O Cover, open rear cover, open EMI chassis, remove inverter cable on M/B (CN1), check if CF Card well connected with CF Slot 2. If yes to item 2, replace with another CF card for testing 3. If fail, replace with MB for testing 4 If fail, system RMA to manufacturer
3500	CMOS checksum error	1. MB	1. Shut Down Power, remove battery module/ remove MSR module base/ I/O Cover, open rear cover, open EMI chassis, remove inverter cable on M/B (CN1), replace with another MB for testing 2. If fail, system RMA to manufacturer
3400	Touch malfunction	1. Driver (NA) 2. Touch to.MB cable 3. MB 4. Touch panel	1. Reinstall touch driver 2. If fail, shut down power, remove battery module/ remove MSR module base/ I/O Cover, open rear cover, open EMI chassis, remove inverter cable on M/B (CN1), check if touch panel cable well connected with MB 3. If yes to item 2, replace with another MB for testing 4. If fail, replace with another touch panel for testing 5. If fail, RMA system to manufacturer



Error Code	Symptom	Check Points	Detail Steps
3700	Boot Up, USB K/B Malfunction	1. USB Keyboard 3. MB	<p>1. Check if USB keyboard cable well connected with USB port</p> <p>2. If yes to item 2, replace with another keyboard(same model) for testing</p> <p>3. If fail, replace with another keyboard(other model) for testing</p> <p>4. If fail, shut down power, remove battery module/ remove MSR module base/ I/O Cover, open rear cover, open EMI chassis, remove inverter cable on M/B (CN1), replace with another MB for testing.</p> <p>7. If fail, system RMA to manufacturer</p>
3701	MSR Malfunction	1. MSR to 52 I/O board Cable 2. MSR 3. MB	<p>1. Shut down power, remove battery module, check if MSR cable well connected with 52 I/O Board</p> <p>2. If yes to item 2, replace with another MSR for testing</p> <p>3. If fail, open rear cover, open EMI chassis, remove inverter cable on M/B (CN1), replace with another MB for testing</p> <p>4. If fail, RMA MSR to manufacturer</p>
3703	USB Device Malfunction	1. Device USB cable 3. MB	<p>1. Check if USB keyboard cable well connected with USB port</p> <p>2. If yes to item 2, replace with another keyboard(same model) for testing</p> <p>3. If fail, replace with another keyboard(other model) for testing</p> <p>4. If fail, shut down power, remove battery module/ remove MSR module base/ I/O Cover, open rear cover, open EMI chassis, remove inverter cable on M/B (CN1), replace with another MB for testing.</p> <p>7. If fail, system RMA to manufacturer</p>

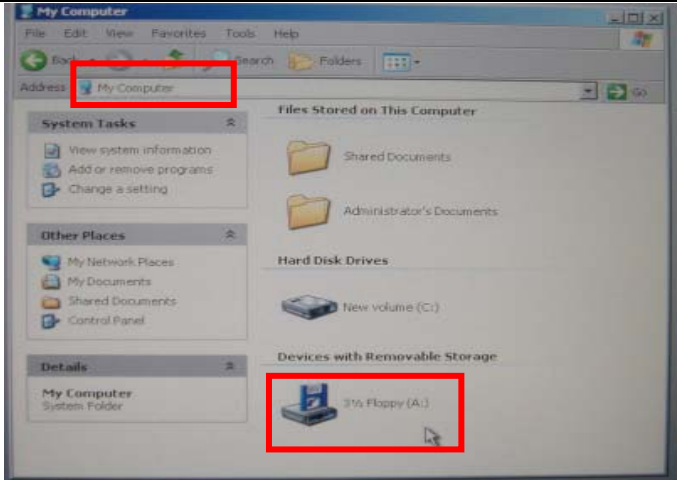
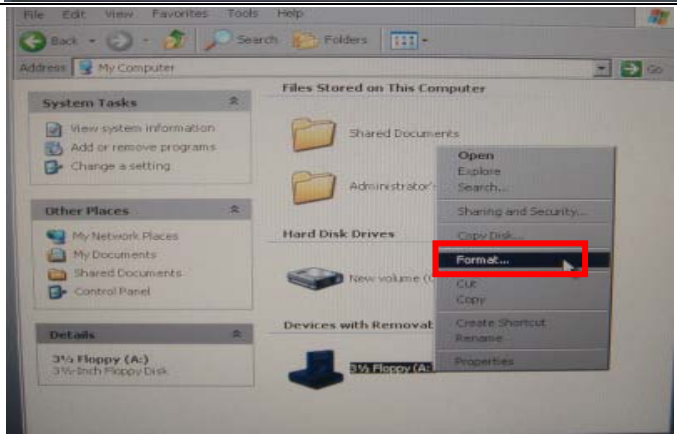
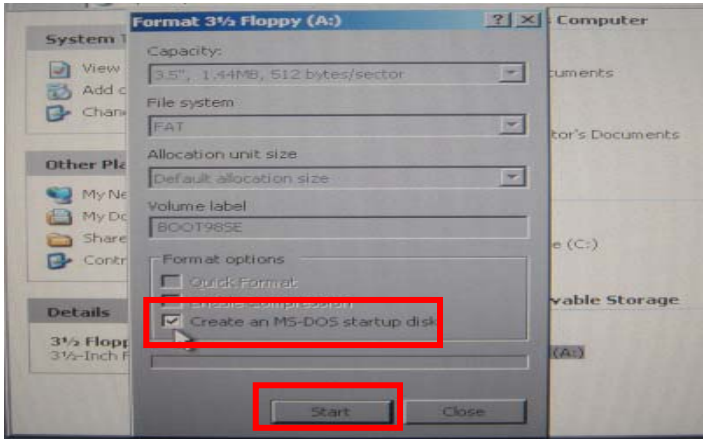
## 1.2 BIOS Upgrade

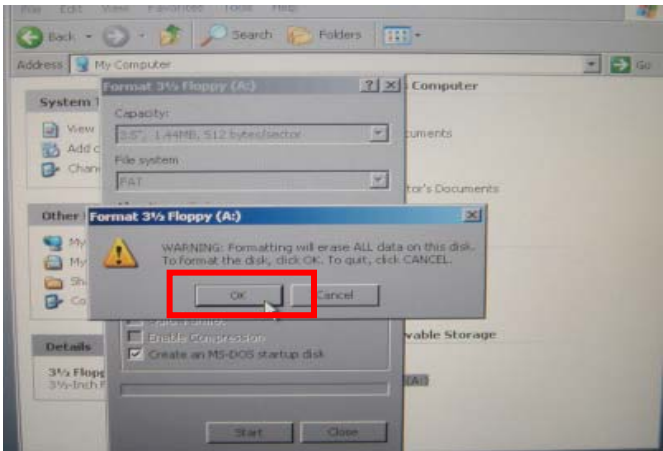
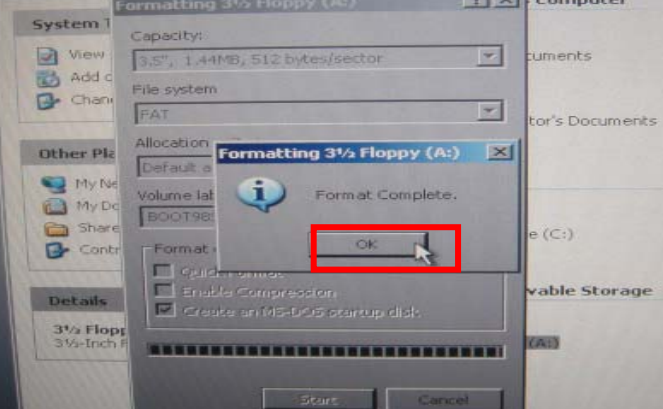
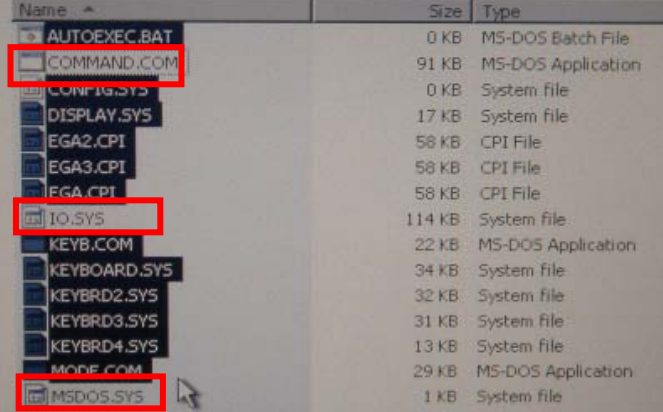
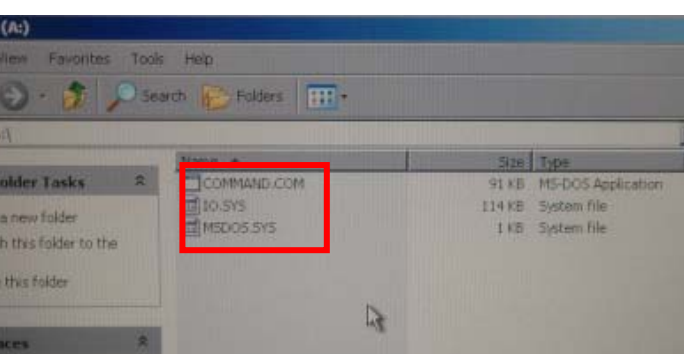
### 1.2.1 Equipment List:

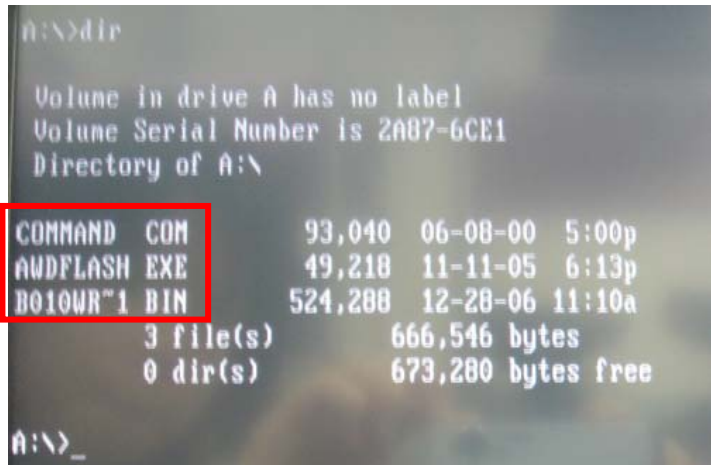
- USB Floppy Disk\* 1 set
- Keyboard\* 1 set,
- 1.44MB Floppy Boot up Disk\*1
- BIOS file

### 1.2.2 Upgrade Process

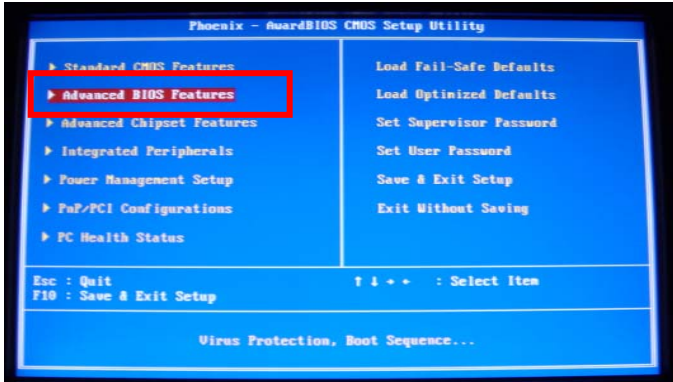
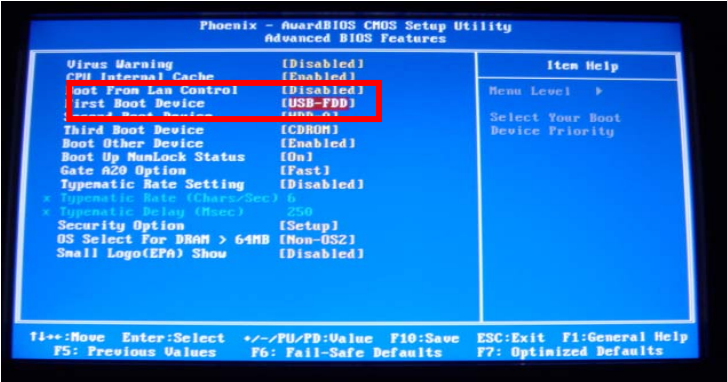
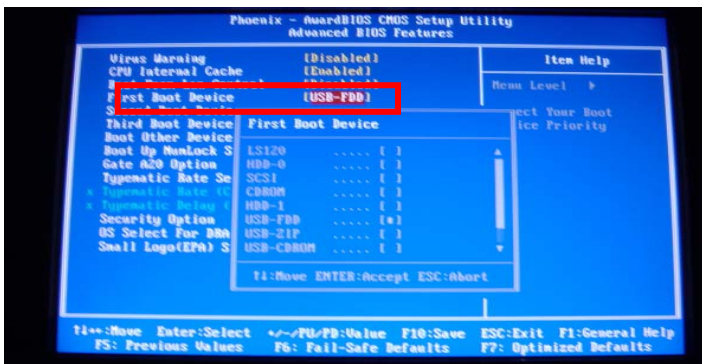
Make a start up disk and copy BIOS and EXE file

Item	Photo	Description
1		<ol style="list-style-type: none"><li>1. Put empty 1.44MB disk into USB floppy disk</li><li>2. Plug the disk into another computer with XP OS installed</li><li>3. Click "My Computer". The new device "Floppy A" will show on the screen</li></ol>
2		<ol style="list-style-type: none"><li>1. Right click floppy disk and select "Format"</li></ol>
3		<ol style="list-style-type: none"><li>1. Click "Create an MS-DOS startup disk"</li><li>2. Click "Start"</li></ol>

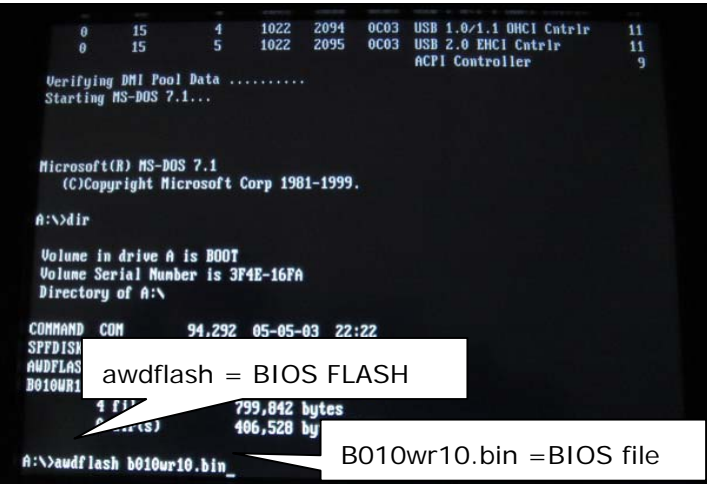
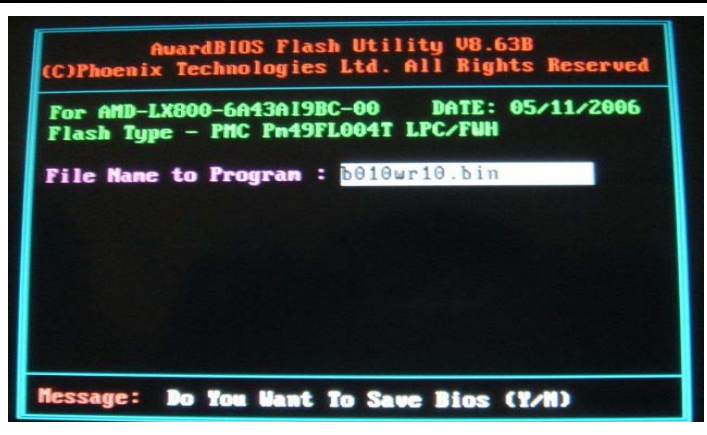
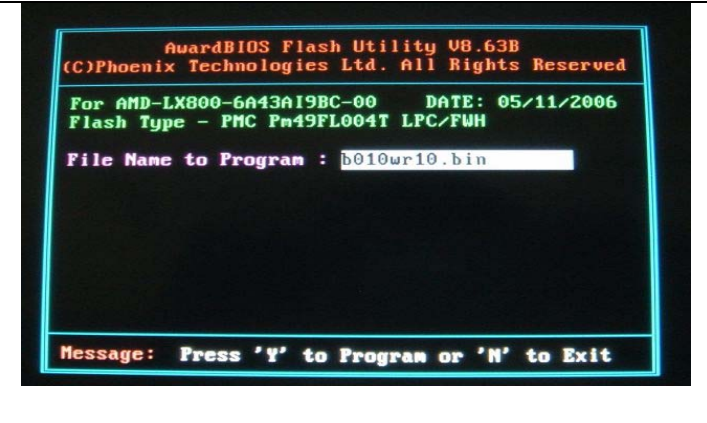

Item	Photo	Description
4		<p>1. Click "OK"</p>
5		<p>1. Click "OK". 2. The start up disk is created</p>
6		<p>1. Check the files in floppy disk 2. Leave 3 files in the floppy disk, delete the rest files highlighted.</p>
7		<p>1. Only 3 files left in the floppy disk - "COMMAND.COM" - "IO SYS" (hidden file) - "MSD OS.SYS" (hidden file) 2. Copy BIOS file and EXE. File into floppy disk</p>

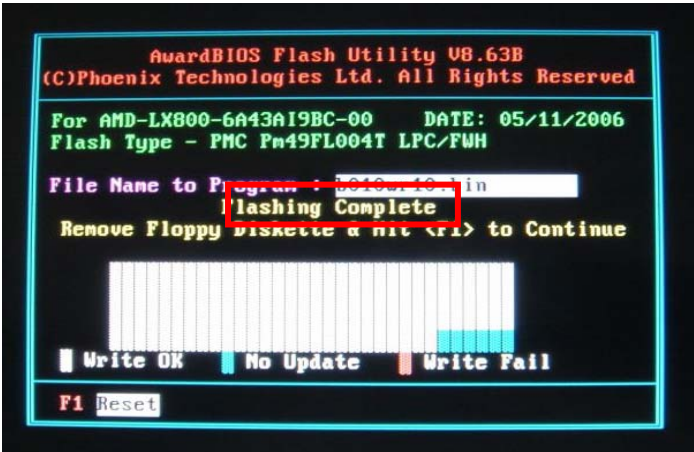
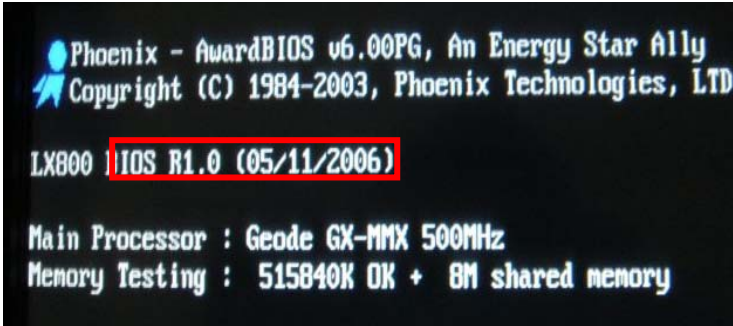
Item	Photo	Description
8		<ol style="list-style-type: none"> <li>1. Plug the floppy disk into Mobile POS</li> <li>2. Power on the computer</li> <li>3. Ensure that 3 files show on the screen <ul style="list-style-type: none"> <li>-Command.COM</li> <li>-AWDFLASH.EXE</li> <li>-BIOS file(Ex: B010R~1 Bin)</li> </ul> </li> </ol>

#### Update BIOS file

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>4. Reboot Mobile POS 50</li> <li>5. Press “Del” button</li> <li>6. Choose “Advanced BIOS Features”</li> <li>7. Press “Enter” Key</li> </ol>
2		<ol style="list-style-type: none"> <li>1. Choose “First Boot Device”.</li> <li>2. Press “Enter” Key</li> </ol>
3		<ol style="list-style-type: none"> <li>1. Select “USB-FDD”.</li> <li>2. Press “Enter” Key</li> <li>3. Press “F10”.</li> <li>4. Press “Enter” key to save the file</li> </ol>



Item	Photo	Description
4		1. Key in BIOS Utility and BIOS Version needs to be updated. Ex: “awdflash b010wr10.bin”
5		1. Press “N”. Press “Enter” Key
6		1. Press “Y”. Press “Enter” Key
7		Note: DO NOT TURN OFF or RESET SYSTEM Until the BIOS update is completed. Stopping the BIOS update before it is completed will cause the system to become non-functional.

Item	Photo	Description
8	 <p>The screenshot shows the AwardBIOS Flash Utility V8.63B interface. It displays the date 05/11/2006 and the flash type PMC Pn49FL004T LPC/FWH. The file name to program is BIOS.R1.0.in. The status 'Flashing Complete' is highlighted with a red box. Below the status bar, there are indicators for 'Write OK', 'No Update', and 'Write Fail'. At the bottom, there is a red box around 'F1 Reset'.</p>	<ol style="list-style-type: none"> <li>1. Wait till the screen shows "Flashing Complete".</li> <li>2. Press "F1" to reset</li> </ol>
9	 <p>The screenshot shows the Phoenix - AwardBIOS v6.00PG interface. It displays the date 05/11/2006 and the BIOS version R1.0. The status 'BIOS R1.0 (05/11/2006)' is highlighted with a red box. Below the status bar, there are indicators for 'Main Processor : Geode GX-MMX 500MHz' and 'Memory Testing : 515840K OK + 8M shared memory'.</p>	<ol style="list-style-type: none"> <li>1. Double check the BIOS version is updated when the system resets.</li> </ol> <p>Note:</p> <p>The BIOS contained here is exclusively for manufacturer MPOS 50 Series only. manufacturer has no responsibility for any damages resulting from improper use or lacking of technical expertise at field side</p>

CHAPTER

2





Chapter 2

# Disassembly, Assembly

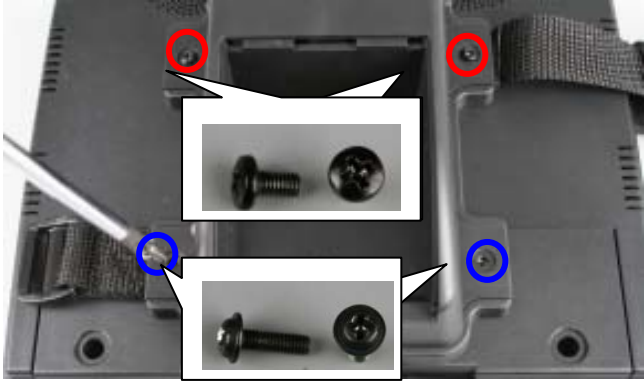
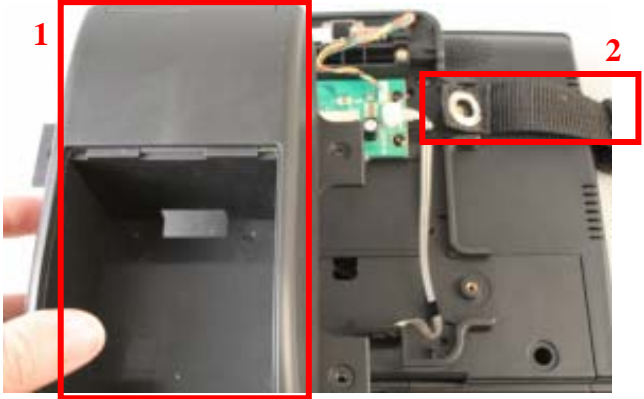

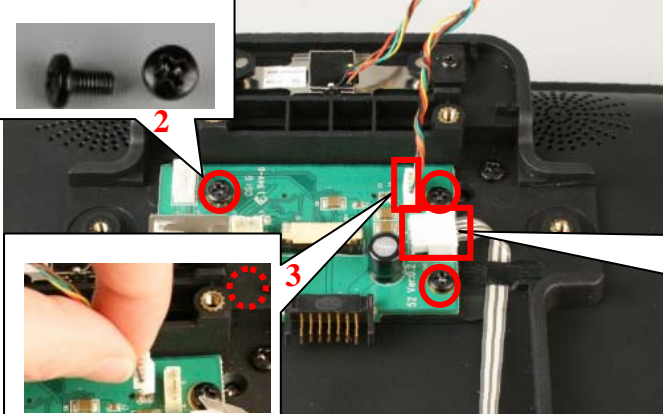
## Chapter 2 Disassembly, Assembly

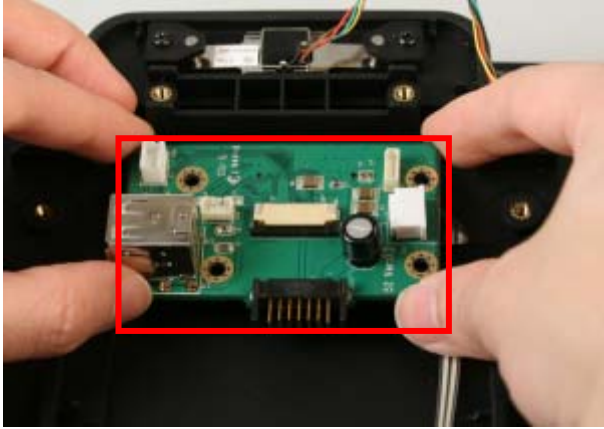
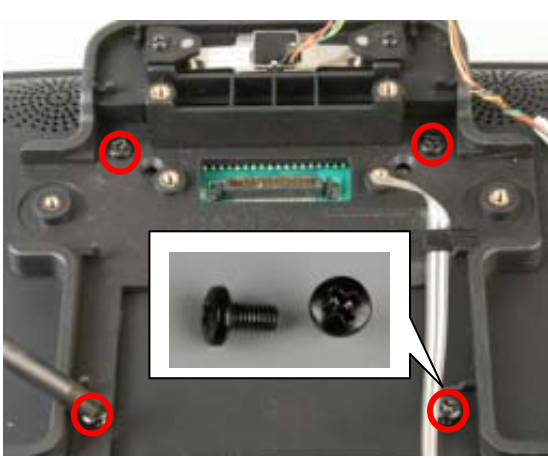


### 2.1 Main Unit

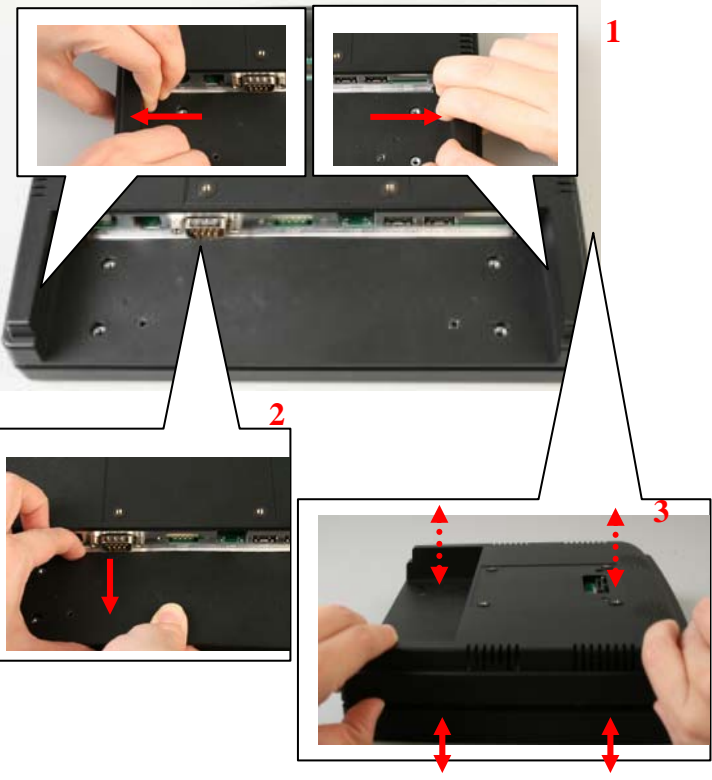
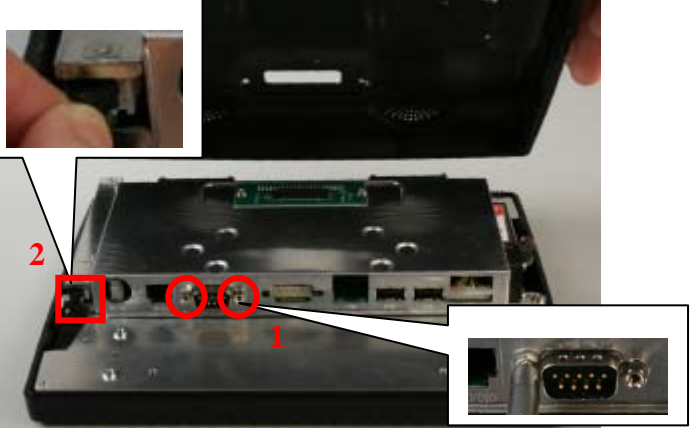
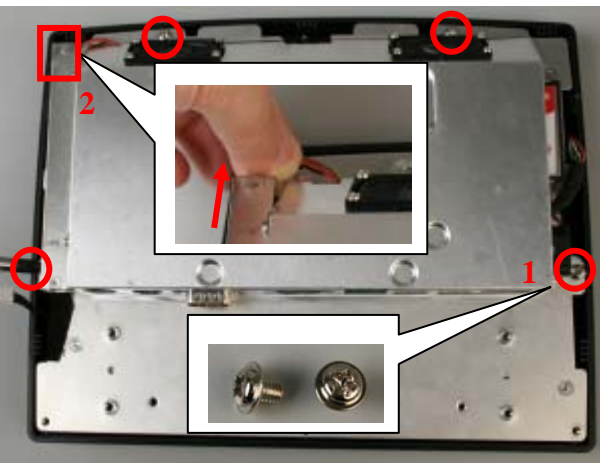
#### 2.1.1 Touch Panel + Touch Screen Holder


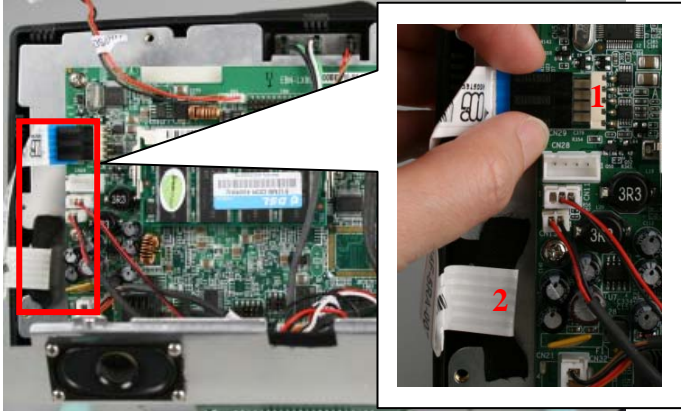


Item	Photo	Description
1		1. Unpack handheld belt
2		1. Remove 2 screw pad 2. Remove 2 screws from I/O cover
3		1. Move the clicker to right and push up
4		1. Remove battery from battery module



Item	Photo	Description
5		<p>1. Remove 4 screws from MSR reader module cover</p>
6		<p>1. Remove MSR reader module cover 2. Remove handheld belt</p>
7		<p>1. Remove I/O cover</p>
8		<p>1. Remove power button cable 2. Remove 4 screws from I/O board 3. Remove MSR cable if needed</p>

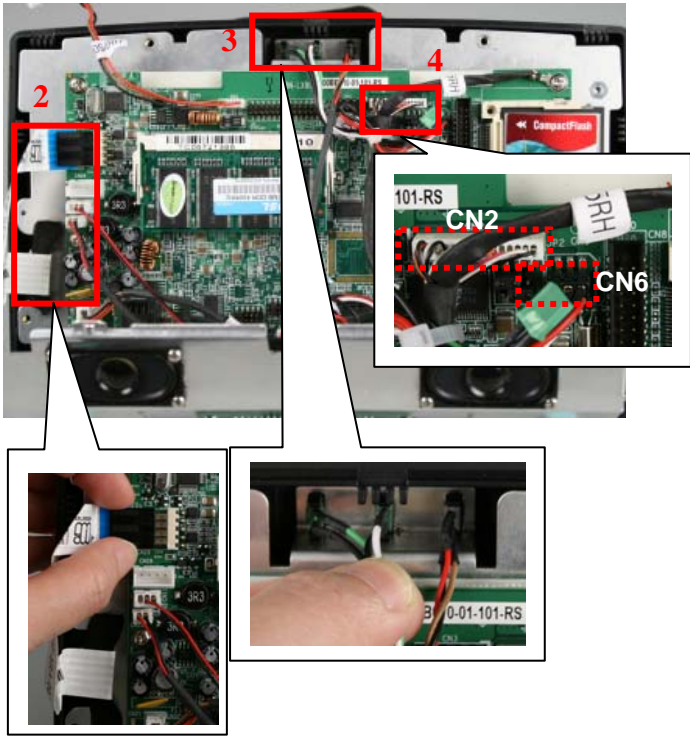
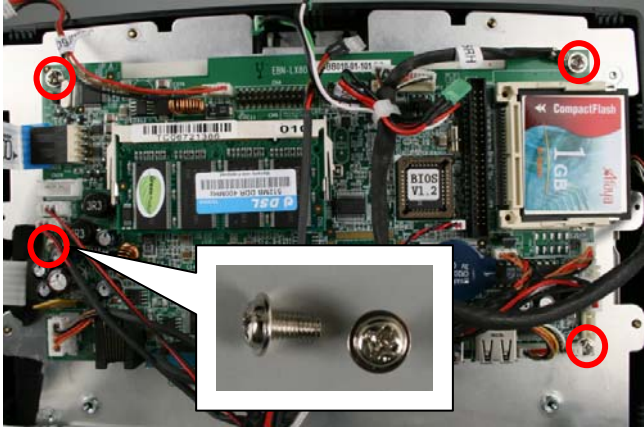
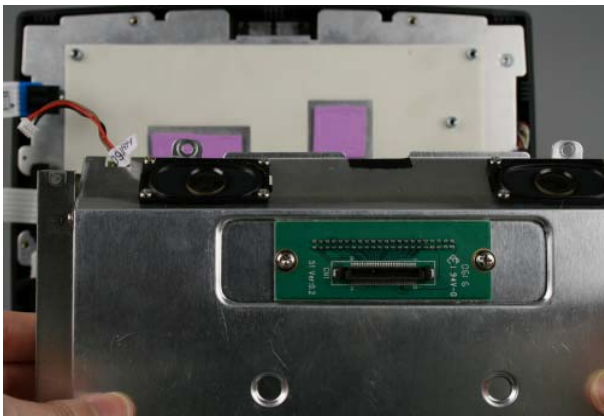
Item	Photo	Description
9		<p>1. Remove I/O board from MSR module base</p>
10		<p>1. Remove 4 screws from MSR module base</p>
11		<p>1. Remove MSR module base</p>
12		<p>1. Remove 4 screws from LCD rear cover</p> <p>2. Be aware of different screw length. The misplace of the screw will cause the LCD broken</p>

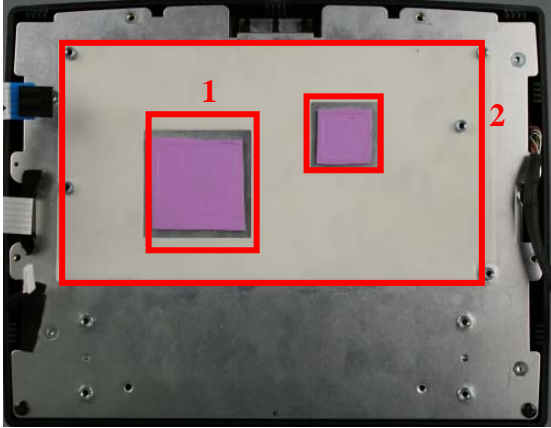
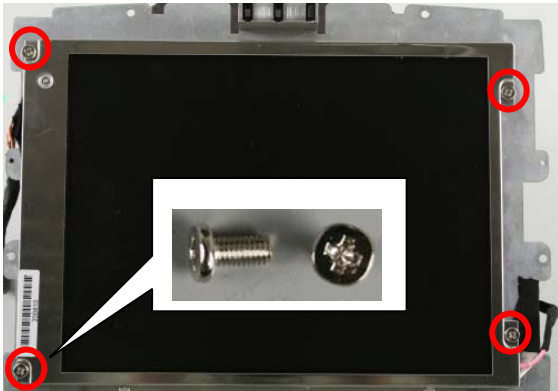
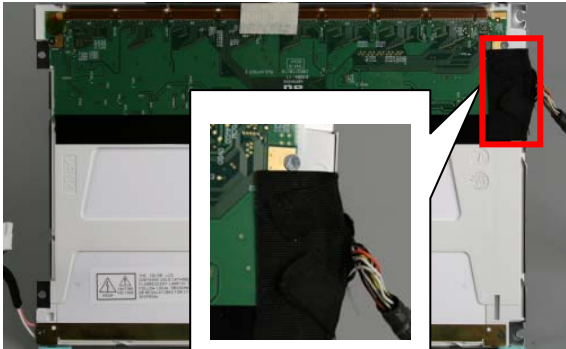
Item	Photo	Description
13		<ol style="list-style-type: none"> <li>1. Push out the LCD rear cover to loose clicker</li> <li>2. Push down the LCD rear cover to enable COM port go underneath the cover</li> <li>3. Push up the LCD rear cover to loose clicker</li> </ol>
14		<ol style="list-style-type: none"> <li>1. Remove 2 hex nuts from COM port</li> <li>2. Remove cable (inverter to LCD)</li> </ol>
15		<ol style="list-style-type: none"> <li>1. Remove 4 screws from EMI cover</li> <li>2. Remove cable( inverter to M/B)</li> </ol>

Item	Photo	Description
16		1. Push up the EMI cover
17		1. Remove touch panel cable 2. Pull up the black tape
18		1. Remove the LCD module / M/B and EMI cover from touch panel module
19		1. Replace with another touch panel module

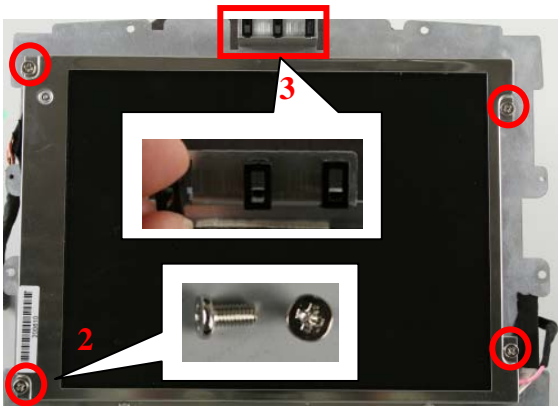



## 2.1.2 LCD, AUO 8.4"

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 16</li> <li>2. Remove cable (touch panel to M/B )(CN29) and pull up the black tape</li> <li>3. Pull out LED cable from LED frames</li> <li>4. Remove cables (LCD to M/B) (CN2) and (LED to M/B)(CN6)</li> </ol>
2		<ol style="list-style-type: none"> <li>1. Remove 4 screws from M/B</li> </ol>
3		<ol style="list-style-type: none"> <li>1. Remove M/B and EMI chassis</li> </ol>

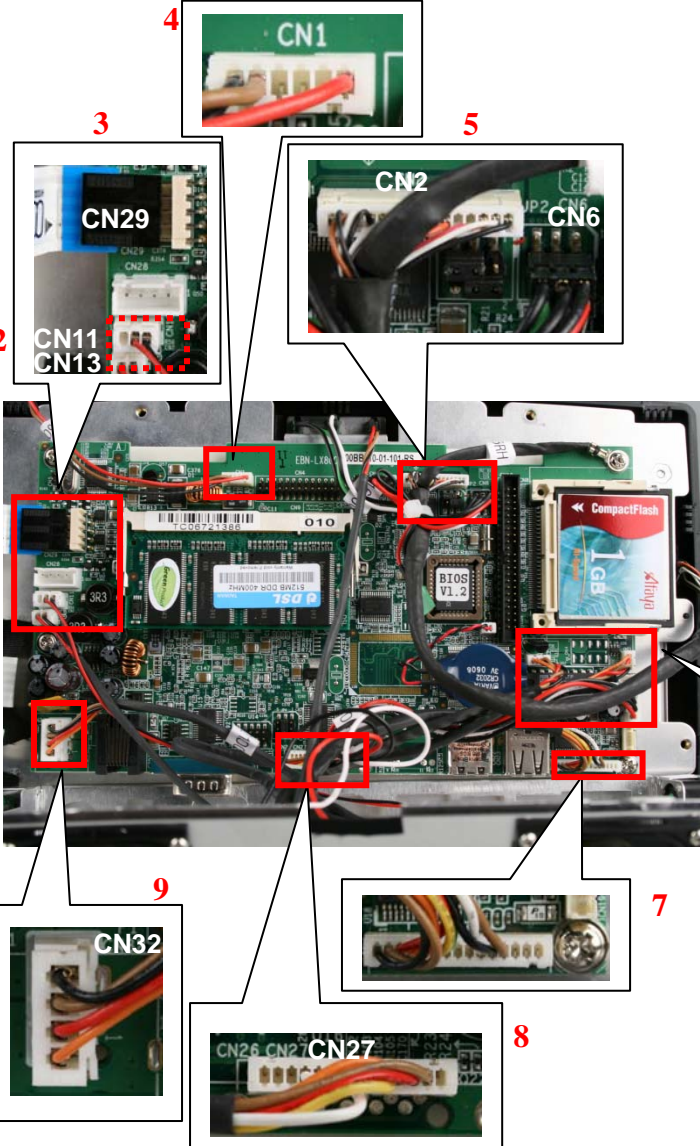
Item	Photo	Description
4	 A photograph of the back of an LCD chassis. Two purple heat pads are visible, each enclosed in a red rectangular box. The number '1' is placed above the left pad, and the number '2' is placed to the right of the right pad.	<ol style="list-style-type: none"> <li>1. Remove 2 heat pads</li> <li>2. Remove mylar from M/B</li> </ol>
5	 A photograph of the front of an LCD chassis. Four screws are circled in red, one at each corner. An inset image shows a close-up of two screws, with a white arrow pointing from the bottom-left corner screw to the inset.	<ol style="list-style-type: none"> <li>1. Turn to front side. Remove 4 screws from LCD chassis</li> </ol>
6	 A photograph of the LCD cable being disconnected from the chassis. A red rectangular box highlights the cable connector. An inset image shows the cable being pulled away from the chassis, with a white arrow pointing from the box to the inset.	<ol style="list-style-type: none"> <li>1. Remove LCD cable</li> <li>2. Replace with another LCD</li> </ol>

### 2.1.3 LCD Chassis

Item	Photo	Description
1	 A photograph of the front of an LCD chassis. Three LED frames are visible, each enclosed in a red rectangular box. The number '1' is placed above the top frame, the number '2' is placed to the left of the bottom-left frame, and the number '3' is placed to the right of the top frame. An inset image shows a close-up of the three LED frames, with a white arrow pointing from the top frame to the inset.	<ol style="list-style-type: none"> <li>1. Follow 2.1.2 item 1 to 4</li> <li>2. Remove 4 screws on LCD</li> <li>3. Pull out 3 LED frames from LCD chassis</li> </ol>

Item	Photo	Description
2		1. Replace with another LCD chassis

#### 2.1.4 M/B

Item	Photo	Description
1	 <p>4</p> <p>3</p> <p>2</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>CN1</p> <p>CN2</p> <p>CN6</p> <p>CN29</p> <p>CN11</p> <p>CN13</p> <p>CN32</p> <p>CN27</p> <p>CN17</p>	<ol style="list-style-type: none"> <li>Follow 2.1.1 item 1 to 16</li> <li>Remove fan cable(CN11) and switch cable(CN13)</li> <li>Remove touch panel cable(CN29) and pull up the black tape</li> <li>Remove cable (inverter to M/B)(CN1)</li> <li>Remove LCD cable(CN2) and LED cable (CN6)</li> <li>Remove USB cable *2 and audio cable(CN17)</li> <li>Remove COM 3 cable</li> <li>Remove COM2 cable(CN27)</li> <li>Remove power cable(CN32)</li> </ol>

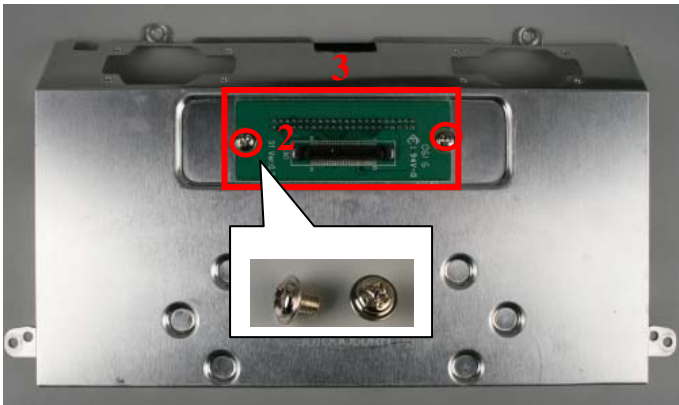


Item	Photo	Description
2		<ol style="list-style-type: none"> <li>1. Remove 4 screws</li> <li>2. Remove RAM from M/B(CN9)</li> <li>3. Remove CF from M/B(CN8)</li> <li>4. Replace with another M/B</li> </ol>

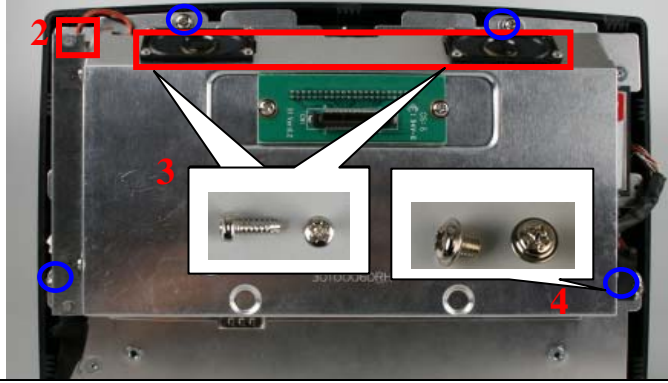
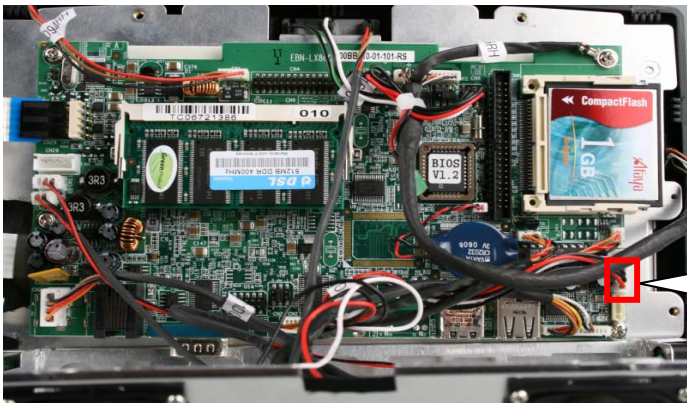
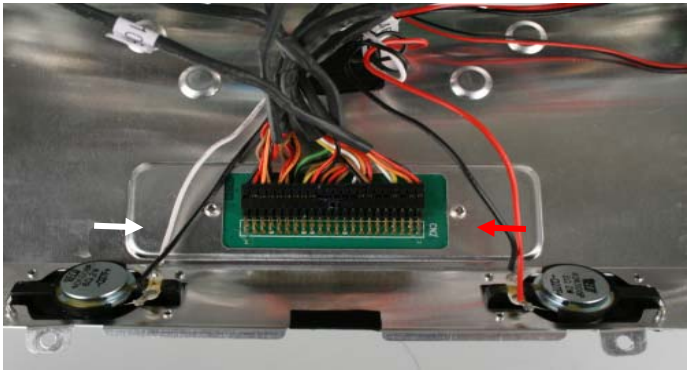
### 2.1.5 EMI A/D Cover

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 14</li> <li>2. Remove 4 screws</li> <li>3. Remove inverter cable</li> <li>4. Remove 8 screws from speaker</li> </ol>
2		<ol style="list-style-type: none"> <li>1. Remove 2 screws from inverter cover</li> <li>2. Remove inverter cover</li> </ol>
3		<ol style="list-style-type: none"> <li>1. Remove I/O cable from I/O board</li> <li>2. Pull out 2 speakers</li> </ol>

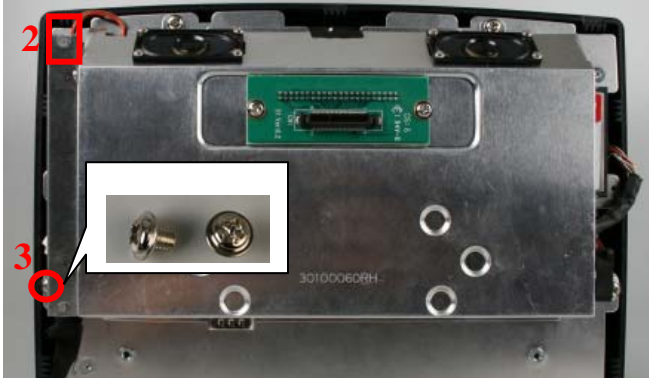

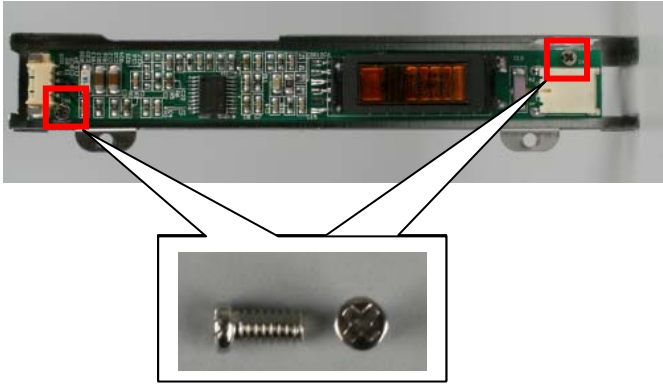



Item	Photo	Description
4		<ol style="list-style-type: none"> <li>1. Remove 2 screws from I/O board</li> <li>2. Remove I/O board from EMI cover</li> <li>3. Replace with another EMI cover</li> </ol>


### 2.1.6 Speaker Module

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 14</li> <li>2. Remove inverter cable</li> <li>3. Remove 8 screws from speaker</li> <li>4. Remove 4 screws</li> <li>5. Open EMI cover</li> </ol>
2		<ol style="list-style-type: none"> <li>1. Remove audio cable(CN17) from M/B</li> </ol>
3		<ol style="list-style-type: none"> <li>1. Replace with another speaker module</li> </ol> <p>Note: The white cable goes to left hand side, while red cable goes to right hand side</p>

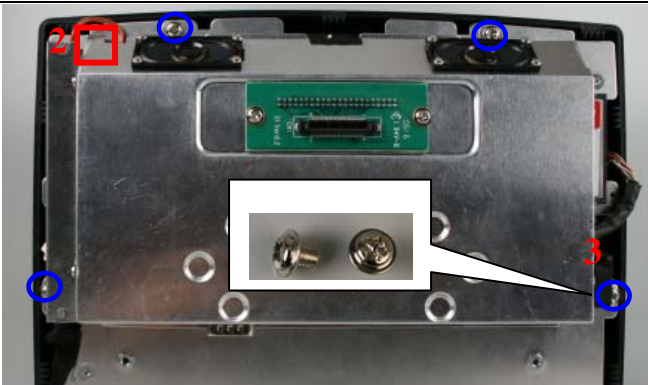
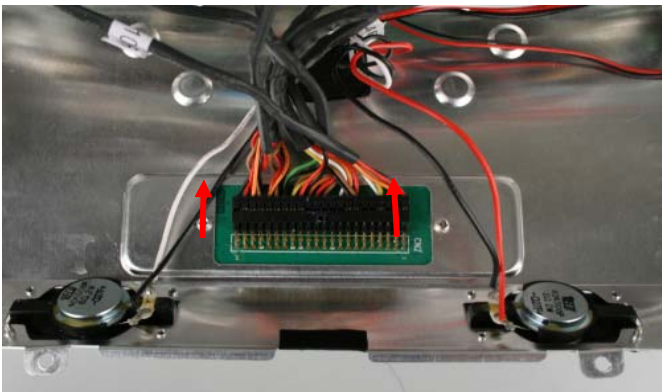
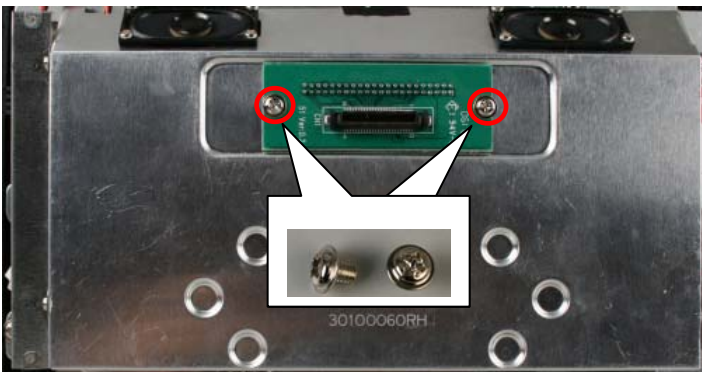
### 2.1.7 Inverter

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow item 2.1.1 item 1 to 14</li> <li>2. Remove inverter cable</li> <li>3. Remove 1 screw from inverter cover</li> </ol>
2		<ol style="list-style-type: none"> <li>1. Remove 2 screws from inverter cover</li> </ol>
3		<ol style="list-style-type: none"> <li>1. Remove 2 screws from inverter</li> </ol>
4		<ol style="list-style-type: none"> <li>1. Replace with another inverter</li> </ol>


### 2.1.8 Inverter Cover

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow item 2.1.7 item 1 to 3</li> <li>2. Replace with another inverter cover</li> </ol>


### 2.1.9 51 I/O Board

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 14</li> <li>2. Remove inverter cable</li> <li>3. Remove 4 screws</li> <li>4. Open EMI cover</li> </ol>
2		<ol style="list-style-type: none"> <li>1. Remove I/O cable from EMI cover</li> </ol>
3		<ol style="list-style-type: none"> <li>1. Turn the EMI cover to the other side</li> <li>2. Remove 2 screws from 51 I/O board</li> <li>3. Replace with another 51 I/O board</li> </ol>

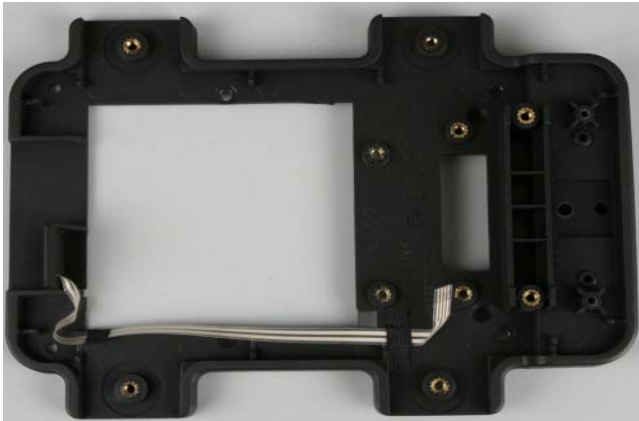
#### 2.1.10 LCD Rear Cover

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 13</li> <li>2. Replace with another LCD rear cover</li> </ol>

#### 2.1.11 I/O Cover



Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 6</li> <li>2. Replace with another I/O Cover</li> </ol>

#### 2.1.12 MSR Module Base+ Power Button

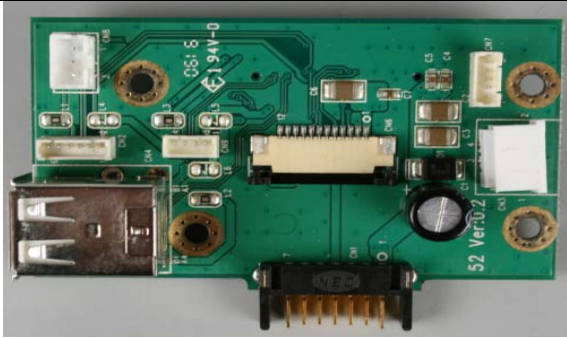
Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 10</li> <li>2. Replace with another MSR module</li> </ol>




### 2.1.13 MSR Reader Module Cover

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 5</li> <li>2. Remove MSR reader module cover</li> </ol>
2		<ol style="list-style-type: none"> <li>1. Replace with another MSR reader module cover</li> </ol>


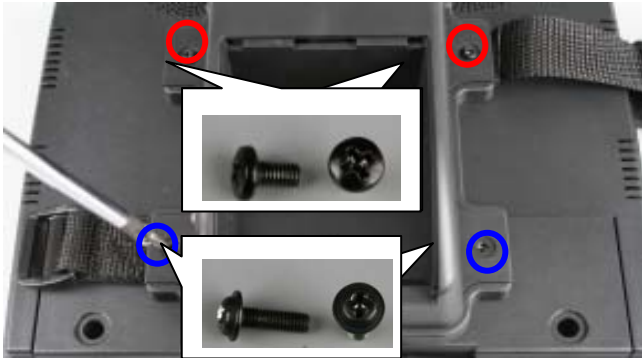

### 2.1.14 52 I/O Board

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>2. Follow 2.1.1 item 1 to 8</li> <li>3. Replace with another 52 I/O Board</li> </ol>

### 2.1.15 Battery Module


Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 3</li> <li>2. Replace with another Battery module</li> </ol>

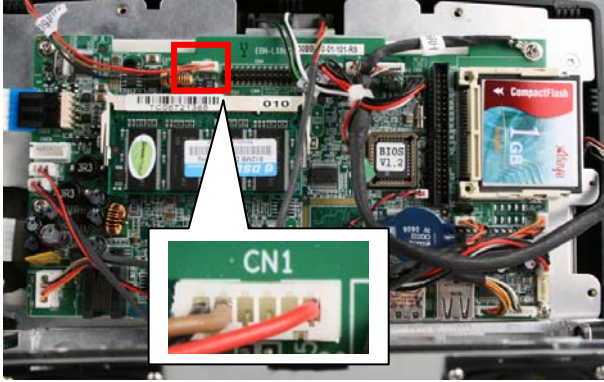

### 2.1.16 Handheld Belt

Item	Photo	Description
1		1. Unpack handheld belt
2		1. Remove 4 screws from MSR reader module cover
3		1. Replace with another handheld belt

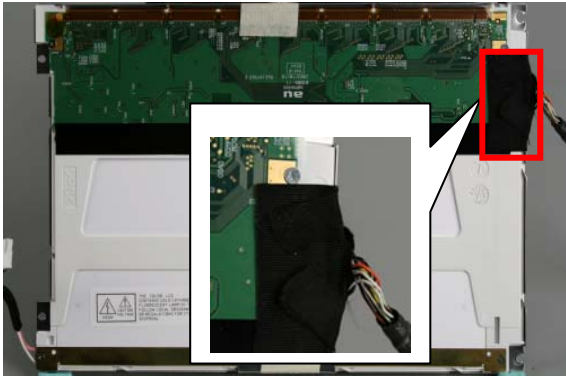

## 2.2 Cables

### 2.2.1 Cable, M/B to Inverter

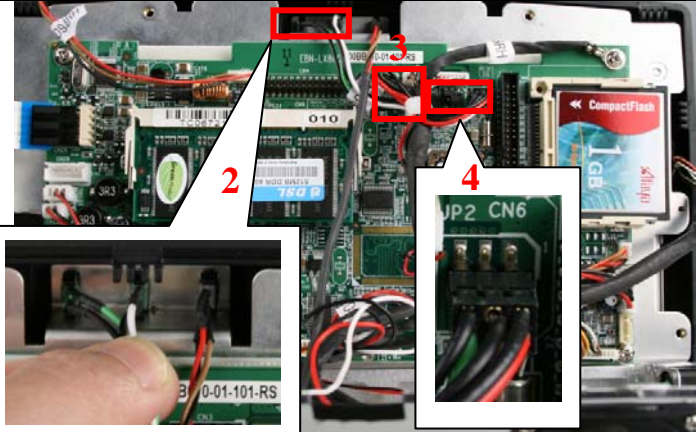

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 15</li> <li>2. Push up the EMI cover</li> </ol>

Item	Photo	Description
2		1. Remove inverter to M/B cable(CN1)
3		1. Replace with another inverter cable

### 2.2.2 Cable, M/B To LCD

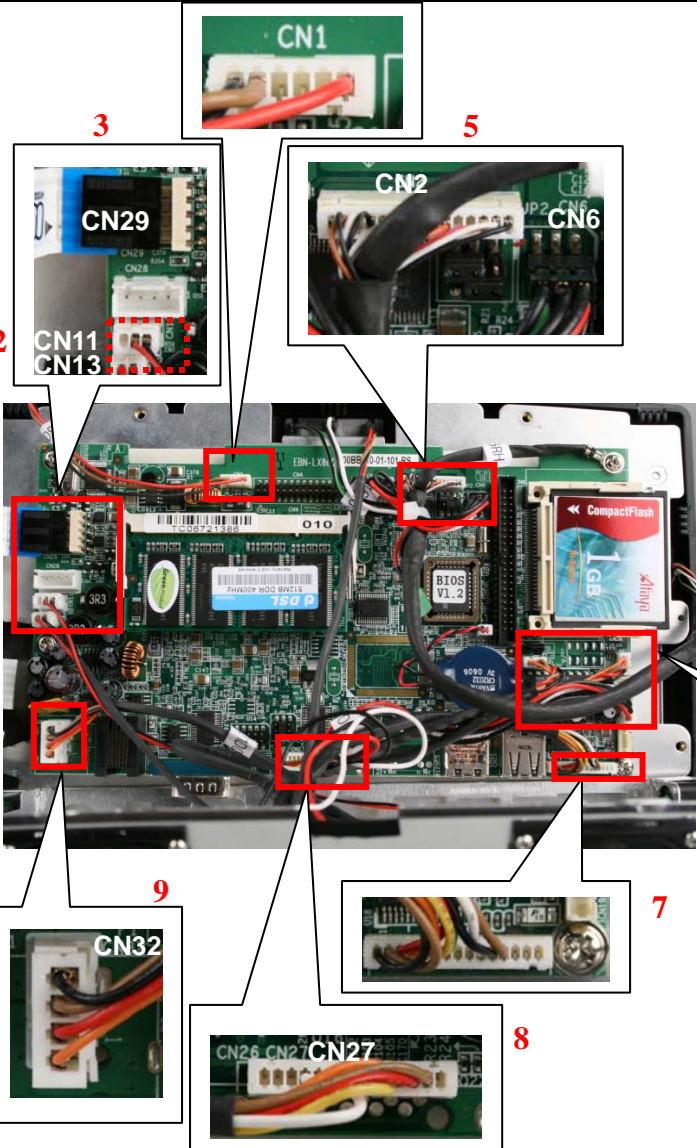

Item	Photo	Description
1		1. Follow 2.1.2 item 1 to 6 2. Remove LCD cable
1		1. Replace with another LCD cable


### 2.2.3 Cable, M/B To LED

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 16</li> <li>2. Pull out the 2 LED from LED frames</li> <li>3. Cut plastic belt (Green at the left / white in the middle)</li> <li>4. Remove LED cable (CN6)</li> </ol>
2		<ol style="list-style-type: none"> <li>1. Replace with another LED cable</li> </ol>




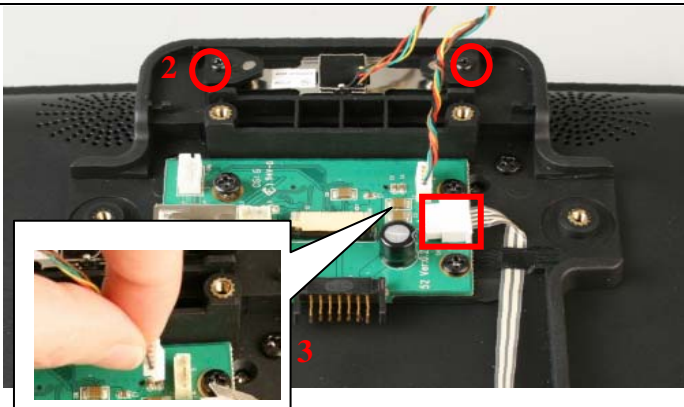
## 2.2.4 Cable, M/B To I/O Connector

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 16</li> <li>2. Remove fan cable(CN11) and switch cable(CN13)</li> <li>3. Remove touch panel cable(CN29) and pull up the black tape</li> <li>4. Remove inverter cable(CN1)</li> <li>5. Remove LCD cable (CN2) and LED cable (CN6)</li> <li>6. Remove USB cable *2 and audio cable(CN17)</li> <li>7. Remove COM 3 cable</li> <li>8. Remove COM2 cable(CN27)</li> <li>9. Remove power cable(CN32)</li> </ol>
2		<ol style="list-style-type: none"> <li>1. Remove the I/O connector cable</li> </ol>

Item	Photo	Description
3		1. Replace with another I/O Connector cable

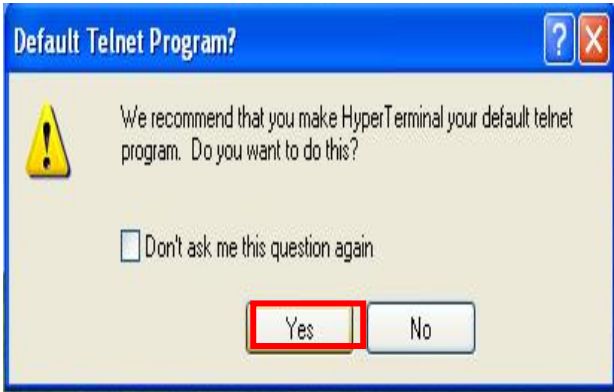
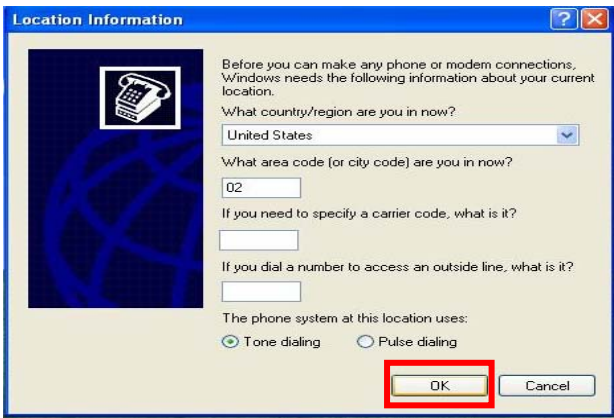
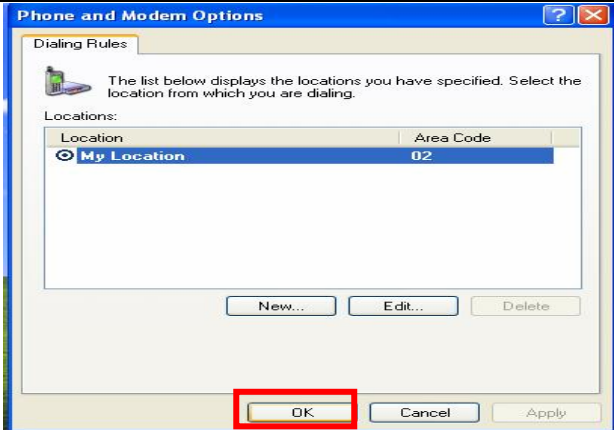

## 2.3 Accessories


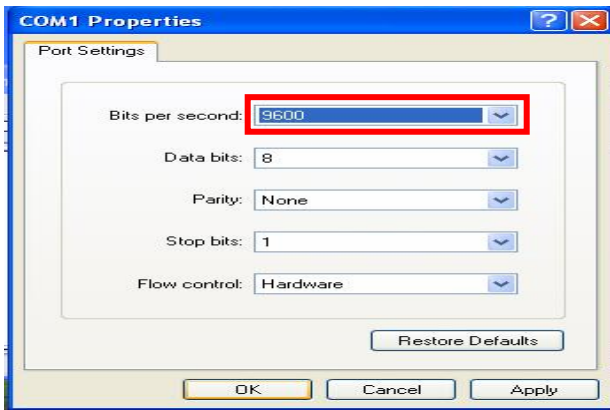
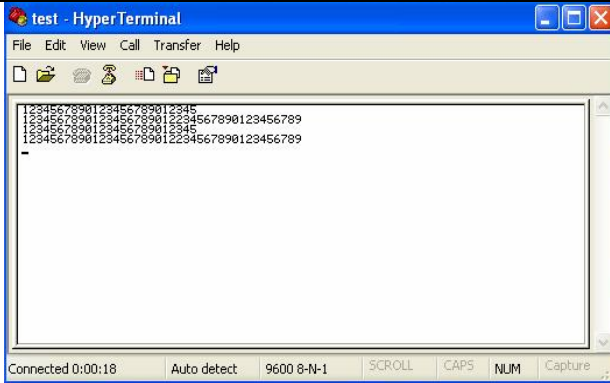
### 2.3.1 MSR

HW Installation		
Item	Photo	Description
1		1. Take out MSR module
2		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 5</li> <li>2. Put MSR module at upper position</li> <li>3. Fasten 2 screws to tighten MSR module</li> <li>4. Plug MSR cable to I/O board</li> <li>5. Follow steps back to 2.1.1 item 1</li> </ol>

### Verification: RS232 type


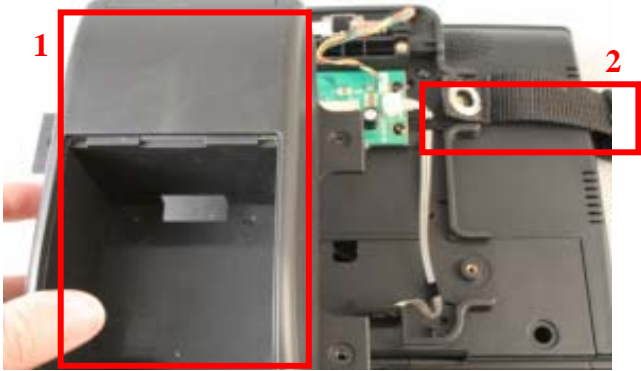
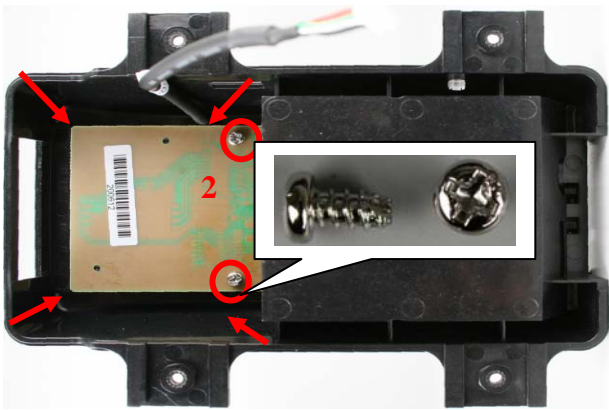
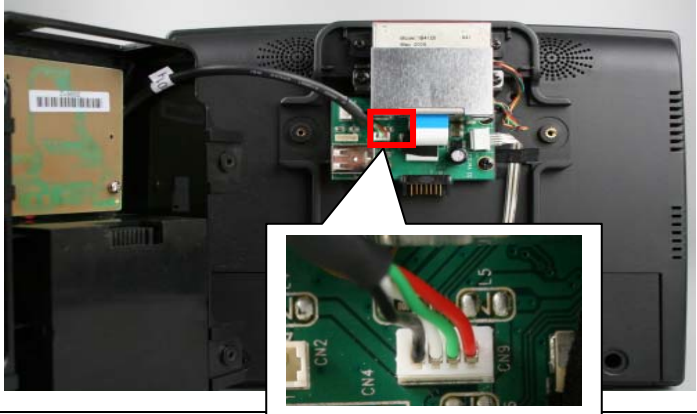
Item No.	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Enter to "All Programs" → "Communication" → "Hyper Terminal"</li> </ol>

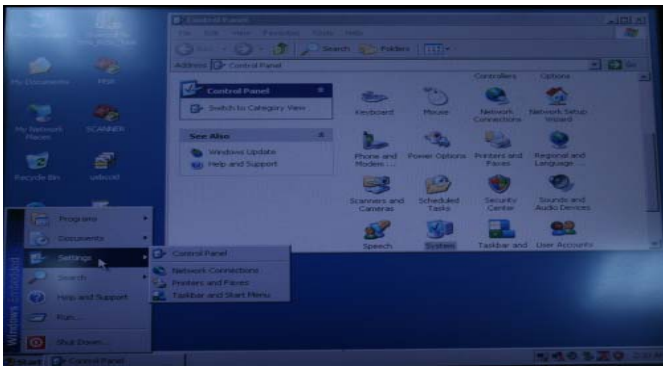
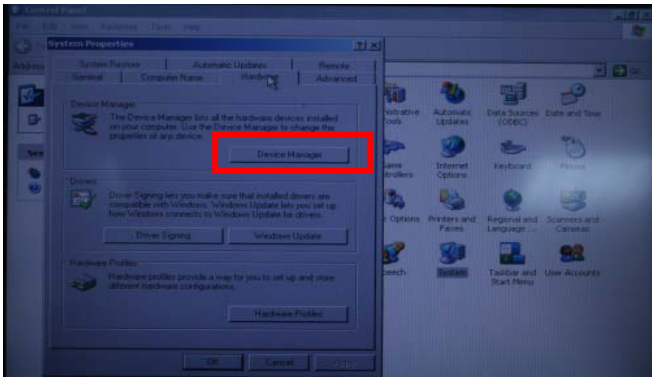
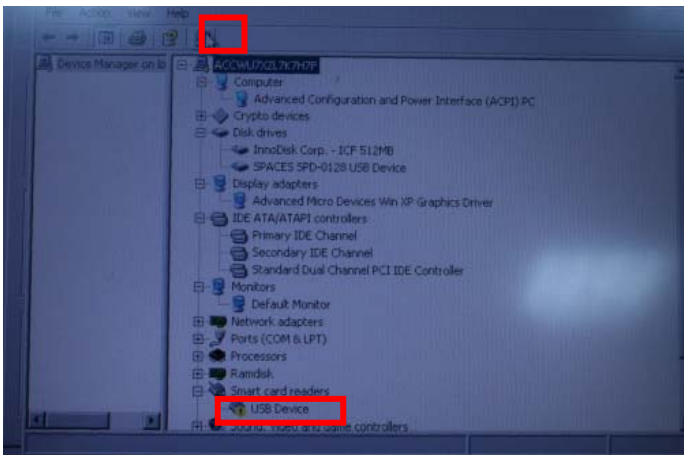
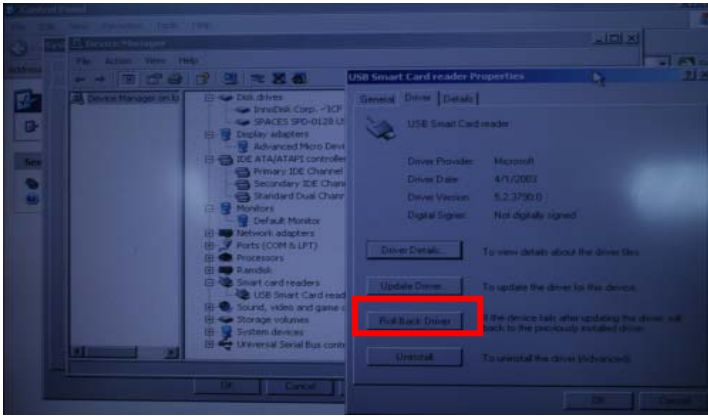
Item No.	Photo	Description
2		1. Click "Yes" to continue
3		1. Set "area code" and click OK
4		1. Click OK
5		1. Enter a name and Click OK

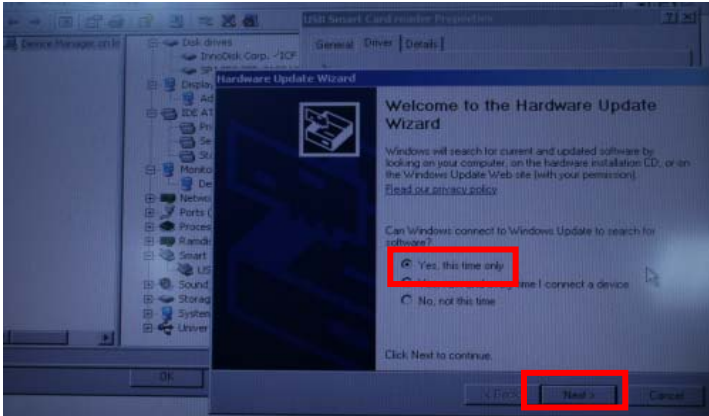
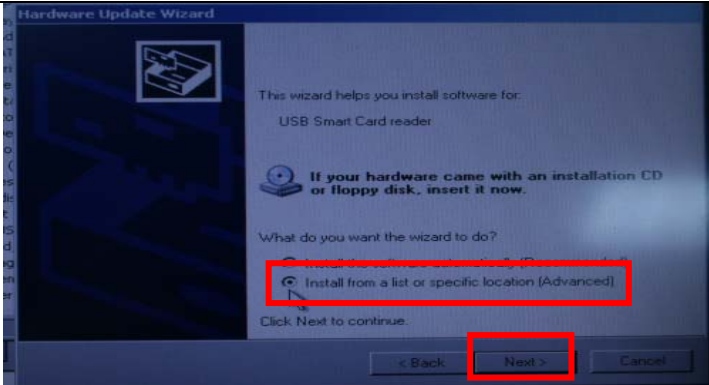
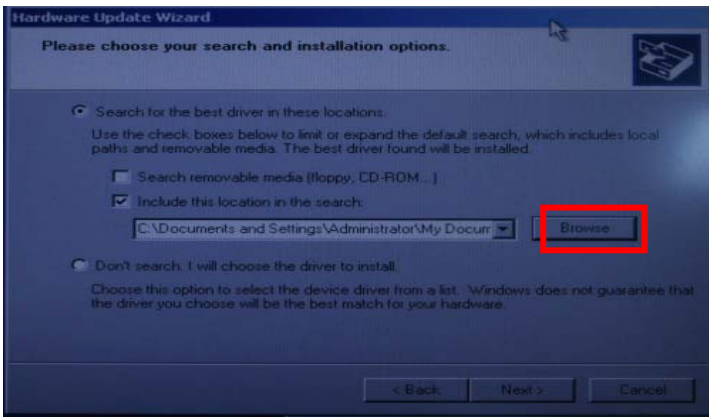
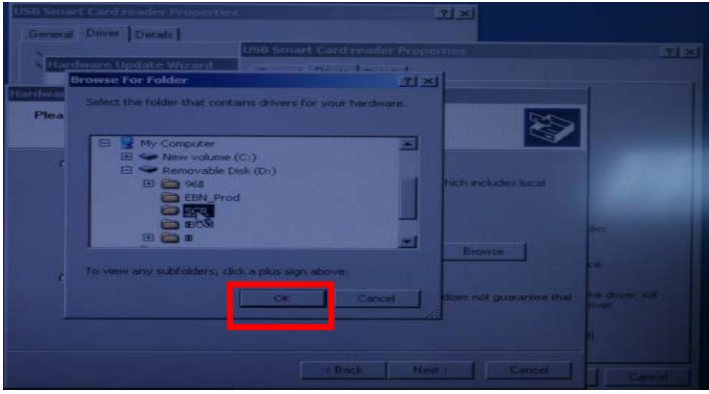
Item No.	Photo	Description
6		<ol style="list-style-type: none"> <li>1. Select on using COM2 port for MSR (Select COM3 if scanner installed)</li> <li>2. Click "OK"</li> </ol>
7		<ol style="list-style-type: none"> <li>1. Set Bits per second to be 9600 bps.</li> </ol>
8		<ol style="list-style-type: none"> <li>1. Test OK</li> </ol>

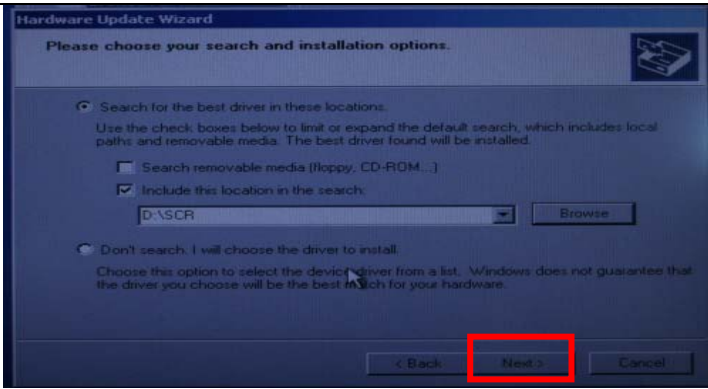

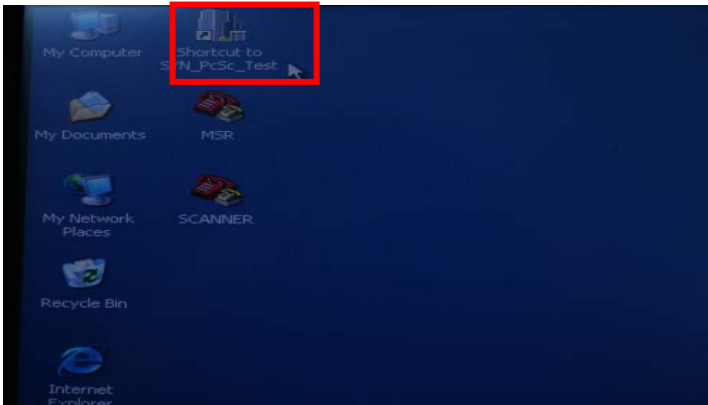
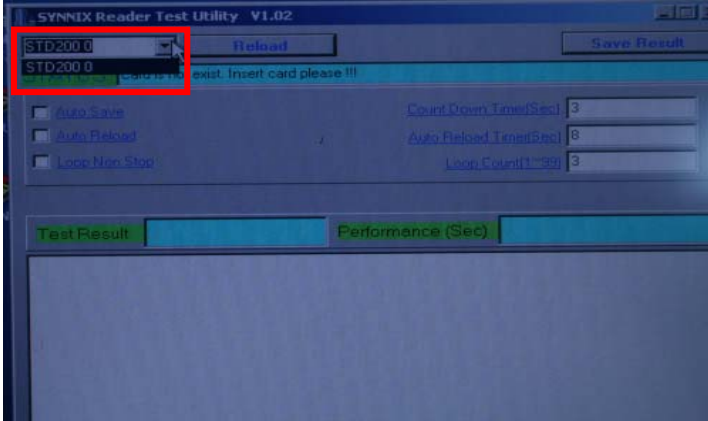


### 2.3.2 Smart Card

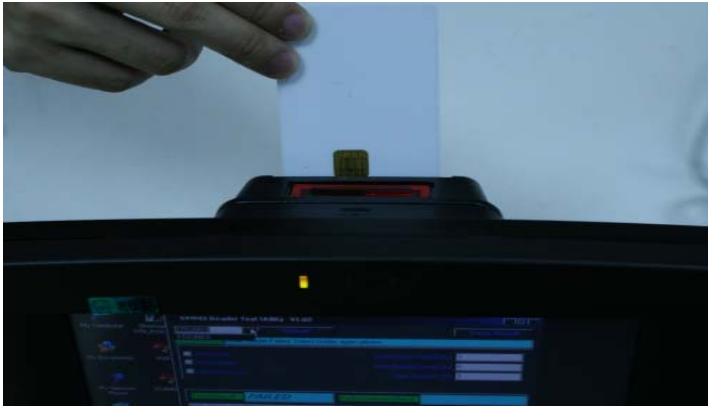
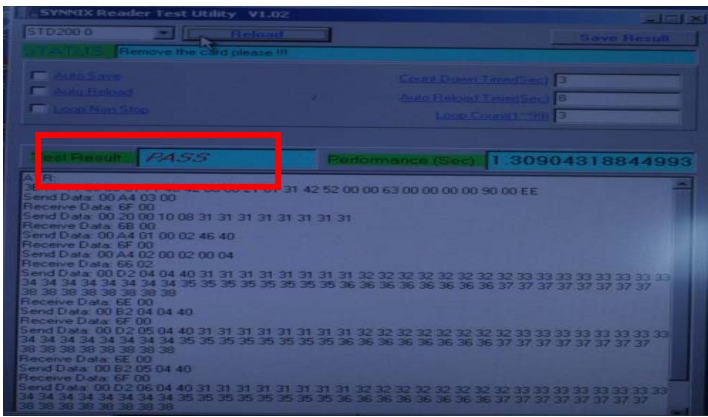
HW Installation		
Item	Photo	Description
1		1. Take out smart card module
2		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 5</li> <li>2. Remove MSR reader module cover</li> <li>3. Turn MSR reader module cover to the other side</li> </ol>
3		<ol style="list-style-type: none"> <li>1. Put smart card in the reader module</li> <li>2. Fasten 2 screws to tighten smart card</li> </ol>
4		<ol style="list-style-type: none"> <li>1. Plug smart card cable on I/O board</li> <li>2. Follow steps back to 2.1.1 item 1</li> </ol>

Verification		
Item	Photo	Description
1		1. Click “start”→”Setting”→”Control Panel”→”System”
2		1. Click “Hardware” 2. Click “Device Manager”
3		1. Click “”Detect plug in device..” 2. Double click “USB Device”
4		1. Click “Update Driver”


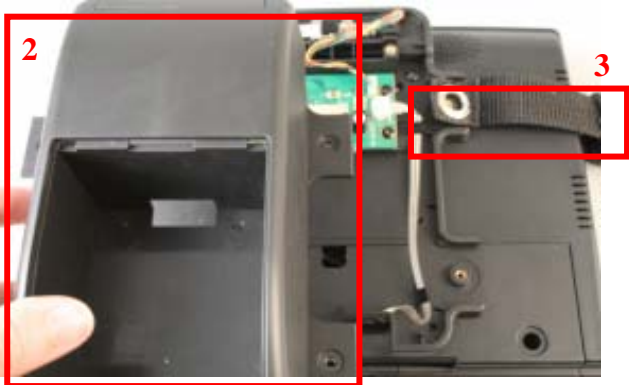
Item	Photo	Description
5		<ol style="list-style-type: none"> <li>1. Click “Yes, this time only”</li> <li>2. Click “Next”</li> </ol>
6		<ol style="list-style-type: none"> <li>1. Click “Install from a list or specific location...”</li> <li>2. Click “Next”</li> </ol>
7		<ol style="list-style-type: none"> <li>1. Click “Browse”</li> </ol>
8		<ol style="list-style-type: none"> <li>1. Choose the location where the driver is stored</li> <li>2. Click “OK”</li> </ol>

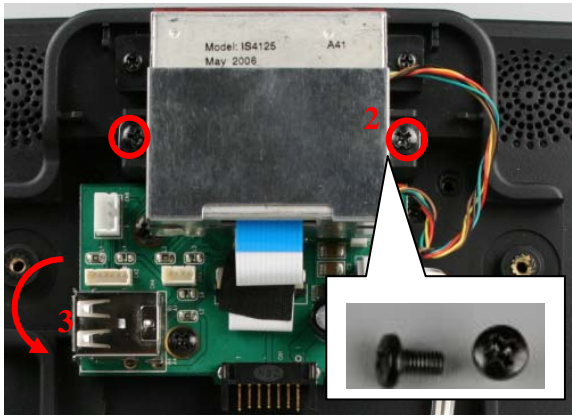
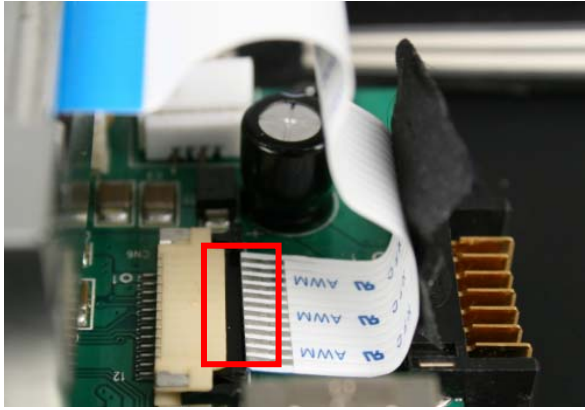
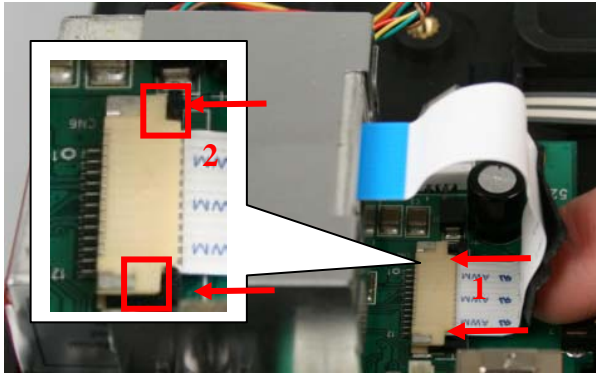
Item	Photo	Description
9		1. Click “Next”
10		1. Click “Finish” and the installation process is completed
11		1. Click “Shortcut to SYN_PcSc_Test”
12		1. Click “STD2000”



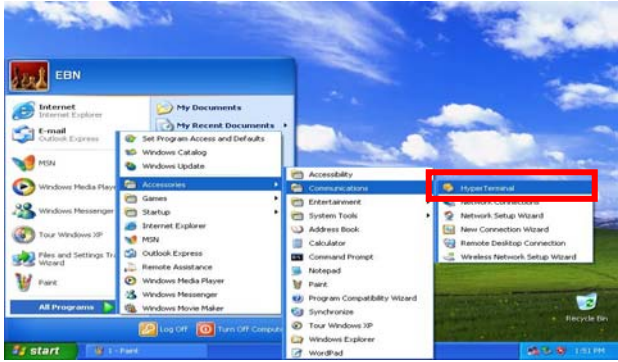
Item	Photo	Description
13		1. Insert any smart card into smart card reader
14		1. The test result "PASS" will show on the screen 2. The installation is completed

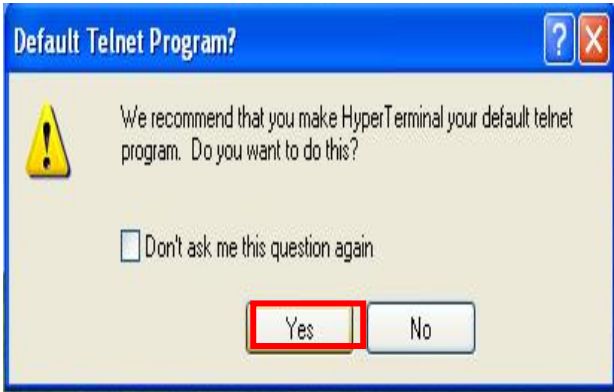
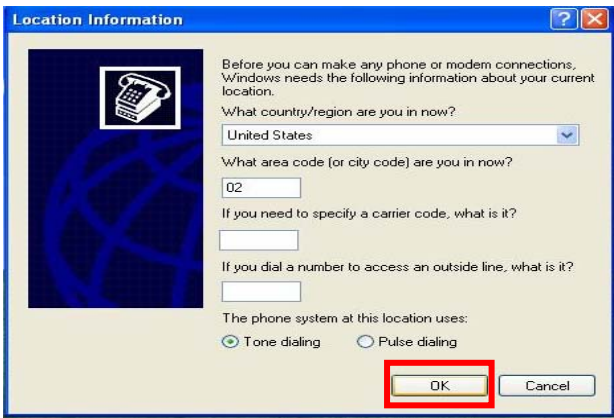
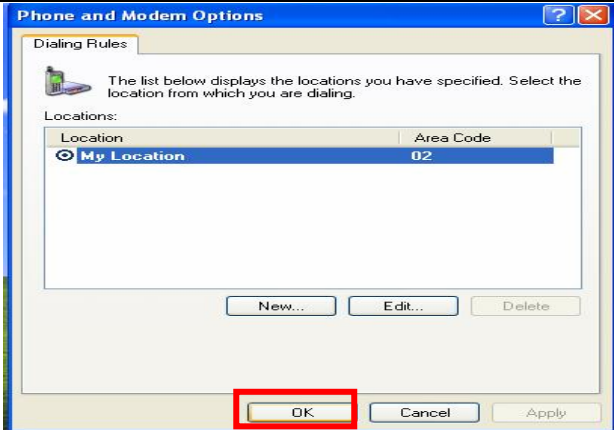

### 2.3.3 Barcode Scanner


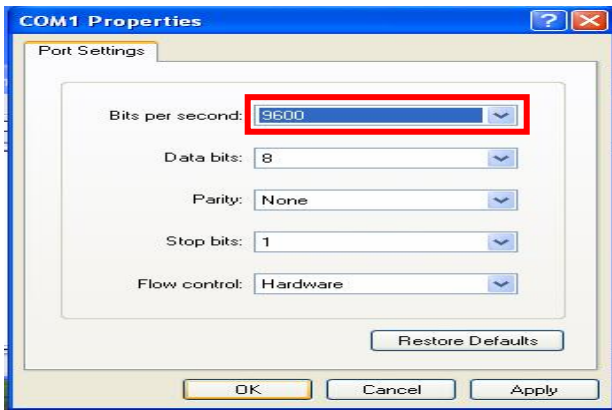
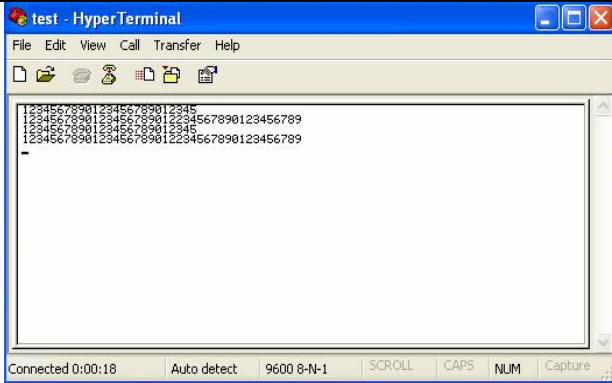
Item	Photo	Description
1		1. Take out smart card module
2		1. Follow 2.1.1 item 1 to 5 2. Remove MSR reader module cover 3. Remove handheld belt

Item	Photo	Description
3		<ol style="list-style-type: none"> <li>1. Put barcode scanner module on MSR module base</li> <li>2. Fasten 2 screws to tighten barcode scanner</li> <li>3. Turn Mobile POS 90° to the left</li> </ol>
4		<ol style="list-style-type: none"> <li>1. Put the cable into the connector on I/O board</li> </ol>
5		<ol style="list-style-type: none"> <li>1. Push in the cable</li> <li>2. Lock the cable by pushing in black clicker</li> <li>3. Follow steps back to 2.1.1 item 1</li> </ol>

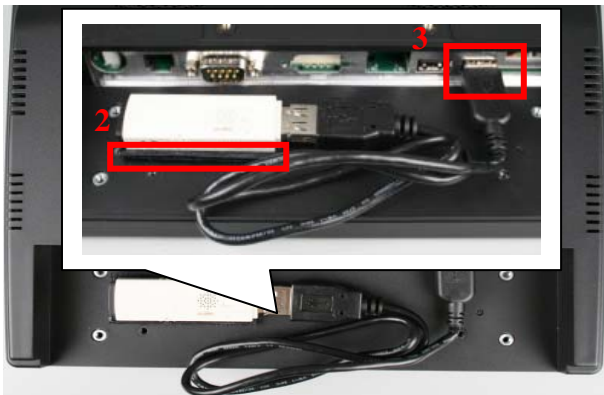
#### Verification:

Item No.	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Enter to "All Programs" → "Communication" → "Hyper Terminal"</li> </ol>

Item No.	Photo	Description
2		1. Click "Yes" to continue
3		1. Set "area code" and click OK
4		1. Click OK
5		1. Enter a name and Click OK

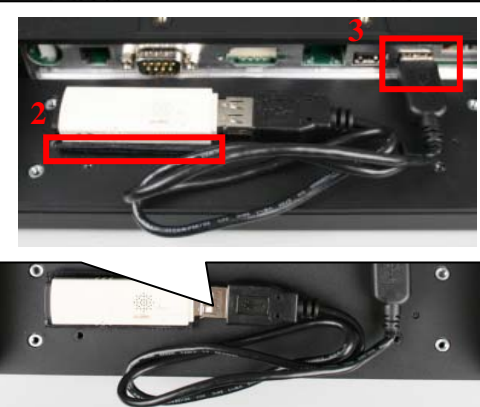
Item No.	Photo	Description
6		<ol style="list-style-type: none"> <li>Select on using COM3 port for barcode scanner (Select COM2 if MSR installed)</li> <li>Click "OK"</li> </ol>
7		<ol style="list-style-type: none"> <li>Set Bits per second to be 9600 bps.</li> </ol>
8		<ol style="list-style-type: none"> <li>Test OK</li> </ol>

### 2.3.4 WLAN IEEE


Item	Photo	Description
1		<ol style="list-style-type: none"> <li>Follow 2.1.1 item 1 to 11</li> <li>Use adhesive tape to stick WLAN IEEE with rear cover</li> <li>Plug in the WLAN IEEE cable to USB port</li> <li>Follow steps back to 2.1.1 item 1</li> <li>Follow the steps in driver CD for installation process</li> </ol>



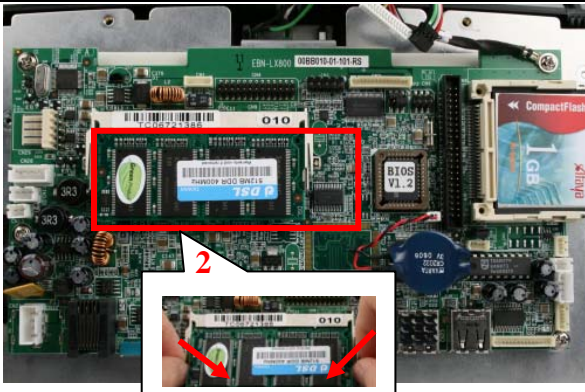
### 2.3.5 WLAN Bluetooth

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 11</li> <li>2. Use adhesive tape to stick blue tooth with rear cover</li> <li>3. Plug in the WLAN IEEE cable to USB port</li> <li>4. Follow steps back to 2.1.1 item 1</li> <li>1. Follow the steps in driver CD for installation process</li> </ol>

### 2.3.6 Compact Flash

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 16</li> <li>2. Put CF in the CF slot</li> <li>3. Follow steps back to 2.1.1 item 1</li> </ol>

### 2.3.7 Memory

Item	Photo	Description
1		<ol style="list-style-type: none"> <li>1. Follow 2.1.1 item 1 to 16</li> <li>2. Put RAM in the RAM slot</li> <li>3. Follow steps back to 2.1.1 item 1</li> </ol>

CHAPTER

3

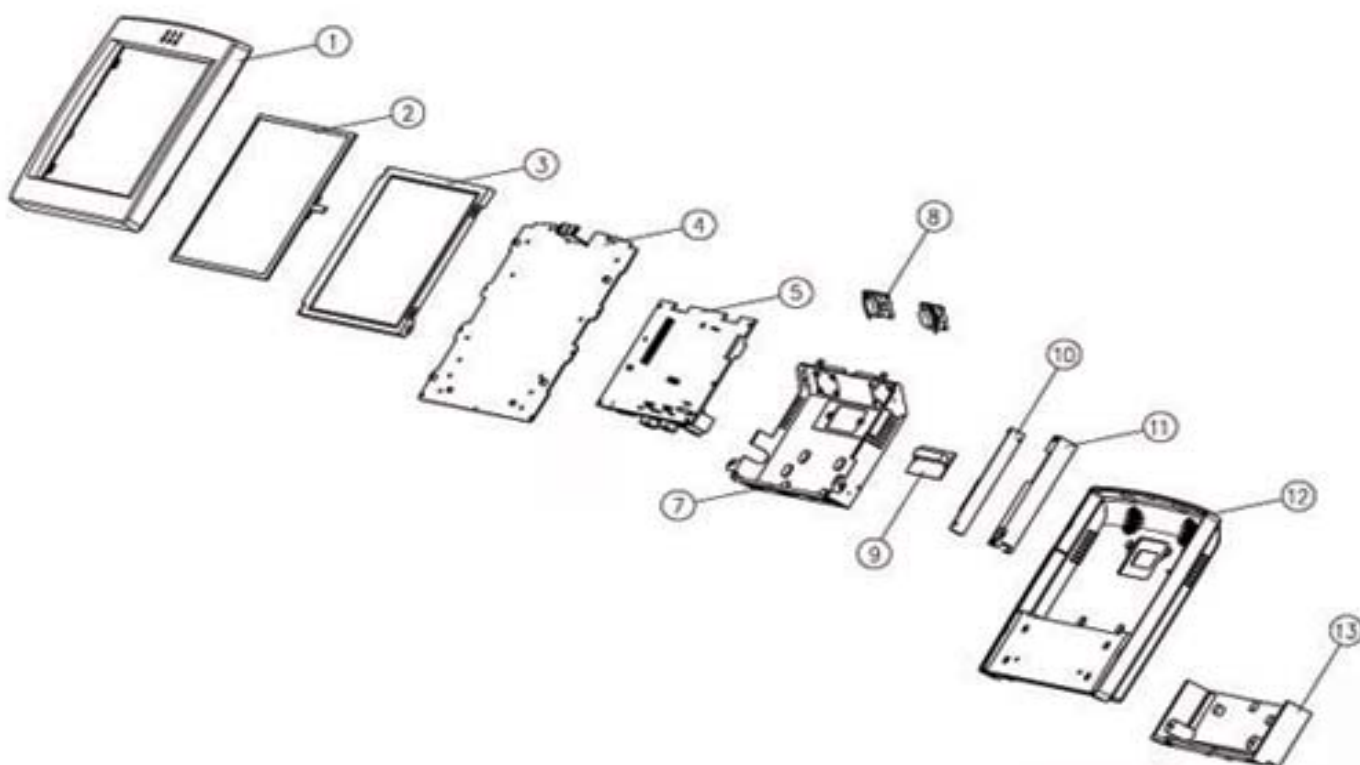
# Spare Parts



## Chapter 3 Spare Parts

### 3.1 Main Unit

#### 3.1.1 Explode of Main Unit



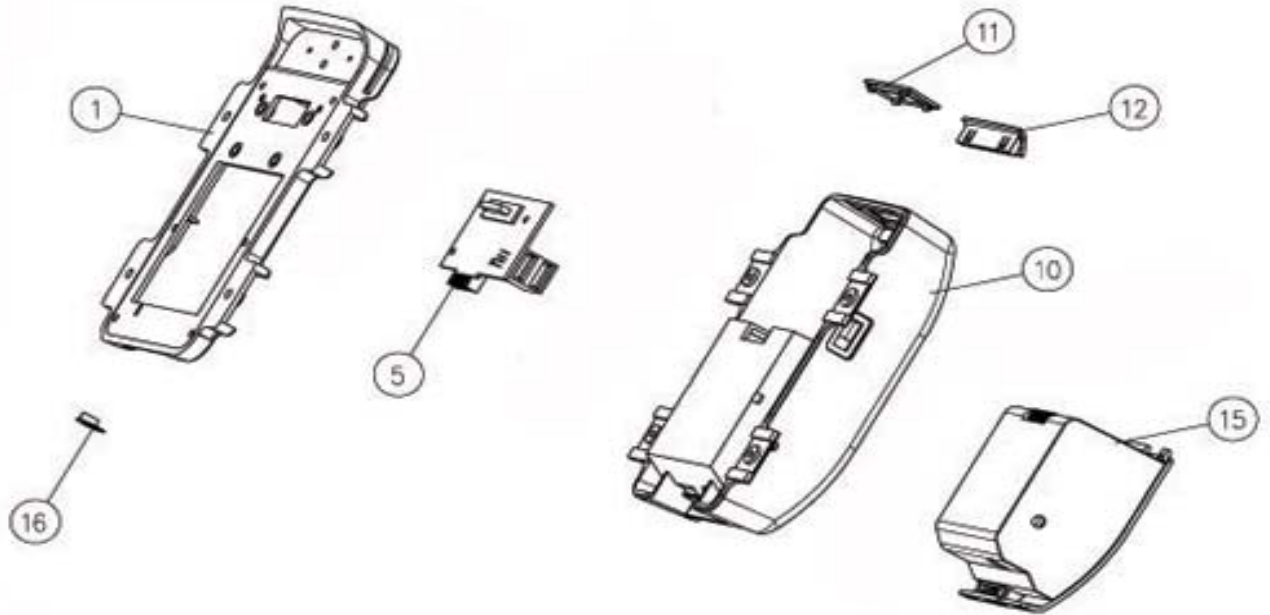
#### 3.1.2 Main Unit Parts List & Quotation

Item	Part No.	Description	Q'ty	Price (USD)
1+2	A10400237RH	Plastic Bezel: 8.4"LCD W/ Water proof sealed stick	1	Call Sales
		Touch Panel: 8.4", Resistive, HT-084F-5RA-002N-18	1	
3	21100011RH	AUO 8.4" LCD PANEL	1	Call Sales
4	30100061RH	LCD chassis (AL=1.0mm)	1	Call Sales
5	10100047RH	LX-800 M/B	1	Call Sales

Item	Part No.	Description	Q'ty	Price (USD)
7+8+ 9+10 +11	A10400561RH	EMI Chassis Module	1	Call Sales
12	30200061BRH	Cover: 8.4 LCD rear cover, Black	1	Call Sales
13	30200051BRH	Cover: I/O Cover, Black	1	Call Sales

### 3.2 Battery Module

#### 3.2.1 Explode of Battery Module

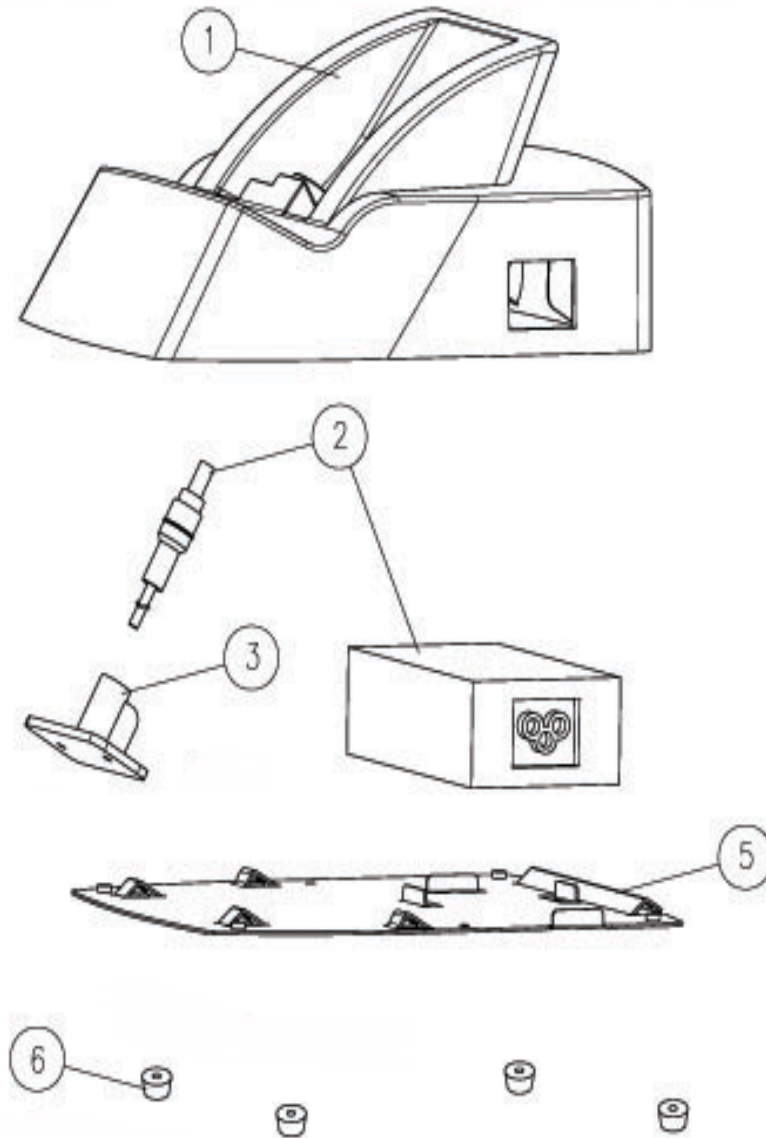


#### 3.2.2 Battery Module Parts List & Quotation

Item	Part No.	Description	Q'ty	Price (USD)
1+16	30200058BRH +21600116RH	Plastic Base: Reader Module Base, PC+ABS, Black	1	Call Sales
5	10100039RH	52 I/O Board	1	Call Sales
10	30200057BRH +30500026RH	Cover: Reader Module Cover, Black W/ Len LED	1	Call Sales
11	30200059BRH	Cover: Scanner Cover, Black	1	Call Sales
12	30200060BRH	Cover: Smart Card Cover, Black	1	Call Sales
15	A10400199RH	Battery Module: 11.1V, 2400mA, Li-ion 3P1S SONY Cell, 68 x 55 x 23.5(mm)	1	Call Sales

### 3.3 Recharge Cradle

#### 3.3.1 Explode of Recharge Cradle



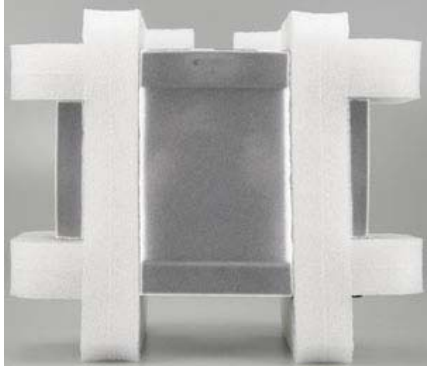


#### 3.3.2 Recharge Cradle Part List & Quotation

Item	Part No.	Description	Q'ty	Price (USD)
1+2+ 3+5+ 6	A10400116RH	Recharge Cradle Module	1	Call Sales

Part No.	Description	Photo	Price(USD)
21600094RH	Inverter cable		Call Sales
21600103RH	I/O CONNECTOR cable, P=2.0 44Pin , MOLEX P=1.25 4Pin+MOLEX P=1.25 4Pin+MOLEX P=1.25 15Pin+MOLEX P=1.25		Call Sales
21600095RH	LCD CABLE for AUO panel		Call Sales
21600041RH	LED cable		Call Sales
31400003RH	Heat pad 40*40*2(mm)		Call Sales









Part No.	Description	Photo	Price(USD)
31400004RH	Heat pad 23*23*2(mm)		Call Sales
31700001RH +31700002RH	Hand Held Belt		Call Sales
40200016RH	Carton: Inner Packing Carton 321 *228 *585 (mm)		Call Sales
40200024RH	Carton: Outer Packing Carton 700*310*210(mm)		Call Sales



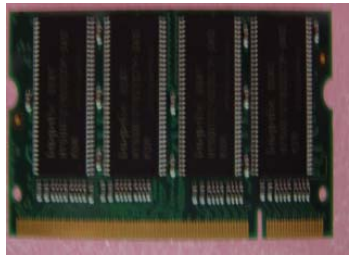
Part No.	Description	Photo	Price(USD)
40800014RH	EPE Sponge for Mobile POS Main Unit(Left and Right)		Call Sales
40800023RH	EPE Sponge for Mobile POS Recharge Cradle(Left and Right)		Call Sales
31800001RH +31800002RH	Leather Bag: Bag w/ Belt		Call Sales

### 3.4 Accessories


#### 3.4.1 Power Cord

Part No.	Description	Photos	Price(USD)
20700001RH	POWER CORE FOR USA 		Call Sales
20700005RH	POWER CORD FOR UK 		Call Sales
20700002RH	POWER CORD FOR EUR 		Call Sales
20700004RH	POWER CORD FOR Australia 		Call Sales

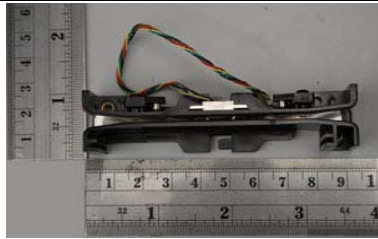
#### 3.4.2 Memory

Part No.	Description	Photo	Price(USD)
20300005RH	400MHz DDR MODULE 128M(200PIN-SO DIMM)		Call Sales
20300006RH	400MHz DDR MODULE 256M(200PIN-SO DIMM)		Call Sales
20300007RH	400MHz DDR MODULE 512M(200PIN-SO DIMM)(		Call Sales

### 3.4.3 Compact Flash

Part NO.	Description	Photo	Price(USD)
20600001RH	Compact Flash 128MB		Call Sales
20600002RH	Compact Flash 256MB		Call Sales
20600003RH	Compact Flash 512MB		Call Sales
20600005RH	Compact Flash 1G		Call Sales
20600007RH	Compact Flash 2G		Call Sales

### 3.4.4 MSR

Part NO.	Description	Photo	Price(USD)
20400008RH	MSR 3 Tracks, RS232		Call Sales

### 3.4.5 Smart Card

PART NO.	Description	Price(USD)
A10400198RH	Smart Card Module for Mobile POS	Call Sales



### 3.4.6 Barcode Scanner

PART NO.	Description	Price(USD)
A10400197RH	Barcode Scanner Module: Laser Engine W/ RS-232+130mm FPC CABLE	Call Sales

### 3.4.7 OS

PART NO.	Description	Price(USD)
20900001RH	WinXP Professional, English Version	Call Sales
20900002RH	WEPOS, English Ver.	Call Sales

### 3.4.8 Wireless LAN

PART NO.	Description	Photo	Price(USD)
60900002RH	WiFi WLAN:WiFi WLAN 802.11b/g USB		Call Sales
61000001RH	Bluetooth V1.2 USB DONGLE(BT-01UD1)		Call Sales