# User's Manual

RichPOS 3600 12"/15"/17" P4 High-Performance POS system

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# **Safety and Warranty**

1. Read these safety instructions carefully.

2. Keep this user's manual for later reference.

3. Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.

4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.

5. Keep this equipment away from humidity.

6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.

7. The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.

8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.

9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.

10. All cautions and warnings on the equipment should be noted.

11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.

12. Never pour any liquid into an opening. This could cause fire or electrical shock.

13. Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.

14. If any of the following situations arises, get the equipment checked by service personnel:

- a. The power cord or plug is damaged.
- b. Liquid has penetrated into the equipment.
- c. The equipment has been exposed to moisture.
- d. The equipment does not work well, or you cannot get it to work according to the user's manual.
- e. The equipment has been dropped and damaged.

f. The equipment has obvious signs of breakage.

15. DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4°F) OR ABOVE 60° C (140° F). IT MAY DAMAGE THE EQUIPMENT.

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# Chapter 1

# Introduction

# **RichPOS-3600 Introduction**

RichPOS 3600 is a decent solution for high-performance-required application. The integrated and modulized design of the system effectively increases the reliability of the product and therefore makes it an optimal choice for retail or any public service markets.

- **System:** Equipped with Intel 915GM and ICH6M chipsets plus high-speed CPU support (up to Pentium M 2.13GHz), RichPOS-3600 is capable of handling a high capacity of data efficiently.
- **Housing:** The strong aluminum housing not only dissipates the heat inside the system but decreases the level of possible damage from dropping, also assuring the compliance to EMI radiation testing.
- **Display**: The LCD display can be tilted at multiple angles for ease of use.
- **Extensibility:** RichPOS-3600 is designed with sufficient I/O interfaces which allow the unit to extend its functionality with a variety of additional devices, such as Magnetic Card Reader, 2<sup>nd</sup> VFD/LCD customer display, Cash drawer, Biometric reader (ex.: finger print reader) and a wide selection of USB devices (all available upon request.)



*RichPOS-3600* W/2<sup>nd</sup> display

RichPOS-3600 W/VFD

# A Quick Tour for RichPOS-3600

Before you start, take a moment to become familiar with RichPOS-3600.



# **RichPOS-3600 Dimension**







# Rear I/O Panel



I/O Port	Connector Type	Description
Line Out	Earphone connector	Connect the speakers to this port
USB	USB type A connector	Standard USB connector for external device
DC-in	DC Power connector	Connect the power adaptor to this port
COM5 · COM6	VFD / RJ45 connector This RJ45 port can be used to attach a customer display or serve as an additio port (switching cable provided).	
Cash Drawer	wer RJ11 connector Cash Drawer Connector, 12 V actuation supp	
KB/MS	PS2 connector Connect the keyboard or mouse to this po	
COM1 · COM2	D-SUB 9 connector	The serial ports COM1/COM2/COM5/COM6 can be used to connect devices such as a printer or a fax/modem.
Printer	SCSI Ribbon 26pin A switching cable provided to connect print standard LPT (D-SUB 25 pin) connector.	
LAN	RJ45 connector	Connect RichPOS-3600 to the Ethernet

# **Packing List**

- RichPOS-3600 Main System x 1
- Power Adapter x 1
- Driver & Manual CD x 1
- AC Power Cord x 1
- COM port switching cable (RJ45 to D-SUB 9 pin) x 2
- Printer switching cable (SCSI 26 pin to LPT) x 1

#### **Optional:**

- 2<sup>nd</sup> LCD Display
- Finger Print Reader
- RFID
- MCR
- VFD Customer Display
- Wireless LAN Module

# Hardware Installation and Upgrading



Chapter 2

Do not remove the rear cover until you have verified that no power is supplied to the system. Power must be switched off and the power cord must be unplugged. Every time you service the system, you should be aware of this.

# 2.5" Hard Disk Drive Installation

- 1. Turn off power and remove power cord from the system
- 2. Unscrew the HDD tray at the bottom of the unit





3. Pull the HDD tray out



- 5. Slide in the HDD tray back to the system (no cabling needed).
- 7. Fix the HDD tray with the screw.
- 8. Connect the power cord to the system.

# 2nd Display (LCD/VFD) Installation

1. Remove the plastic cover above the rear I/O panel





2. Slide in the 2<sup>nd</sup> display set and screw it on the system (no cabling needed)



# Memory (DDRII RAM) / Compact Flash Card (CF) Installation

1. Unscrew and remove the bottom cover



- 2. Install the DDRII RAM or CF you require
- 3. Restore the bottom cover

# **MCR Parameter Modification**

This option is for users who need to customize the MCR parameters for a particular task. Some of the useful parameters include:

The selection of country code, other than the default English.

The choice of track combinations.

The preamble/post amble codes.

The MCR parameters can be modified by using the supplied utility program. The utility can be found on the CD that came with your system in the "Utilities" folder. The program name is msr\_v12\_win.zip.

# **Cash Drawer Installation**

Before connecting the cash drawer to the **RichPOS-3600**, please make sure the drive voltage and cable pin assignment of the cash drawer matches the definition of the cash drawer port of **RichPOS-3600**. Please refer to **page 46** for more information.

Plug cash drawer cable into the cash drawer port.



Note: If the cash drawer cannot be detected by the system, please refer to troubleshooting.

The default driving voltage of the solenoid is DC+12V. It can be adjusted to DC +5V by switching the jumper setting on CN5. Please refer to **page 46** for more information.

Two ports are used for drawer operation: 2Eh (index port) and 2Fh (data port). A test program is supplied (\Utility\POS Utility\Cash Drawer\GPO\GPO0.exe). For Linux and Windows, source code of which is available on request by software developers.

# Chapter 3

# Software Installation and Setup

# **Driver Installation**

RichPOS-3600 comes with a variety of drivers for different operating systems.

You may find the system CD with all the necessary drivers and utilities.

# Please follow this installation sequence.

Driver installation sequence:

Chipset Driver -> VGA Driver -> LAN Driver -> Audio Driver -> Touch Tools

The reason to follow our sequence is that IRQ settings will be changed by Windows 2000 and XP to non supported values, and you may encounter unnecessary problems later.

# **Intel Chipset Driver Installation**

- 1. Insert the CD into your CD ROM Drive.
- 2. Locate the folder of D:\DRIVER\WIN2K&XP\CHIPSET\
- 3. Open infinst\_autol.exe



4. Click Next.



5. Read the License Agreement and click Yes.



6. Click **Next** and the drivers for the Intel Chip set will install.



7. When the 'Setup COMPLETE' message appears click Finish to restart your computer.

# **VGA Driver Installation**

# 915GM Driver Installation for Windows 2000 & XP

- 1. Locate the folder of D:\Driver\WIN2K&XP\VGA\
- 2. Open win2k\_xp1424.exe



3. Select Next to continue.



4. Select Next to continue.



5. Read the License Agreement and click Yes.



6. Click Next to see the setup progress.



7. Select Next to continue.



8. Click Finish to complete the installation procedure and restart the system.

# Enable Second LCD Panel Setting for Windows 2000 & XP

After you have installed the VGA driver, you must adjust the settings as follows.

1. Right click your mouse anywhere on the desktop and then click **properties**.

Display Properties ? 🔀
Themes Desktop Screen Saver Appearance Settings
A theme is a background plus a set of sounds, icons, and other elements to help you personalize your computer with one click.
<u>I</u> heme: Windows XP ▼ <u>S</u> ave As <u>D</u> elete
Sample:
and the second sec
Active Window
Window Text
OK Cancel Apply

2. Click the Settings tab.

isplay P	ropertie	s					?
Themes	Desktop	Screen S	aver	Appearance	Settings		
Drag th	e monitor ic	ons to mat	ch the	e physical arran	igement of	your mo	nitors.
	i i	10.5	_	1			
		4		2			
		-					
Display:							
Display: 1. Digit	al Flat Pan	el (1024x76	58) on	Mobile Intel(R	) 915GM/0	GMS,910	GÞ 😽
Display: 1. Digit	al Flat Pan	el (1024x76	58) on	Mobile Intel(R	) 915GM/C	GMS,910	IG) 🔽
Display: 1. Digit Scree Less	al Flat Pan n resolution	el (1024x76	58) on More	Mobile Intel(R Color qua Highest	) 915GM/0 ality (32 bit)	GMS,910	GN 🗸
Display: 1. Digit Scree Less	al Flat Pani n resolutior	el (1024x76 n 	58) on More	Mobile Intel(R Color qua Highest	) 915GM/0 ality (32 bit)	GMS,910	Gh 🔽
Display: 1. Digit Scree Less	al Flat Pan n resolution 1024 by 7 this device	el (1024×76	58) on More nary m	Mobile Intel(R Color qua Highest	) 915GM/0 ality (32 bit)	GMS,910	GÞ 🗸
Display: 1. Digit Scree Less Use Exte	al Flat Pan n resolution 1024 by 7 this device nd my Wine	el (1024×76 68 pixels as the prin dows desk1	58) on More nary m top or	Mobile Intel(R Color qua Highest monitor. not this monitor.	) 915GM/0 ality (32 bit)	GMS,910	GÞ 🗸
Display: 1. Digit Scree Less Use Exte	al Flat Pan n resolution 1024 by 7 this device nd my Wine	el (1024×76	58) on More nary m top or	Mobile Intel(R Color qua Highest monitor. not this monitor.	) 915GM/0 Ility (32 bit)	GMS,910	
Display: 1. Digil Scree Less Use Use Exte	al Flat Pan n resolution 1024 by 7 this device nd my Win	el (1024×76 68 pixels as the prin dows deskl Ident	58) on More nary m top or	Mobile Intel(R Color qua Highest Highest nonitor. Troublesh	) 915GM/0 ality (32 bit)	GMS,910	
Display: 1. Digit Scree Less Use Exte	al Flat Pan n resolution 1024 by 7 this device nd my Wind	el (1024×76 68 pixels as the prin dows deskl Ident	58) on More nary m top or tify	Mobile Intel(R Color qua Highest nonitor. no this monitor	) 915GM/0 slity (32 bit) oot	GMS,910	

#### **3.** Click Advanced.



4. Click Intel(R) Graphics Media Accelerator Driver for Mobile.

gital Flat Panel (1024	x768) and Mobile Intel(R) 91 <table-cell></table-cell>
General Adapter M	fonitor Troubleshoot Color Management nics Media Accelerator Driver for Mobile
Intel <sup>®</sup> Graphics N	Yedia (intel)
Accelerator Driv	ver for mobile
More visual display op	tions for devices attached to
this computer, such as:	
Television	
Digital Display	
Notebook	
Monitor	
are available here :	Graphics Properties
🔽 Show Tray Icon	
	OK Cancel Apply

5. Click Graphics Properties.

Intel <sup>®</sup> Graphics Media	Notebook a	nd Monitor	Schen	ne Options
for mobile				
Display Devices	Single Display	Monitor		
Display Settings				
Color Correction	Multiple Display	Primary Device		
Hot Keys	C Intel(R) Dual	Notebook 🗾	1 2	
(intel)	<ul> <li>Display Clone</li> <li>Extended</li> <li>Desktop</li> </ul>	Secondary Device Monitor	1	2

6. Click Extended Desktop and select Notebook for primary device, monitor for secondary device.



#### 7. Click OK.

Display P	ropertie	5			? 🔀
Themes	Desktop	Screen Saver	Appearance	Settings	
Drag th	e monitor ic	ons to match the	e physical arran	igement of yo	our monitors.
				11	
		4	9		
			<u> </u>		
Display:	151.5	1 (1004 700)			
I. Digit	tal Flat Pan	31 (1024x768) on	Mobile Intel(H	)915GM/GM	IS,910GN 🗙
Less	in resolution	More		ality	
2000	- -		Highest	(32 bit)	×
	1024 by 7	68 pixels	][		
🗹 Use	this device	as the primary m	nonitor.		
Exte	ind my Wini	dows desktop or	nto this monitor.		
		Identify	Troublesh	oot A	dvanced
				Cancel	Apply

**8.** Select the second LCD panel. This is done either by clicking on the number 2 or selecting from the dropdown menu.

For the second LCD panel make sure that Extend my Windows desktop onto this monitor is selected.

9. Click Apply then click OK to finish the settings.

**Note.** During boot sequence "**No Sync**" will appear on the second LCD panel. The boot sequence can take a minute or so when a second LCD panel is installed.

# **LAN Driver Installation**

# LAN Driver Installation for all Windows Operating Systems.

- 1. Locate D:\Driver\WIN2K&XP\LAN\RTL8111B\
- 2. Double click Setup.exe.



3. Click Next to continue



#### 4. Click Next to continue

REALTEK GbE & FE Ethernet	PCI-E NIC Driver - InstallShield Wizard
	Maintenance Complete InstallShield Wizard has finished performing maintenance operations on REALTEK GbE & FE Ethernal PCI-E NIC Driver.
InstallShield	

5. Click **Finish** to complete the installation procedure.

# **Audio Driver Installation**

# Audio Driver Installation for all Windows Operating Systems.

- 1. Locate D:\Driver\WIN2K&XP\AC97\ WDM\_A391\
- 2. Double click Setup.exe.



Hardwa	re Installation
<u>.</u>	The software you are installing for this hardware: Realtek AC'97 Audio has not passed Windows Logo testing to verify its compatibility with Windows XP. ( <u>Tell me why this testing is important</u> ) <b>Continuing your installation of this software may impair</b> or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
	Continue Anyway

Note: If you receive this warning message, please click Continue Anyway to proceed.



3. Click Finish and restart the system.

# **ELO Touch Tools Installation**

# **ELO Touch Tools Installation for Windows 2000 and XP**

- 1. Locate D:\Utility\TOUCHSCREEN\ELO Touch
- 2. Select the relevant ELO folder for the operating system that you are using.

Example. If you are installing for a Windows 2000 or XP then select Elo Touch 2K\_XP

#### 3. Open Setup.exe



4. Click Next



5. Check "Install serial Touch screen Drivers." And Click Next.



6. Read the "License Agreement" and click Yes if you accept it.



7. Select "Auto-detect Elo devices" and click Next.

āla	Choose one of the COM ports listed below to use with your touchmonitor. All COM ports reported by your system are listed.
TOUCHSYSTEMS	COM1 COM2 COM8 COM4
UE	Once you have selected a COM port, click Next to
	continue the installation.

8. Select the COM port for the touch monitor. It is recommended that you select **COM3** for the touch screen, as this port is internally configured for touch operation.



9. Wait until the ELO Touch Tools have been installed.



**10.** Select "View ELO touch screen control panel" and click **Finish**.

# IT MAY BE NECESSARY TO RESTART YOUR COMPUTER TO UTILIZE YOUR TOUCHSCREEN FEATURES.

ound New Hardware Wizard	Completing the Found New Hardware Wizard
	Elo Serial Touchmonitor Interface
	Windows has finished installing the software for this device.
	The hardware you installed will not work until you restart your computer.
	To close this wizard, click Finish.
	< Back Finish Cancel

**11.** Click **NEXT** while this window appears after system finish rebooting.



12. Click YES to restart your computer again.

After the system finish rebooting follow the directions to calibrate ELO Touch Tools.

# **ELO Control Panel**

This section explains the different options in the ELO control Panel.

#### General tab

The general tab allows you to:

- Change the COM port your touch screen is set to.
- Calibrate the touch screen with the **Align** button.



#### Mode tab

The Buttons tab allows you to:

- Adjust all mouse emulation controls.
- Change cursor properties
- Enable or disable right mouse button utility.

g delay
ble click area

#### Sound tab

The Sound tab allows you to:

• To change sound properties for ELO touch tools.

General Buttons Sound Diagnostics About
Click sound
☑ Enable click sounds
Low Tone High
Short Duration Long
Touch here to test beep sound.
OK Cancel Apply

#### Properties tab

The Diagnostics tab allows you to:

• View Controller Information.



#### About tab

The About tab displays Information about ELO Touch systems

General Buttons Sound Diagnostics	About	
GIG	EMS	
Elo Touchscreen Con	trol Panel	
Copyright © 1998, 19	199, 2000	
Elo TouchSystems, Inc. All r	rights reserved.	
www.elotouch.c	<u>com</u>	
ОК	Cancel	Apply

# **TouchKit Tools Installation**

# **TouchKit Tools Installation for Windows Operating Systems**

- 1. Locate D:\Utility\TOUCHSCREEN\TouchKit(Fujitsu)\Driver
- 2. Select the relevant folder for the operating system that you are using.
- 3. Open Setup.exe



#### 4. Click Next

Setup			X
Setup Type Choose the setup type that best suits your nee	ds.		1
PS2 Interface Installation, Please do not checl unless you want to install PS2 touchkit control	k this check box ller.		
PS2 Touchscreen Driver			
InstallShield			
	< Back	Next >	Cancel

5. Click Next

Setup			×
Setup Type Choose the setup type that best suits your need	ds.		1
Touchkit Accessory Utility			
Rotating Monitor Utility			
🗖 Shutdown Utility			
InstallShield			
	< Back	Next >	Cancel

6. Click Next



#### 7. Click Next



8. Click Next

Setup		x
Setup Status		
Searching Touchkit Conl	troller on COM Port	×
•	Searching Controller On: COM3	
Informat	ion 🔀	
?	Touch Controller Found in COM3. Add this controller now ?	
InstallShield	Ca	ancel

#### 9. Click Yes



10. Click Finish to restart your computer again.

After the system finish rebooting follow the directions to calibrate the Touch screen.

# **TouchKit Control Panel**

This section explains the different options in the TouchKit control Panel.

#### General tab

The general tab allows you to:

- Change the COM port your touch screen is set to.
- Calibrate the touch screen with the **4 pts Cal** button.

TouchKit General Setting Ed	ge Coefficient   Monit	ors About	<u>&gt;</u>
Panel List Active Panel	CO	мз	
Interface	Type 4 Wire	Version Add	
		Remov	/e
		Language	
		English	- -
		4 pts Cal Draw Te:	st
		Advanced	
		OK Cancel	Help

# **RFID Driver Installation**

# **RFID Driver Installation for Windows Operating Systems**

- 1. Locate the folder of D:\Utility\RFID\
- 2. Open PL-2303 Driver Installer.exe



**3.** Wait for the next page to show



4. Select Next to continue



5. Select Finish to complete the installation

# **Wireless LAN Module Driver Installation**

# Wireless LAN Module Driver Installation for Windows Operating Systems

- 1. Locate the folder of D:\Utility\Wireless Lan\WinBond\
- 2. Open w89c35.exe



3. Select Next to continue



4. Select Next to continue



5. Select Next to continue



6. Select OK to continue



7. Wait for the next page to show



8. Select Continue Anyway to go to the next step



9. Select Finish to complete the installation

# Chapter 4

# **Specifications**

# **RichPOS-3600 Specifications**

System Configuration	n
CPU (PGA 478)	INTEL <sup>®</sup> Celeron M 1.5GHz or Pentium M 2.13GHz
Chipset	i82915GM MCH + i82801FBM ICH6-M
South Bridge	INTEL 82801FBM (ICH6-M)
Memory	Support one 200-pin SODIMM, DDRII 400/533MHz up to 1GB
VGA controller	Integrated in 915GM (Graphics Media Accelerator 900). 128MB frame buffer using system memory
Primary LCD Panel	12" /15" /17" TFT LCD Panel (800X600/1024x768).
Primary Touch Panel	12" with ELO 4-wire or 15"/17" with ELO 5-wire resistive touch panel.
Storage	Internal 2.5" Serial ATA 40GB hard disk drive (support up to 2 x 2.5" SATA HDD)
	Supports type II Compact Flash <sup>™</sup> Disk. IDE interface
Power	150 watt external power adapter.
I/O Port	
Serial Port	<ul> <li>4 User available COM ports (COM1, COM2, COM5 &amp; COM6).</li> <li>2 System assigned COM ports (COM3 &amp; COM4).</li> <li>➤ COM3 for primary touch screen.</li> <li>➤ COM4 for secondary touch screen or customer character display.</li> </ul>
Enhanced Parallel Port	supports EPP/SPP/ECP
USB port	4 USB 2.0 ports (2*Internal, 2*External)

Cash drawer port	RJ11 Cash drawer port,12V actuation. Controlled through 2Eh (index port) and 2Fh (data port)
Keyboard Port	One PS/2 keyboard port.
LAN Port	10/100/1000Base-T Ethernet Controller, Realtek RTL8111B
2 <sup>nd</sup> Display Connection	Specially designed connection port for FEC VFD or 2 <sup>nd</sup> LCD display (not standard D-SUB VGA port)
Audio Port	Integrated Sound Blaster compatible, AC97 Audio Codec. (Realtek ALC655)
Expansion	One mini-PCI socket available
<b>Optional Features</b>	
Customer display	Integrated VFD/LCD customer display.
MSR	External Magnetic Stripe Card Reader track 1/2/3
Identification Device	External Finger Print Receiver and RFID receiver(USB)
Wireless	Internal Wireless Module(USB)
Power Consumption	
Power Consumption Power consumption	80W Idle (Standard system with secondary LCD panel while accessing HDD).
Power Consumption Power consumption Operating temperatu	80W Idle (Standard system with secondary LCD panel while accessing HDD).

# **Motherboard Configuration**



**Mother Board Top** 





This chapter describes how to connect peripherals, switches and indicators to the **AIMB-553** mother board.

Label	Function
JCMOS1	CMOS clear
JLVD1	Set Panel Voltage to 3.3V or 5.0V
JIDESET1	Set Compact Flash Master / Slave
IDE1	44pin 2.0mm Connector, support 2.5" IDE HDD
USB1	USB 2.0 port 4 and port 5
TVOUT1	TV output function
SEC_VGA1	VGA & COM4
FIVE_IN_ONE1	COM3, USB 2.0 port6, port7, inverter, K/B pass, speaker
	out
LVDS36	Integrated Flat Panel interface, 18bits / 36bits Dual
	Channel
LVDS48	Flat Panel interface by SDVO_B, 24bits / 48bits Dual
	Channel
SYSFAN1	FAN connector
SYSFAN2	FAN connector
BTN1	Power Button, Power LED, Reset Button, KB Lock, PS-on

#### JCMOS1 Clear CMOS Setup

PIN	Description
Short 1-2*	Keep CMOS Setup
	(Default)
Short 2-3	Clear CMOS Setup

#### JLVD1 TFT LCD Voltage (5V/3V) Setting

PIN	Description
Short 1–2	3.3V TFT LCD
Short 2–3	5V TFT LCD

# JIDESET1 Compact Flash ( Master / Slave ) Setting

PIN	Description		
Short 1–2	CF Master		
Short 2–3	CF Slave		

|--|

#### IDE Pin Definition

PIN	Description	PIN	Description
1	RESET#	2	GROUND
3	DATA 7	4	DATA 8
5	DATA 6	6	DATA 9
7	DATA 5	8	DATA 10
9	DATA 4	10	DATA 11
11	DATA 3	12	DATA 12
13	DATA 2	14	DATA 13
15	DATA 1	16	DATA 14
17	DATA O	18	DATA 15
19	GROUND	20	N/C
21	DRQ	22	GROUND
23	IOW#	24	GROUND
25	IOR#	26	GROUND
27	CHRDY	28	REV. PULL LOW
29	DACK	30	GROUND
31	INTERRUPT	32	N/C
33	SA1	34	PD66 SELECT
35	SAO	36	SA2
37	HDC CS0#	38	HDC CS1#
39	HDD ACTIVE#	40	GROUND
41	+5V	42	+5V
43	GND	44	N/C

# USB1 2 Ports USB Definition (USB 2.0)

PIN	Description	PIN	Description
1	USBV3	2	USBV3
3	USBD4-	4	USBD5-
5	USBD4+	6	USBD5+
7	GROUND	8	GROUND
9	GROUND	10	GROUND

# TVOUT1 TV Output Pin Definition

PIN	Description	PIN	Description
1	TVDAC_A	2	TVDAC_B
3	TVDAC_C	4	GROUND

PIN	Description	PIN	Description
1	VCC12-IO(12V)	2	VCC12-IO(5V)
3	RID#4	4	DSRD#4
5	DTRD#4	6	SIND
7	SOUTD	8	DCDD#4
9	RTSD#4	10	CTSD#4
11	GROUND	12	GROUND
13	VCC12-IO(12V)	14	VCC12-IO(12V)
15	VCC12-IO(12V)	16	VGA_SMDAT
17	VGA_RED	18	VGA_SMCLK
19	VGA_GREEN	20	GROUND
21	VGA_BLUE	22	GROUND
23	VGA_Hsync	24	GROUND
25	VGA_Vsync	26	GROUND

# SEC\_VGA1 VGA & COM4 Pin Definition

# FIVE\_IN\_ONE1 34Pin Box Header Pin Definition

PIN	Description	PIN	Description
1	DCDC#3	2	DSRC#3
3	SINC	4	RTSC#3
5	SOUTC	6	CTSC#3
7	DTRC#3	8	RIC#3
9	GROUND	10	VCC_COM3 (5V)
11	USBV4	12	USB6-
13	USB6+	14	GROUND
15	USBV4	16	USB7-
17	USB7+	18	GROUND
19	VCC12_INV1 (12V)	20	VCC12_INV1 (12V)
21	GROUND	22	GROUND
23	BKLT_EN	24	VCC_KB (5V)
25	SIO_KBDAT	26	KB_DAT
27	SIO_KBCLK	28	KB_CLK
29	AUD_GND	30	SPKOUT-R
31	AUD_GND	32	SPKOUT-L
33	GROUND	34	GROUND

PIN No.	Description	PIN No.	Description
1	GROUND	2	GROUND
3	LVDS_A_DOP	4	LVDS_A_DOP
5	LVDS_A_D1P	6	LVDS_A_D1P
7	LVDS_A_D2P	8	LVDS_A_D2P
9	LVDS_A_CLKP	10	LVDS_A_CLKP
11	NC	12	NC
13	GROUND	14	GROUND
15	LVDS_B_DOP	16	LVDS_B_DOP
17	LVDS_B_D1P	18	LVDS_B_D1P
19	LVDS_B_D2P	20	LVDS_B_D2P
21	LVDS_B_CLKP	22	LVDS_B_CLKP
23	NC	24	NC
25	GROUND	26	GROUND
27	VDD_LCD	28	VDD_LCD
29	VDD_LCD	30	VDD_LCD

# LVDS36 LVDS Pin Definition



# LVDS48 LVDS Pin Definition

PIN No.	Description	PIN No.	Description
1	GROUND	2	GROUND
3	LVDS2_A0P	4	LVDS2_A0P
5	LVDS2_A1P	6	LVDS2_A1P
7	LVDS2_A2P	8	LVDS2_A2P
9	LVDS2_CLK1P	10	LVDS2_CLK1N
11	LVDS2_A3P	12	LVDS2_A3N
13	GROUND	14	GROUND
15	LVDS2_A4P	16	LVDS2_A4N
17	LVDS2_A5P	18	LVDS2_A5N
19	LVDS2_A6P	20	LVDS2_A6N
21	LVDS2_CLK2P	22	LVDS2_CLK2N
23	LVDS2_A7P	24	LVDS2_A7N
25	GROUND	26	GROUND
27	VDD_LCD	28	VDD_LCD
29	VDD_LCD	30	VDD_LCD

# SYSFAN1 & 2 Fan Connectors Definition

PIN	Description	PIN	Description
1	GROUND	2	12V(or Pulse)
3	SPEED		

# BTN1 Power Switch & LED Function Setting

PIN	Description	PIN	Description
Short 1–2	ATX Soft power switch	Short 7-8	HDD LED
Short 3–4	Power LED	Short 9-10	Keyboard Lock
Short 5-6	CPU Reset Bottom or	Short 11-12	PS-ON
	switch		

# COM & PARALLEL COM Ports & Parallel Port Definition

<b>COM Port</b>	Location	Address	IRQ
COM1	IO_FINGER1	3F8	4
COM2	IO_FINGER1	2F8	3
COM3	FIVE_IN_ONE1	4E0	10
COM4	SEC_VGA1	4E8	11
COM5	IO_FINGER1	4FO	5
COM6	IO_FINGER1	4F8	11
Parallel	IO_FINGER1	378	7
Port			

# I/O board Configuration

The 9000CB2030 board carries the following signals to the main board: LAN, LPT, COM (1/2/5/6), keyboard, cash drawer, audio in and two USB ports.

# 9000CB2030 I/O Board Pin Definition



#### JP1

#### COM1 Voltage Selection

JP1	Description	
Short 1-2	+12V	
Short 3-4*	RI (Default)	
Short 5-6	+5V	



#### COM2 Voltage Selection

JP1	Description
Short 7-8	+12V
Short 9-10*	RI (Default)
Short 11-12	+5V

#### CN2

#### COM5 Voltage Selection

CN2	Description
Short 1-2	+12V
Short 2-3	+5V

# CN1 COM5 Mode Selection

CN1	Description		
Short 1-3	PS_222 (Default)		
Short 2-4			
Short 1-2			
Short 3-5	VFD		
Short 4-6			



# COM6 Voltage Selection

CN4	Description	
Short 1-2	+12V	
Short 2-3	+5V	



#### COM6 Mode Selection

CN3	Description		
Short 1-3	DS 222 (Dofault)		
Short 2-4	KS-ZSZ (Delault)		
Short 1-2			
Short 3-5	VFD		
Short 4-6			



#### Cash Drawer Voltage Selection

CN5	Description	
Short 1-2	+5V	
Short 2-3*	+12V (Default)	

# Mother Board BIOS Setup (AWARD)

# Introduction

Award's BIOS ROM has a built-in setup program that allows users to modify the basic system configuration. This type of information is stored in battery backed-up memory (CMOS RAM) so that it retains the setup information when the power is turned off.

## **CMOS RAM Auto-backup and Restore**

The CMOS RAM is powered by an onboard button cell battery. When you finish BIOS setup, the data in CMOS RAM will be automatically backed up to Flash ROM. If operation in harsh industrial environments causes a soft error, BIOS will recheck the data in CMOS RAM and automatically restore the original data in Flash ROM to CMOS RAM for booting.

**Note:** If you intend to change the CMOS setting without restoring the previous backup, you have to click on "DEL" within two seconds of the "CMOS checksum error..." display screen message appearing. Then enter the "Setup" screen to modify the data. If the "CMOS checksum error..."message appears again and again, please check to see if you need to replace the battery in your system.

# **Entering Setup**

Turn on the computer and press **<Del>** to allow you to enter the BIOS CMOS setup utility.
Phoenix - AwardBIOS CMOS Setup Utility

<ul> <li>Standard CMOS Features</li> <li>Advanced BIOS Features</li> <li>Advanced Chipset Features</li> <li>Integrated Peripherals</li> <li>Power Management Setup</li> <li>PnP/PCI Configurations</li> </ul>	PC Health Status Load SetUp Defaults Set Password Save & Exit Setup Exit Without Saving	
Esc : Quit F9 : Menu in BIOS ↑↓→← : Select Item F10 : Save & Exit Setup Time, Date, Hard Disk Type		

Figure 1: Award BIOS initial setup screen

# Standard CMOS Setup

Choose the "Standard CMOS Features" option from the "initial setup screen" menu, and the screen below will be displayed. This menu allows users to configure system components such as date, time, hard disk drive, floppy drive, display, and memory. Use the arrow keys to highlight the item and then use the **<PgUp>** or **<PgDn>** keys to select the value you want for each item.

IDE Channel 0 Master/Slave & IDE Channel 1 Master/Slave: If you select **IDE HDD Auto-Detection**, BIOS will show the detail specifications of your drive automatically. If your hard disk drive type is not matched or listed, you can use Manual to define your own drive type manually. Enter the information directly from the keyboard. This information should be provided in the documentation from your hard disk vendor or the system manufacturer.



Figure 2: Standard CMOS Features Screen

# **Advanced BIOS Features**

The "Advanced BIOS Features" screen appears when choosing the "Advanced BIOS Features" item from the "Initial Setup Screen" menu. It allows the user to configure the M/B (AIMB-553) according to his particular requirements. Below are some major items that are provided in the Advanced BIOS Features screen. A quick booting function is provided for your convenience. Simply enable the Quick Booting item to save yourself valuable time.

# **CPU Features**

Delay Prior to Thermal: 4Min, 8Min, 16Min or 32Min Execute Disable Bit: Enabled or Disabled

## Hard Disk Boot Priority

If you prefer to enter into **HDD First Boot Device setting** directly as Figure 2, you could press **<F11>** instead of <Del> when you power on system. Pop-up menu will show you a

devices list as options for first boot device selection.

## Virus Protection, Boot Sequence and others

Virus Warning, CPU L1 & L2 Cache, boot sequence, APIC Mode, and other features could be configured according to your particular requirements.

Phoenix — AwardBIOS CMOS Setup Utility Advanced BIOS Features			
CPU Feature [Press Enter] Hard Disk Boot Priority [Press Enter] Uirus Warning [Disabled] CPU L1 & L2 Cache [Enabled] Quick Power On Self Test [Enabled] Quick Power On Self Test [Enabled] First Boot Device [USB-CDROM] Second Boot Device [Hard Disk] Third Boot Device [USB-FDD] Boot Other Device [Inabled] Boot Up NumLock Status [On ] [Gate A20 Option [Fast] Typematic Rate Setting [Disabled] × Typematic Rate (Chars/Sec) 6 × Typematic Delay (Msec) 250 Security Option [Enabled]	Iten Help Menu Level ►		
†↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save D F5:Previous Values F7: SetUp	ESC:Exit F1:General Help Defaults		
Figure 3: Advanced BIOS Features Screen			

# **Advanced Chipset Features**

DRAM Timing Selectable: Manual or By SPD System / Video BIOS Cacheable: Disabled or Enabled On-Chip Frame Buffer Size: 1MB or 8MB DVMT Mode: Fixed, DVMT or BOTH DVMT/FIXED Memory Size: 64MB or 128MB Panel Type: There are following different type for options

Table: Panel Type for Options			
640x480 LVDS	800x600 LVDS	1024x768 LVDS	1280x1024 LVDS
1400x1050 RB LVDS	1400x1050 Non-RB	1600x1200 LVDS	

Boot Display: Auto, CRT or LFP

RICHPOS-3600			
Phoenix - AwardBIOS CMOS Setup Utility			
nu~	ancea ompset reatures		
DRAM Tining Selectable	[By SPD]	Iten Help	
× CAS Latency Time	2.5		
× DRAM RAS# to CAS# Delay	3	Menu Level 🕨	
x DRHM RHS# Precharge	3		
x Precharge dealy (tRHS)	8 400MU-		
X System Remory Frequency	400nHZ		
lideo BIOS Cacheable	(Disabled)		
Video Dios Cacheable	LD15aD16a1		
** UGA Setting **			
On-Chip Frame Buffer Size	E 8MB1		
DVMT Mode	EDUNT ]		
DVMT/FIXED Memory Size	[ 128MB]		
Panel Type	[800x600 LVDS]		
Boot Display	(LFP)		
11++:Move Enter:Select +/-	ZPHZPD:UalueF10:Saue	ESC:Exit F1:General Helm	
F5:Previous Value	s F7: SetU	p Defaults	
Figure 4: Advanced Chipset Features Screen			

# **Integrated Peripherals**

# **OnChip IDE Device**

Recommend to **"Enabled"** all IDE functions and PIO/UDMA by **"Auto"** On-Chip Serial ATA: Disabled, Auto, Combined Mode, Enhanced Mode & SATA Only

# **Onboard Device**

Setting "Enabled" or "Disabled" for USB / USB 2.0 Controller and USB Keyboard Support Setting "Auto" or "Disabled" for AC97 Audio

## **SuperIO Device**

Refer to **page 44** for the "Serial Port 1 ~ 6", parallel port address and IRQ information Parallel Port Mode: SPP, EPP, ECP, ECP+EPP or Normal ECP Mode Select: EPP1.9 or EPP1.7 ECP Mode Use DMA: 1 or 3

# RICHPOS-3600 Phoenix - AwardBIOS CHOS Setup Utility Integrated Peripherals • OnChip IDE Device [Press Enter] • Onboard Device [Press Enter] • SuperIO Device [Press Enter] • SuperIO Device [Press Enter] • Menu Level • • Press Enter] • SuperIO Device [Press Enter] • SuperIO Device [Press Enter] • Menu Level • • Menu Level •

Figure 5: Integrated Peripherals Screen

Phoenix - AwardBIOS CMOS Setup Utility OnChip IDE Device			
IDE HDD Block Mode[Enabled]IDE DMA transfer access[Enabled]Om-Chip Primary PCI IDE[Enabled]IDE Primary Master PIO[Auto]IDE Primary Slave PIO[Auto]IDE Primary Master UDMA[Auto]IDE Primary Slave UDMA[Auto]Om-Chip Secondary PCI IDE[Enabled]IDE Secondary Master PIO[Auto]IDE Secondary Master PIO[Auto]IDE Secondary Master PIO[Auto]IDE Secondary Slave UDMA[Auto]IDE Secondary Slave UDMA[Auto]IDE Secondary Slave UDMA[Auto]IDE Secondary Slave UDMA[Auto]#*** On-Chip Serial ATA[Auto]**** On-Chip Serial ATA[Auto]**** PATA IDE ModeSecondarySATA PortP0, P2 is Primary	Iten Help Menu Level →→ If your IDE hard drive supports block mode select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support		
Alight HoveEnter:Select+/-/PU/PD:ValueF10:SaveESC:ExitF1:General HelpF5:Previous ValuesF7: SetUp Defaults			





Phoenix -	- AwardBIOS CM SuperIO Devi	OS Setup Uti ce	ility		
Onboard Serial Fort 1	t 1 [3F8/IRQ4]		Iten Help		
Onboard Serial Port 2 Onboard Parallel Port Parallel Port Mode EPP Mode Select ECP Mode Use DMA Onboard Serial Port 3 Onboard Serial Port 4 Onboard Serial Port 5 Onboard Serial Port 6	L2F8/IRQ3] [378/IRQ7] [ECP+EPP1 [EPP1.9] [3] [4E0/IRQ10] [4E8/IRQ11] [4F0/IRQ5] [4F8/IRQ11]		Menu Level	<b>₩</b>	
1↓→+:Move Enter:Select +/- F5:Previous Value	-/PU/PD:Value s	F10:Save F F7: SetUp	ESC:Exit F1:0 Defaults	General	Help

Figure 8: SuperIO Device Screen

# **Power Management Setup**

## **PCI Express PM Function**

PCI Express PM Function: Disabled or Enabled ACPI Function: Disabled or Enabled ACPI Suspend Type: S1 (POS)

Power Management: User Define, Min Saving or Max Saving Video Off Method: Blank Screen, V/H SYNC + Blank or DPMS Video Off In Suspend: No or Yes Suspend Type: Stop or PwrOn Suspend MODEM Use IRQ: NA, 3, 4, 5, 7, 9, 10 or 11 Suspend Mode: There are different mode as following for options

Table: Different Suspend Mode for options			
Disabled	1 ~ 2 Min	2 ~ 3 Min	4 ~ 6 Min
8 ~ 10 Min	12 ~ 14 Min	20 ~ 22 Min	30 ~ 33 Min

HDD Power Down: There are Disabled or 1 Min ~ 7 Min different timing for options Soft-Off by PWR-BTTN: Instant-Off or Delay 4 Sec. PowerOn by LAN, PowerON by Modem and PowerOn by Alarm: Disabled or Enabled Primary IDE 0 / 1, Secondary IDE 0 / 1: Disabled or Enabled FDD, COM, LPT Port, PCI PIRQ[A-D]#: Disabled or Enabled PWRON After PWR-Fail: Off, On or Former-Sts

Phoenix - AwardBIOS CMOS Setup Utility Power Management Setup			
PCI Express PM Function     OCPL Expression	[Press Enter]	Item Help	
ACP1 Suspend Type	[S1(POS)]	Menu Level 🕨	
Power Management Video Off Method	[DPMS]		
Video Off In Suspend Suspend Type	[Yes] [Stop Grant]		
MODEM Use IRQ Suspend Mode	[3] [lisabled]		
HDD Pover Down	[Disabled]		
PowerOn by LAN	[Disabled]		
PowerUn by Moden PowerUn by Alarn	[Disabled]		
x Date(of Month) Alarm x Time(hh:mm:ss) Alarm	0 8:0:0		
** Reload Global Timer Ex	vents **		
Primary IDE 0		<u> </u>	
↑↓→+:Move Enter:Select +/- F5:Previous Value	-/PU/PD:Value F10:Save es F7: Set	e ESC:Exit F1:General Help tUp Defaults	

Figure 9-1: Power Management Setup Screen



# **PnP/PCI** Configurations

Reset Configuration Data: Disabled or Enabled Resources Controlled By: Auto(ESCD) or Manual

Phoenix — AwardBIOS CMOS Setup Utility PnP/PCI Configurations			
Reset Configuration Data [Disabled]	Iten Help		
Resources Controlled By [Auto(ESCD)] x IRQ Resources Press Enter	Menu Level ► Default is Disabled. Select Enabled to reset Extended System Configuration Data ESCD> when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot		
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Sau F5:Previous Values F7: So	ve ESC:Exit F1:General Help etUp Defaults		
Figure 10: PnP/PCI Configurations Screen			

# **PC Health Status**

# **CPU Warning Temperature**

Table: Different CPU Warning Temperature for options				
Disabled	<b>50</b> °C/ <b>122</b> °F	<b>53</b> °C/ <b>127</b> °F	<b>56°</b> C <b>/133</b> °F	
<b>60</b> °C <b>/140</b> °F	<b>63</b> ℃/145°F	<b>66°</b> C <b>∕151</b> °F	<b>70</b> °C/ <b>158</b> °F	

# **Shutdown Temperature**

Table: Different Shutdown Temperature for options			
Disabled	<b>60</b> °C/ <b>140</b> °F	<b>65</b> °C/149°F	<b>70</b> °C/ <b>158</b> °F
<b>75</b> °C/167°F	<b>80°</b> C <b>∕176</b> °F	<b>85°</b> C <b>∕185</b> °F	<b>90</b> °C/194°F

# **FAN Duty Control**

There are four options as Full, 100%, 50% and 25%

Phoenix - AwardBIOS CMOS Setup Utility PC Health Status				
CPU Harning Temperature	[Disabled]			Iten Help
SYSTEM Temperature CPU Temperature SYSTEM FAN1 SPEED SYSTEM FAN2 SPEED Vcore +3.3V + 5 V +12 V VBAT(V) SVSB(V) Shutdown Temperature FAN Duty Control	34°C/ 93°F 29°C/ 84°F 8231 RPM 0 RPM 1.36 V 3.31 V 5.05 V 12.03 V 2.94 V 5.01 V [Disabled] [Full]		Menu Le	vel 🕨
 ↑↓→+:Move Enter:Select +/	-/PII/PD:Ualue	F10:Save	ESC:Exit	F1:General Heln
F5:Previous Values F7: SetUp Defaults				
Figure 11: PC Health Status Screen				

# Load SetUp Defaults

Press "Y" if you want to load BIOS default setting



Figure 12: Load SetUp Defaults Screen

# Set Password

Enter your password after "Enter Password:" as screen showing Press "**Enter**" key if you don't want to set password, "PASSWORD DISABLED!!!" will be showed on screen.



Figure 13: Set Password Screen

# Save & Exit Setup

Press " $\mathbf{Y}$ " if you want to SAVE your changed to CMOS and quit BIOS function. Press " $\mathbf{N}$ " if you want to continue the BIOS setting.



Figure 14: Save to CMOS and EXIT Screen

# **Exit Without Saving**

Press "**Y**" if you want to quit BIOS function without saving any changes which you did. Press "**N**" if you want to continue the BIOS setting.

Phoenix — Awar	dBIOS CMOS Setup Utility	
<ul> <li>Standard CMOS Features</li> <li>Advanced BIOS Features</li> <li>Advanced Chipset Features</li> <li>Integrated Peripherals</li> <li>Power Management S</li> <li>PnP/PCI Configurat</li> </ul>	▶ PC Health Status Load SetUp Defaults Set Password Save & Exit Setup ut Saving (Y/N)? N	
Esc : Quit F9 : Menu in BIOS ↑↓→ ← : Select Item F10 : Save & Exit Setup		
Abandon all Data		

Figure 15: Quit Without Saving Screen

# Chapter 5



Please note that the following troubleshooting guide is designed for people with strong computer hardware knowledge such as System Administrators and Engineers.

# **Touch Panel Does not Work**

- A) Check CMOS settings, COM3 needs to be "Enabled". The correct settings are "4E0" and "IRQ10".
- B) Check if there are no conflicts between COM3 IRQ10 and any other devices.
- **C)** Check if the ELO driver or the TouchKit driver has been properly installed. Or try to reinstall again (Please refer to the ELO driver installation or the TouchKit driver).
- D) Check if the ELO controller or the TouchKit driver on COM3 has been detected during the ELO driver or the TouchKit driver installation. If yes, then check if the flat cable from the ELO touch screen or the TOUCHKIT touch screen has been properly connected to the ELO controller or the TouchKit controller (Attention: Pin1 mark should be on the same side as the ELO controller).
- E) Check if the ELO controller Green LED is blinking?

If no, there is no DC+5V support for the ELO controller from the motherboard.

F) Touch screen controller could be defective or the touch panel could be defective.

# **ELO Touch Panel Cannot Calibrate Correctly**

- A) Please replace the ELO controller, and re-calibrate. If this works, change back to the original ELO controller, and re-calibrate.
- **B)** If the ELO touch panel still cannot calibrate correctly after changing to a new ELO controller, the touch panel may be not installed properly or it could be defective.

# LAN is not functioning properly

- A) Check if the LAN driver is installed properly. (Please refer to the LAN driver installation)
- B) Check if there are any IRQ conflicts.
- **C)** Check if the RJ45 cable is properly connected.
- D) The on board LAN chip could be defective.

# COM1, COM2, COM5, COM6 are not functioning properly

- A) Check if the I/O ports are enabled in the CMOS setup.
- B) Check if there are any IRQ conflicts.
- C) The motherboard could be defective.

# **Cash Drawer Port is not functioning properly**

- A) Make sure the pin assignment matches between the cash drawer and the RJ11 cash drawer port.
- **B)** Verify the digit I/O port address and bit are 2Eh (index port) and 2Fh (data port) respectively.
- **C)** The motherboard could be defective.

# USB device is not functioning properly

- A) Ensure that the USB controller is "enabled" in the CMOS setup.
- **B)** Ensure that the USB Legacy is "enabled" in the CMOS setup. (Windows 2000 \vdot Window XP Professional)
- C) Ensure that the USB Legacy is "Disabled" in the CMOS setup. (Embedded OS: Windows XP Embedded \circ Window CE. NET \ Linux RedHat 9)