User's Manual

Gladius Smart

15” All in one POS PC

(M/B: FH-5251)

Version 1.7

Copyright © 2012. All rights reserved.
All other brand names are registered trademarks of their respective owners.

Copyright Notice

This document is copyrighted, © 2012. All rights are reserved. FIRICH ENTERPRISES CO., LTD. has the right to make improvements of the product described in this manual at any time without notice.

No part of this manual may be reproduced, copied, translated, or transmitted in any form or by any means without the prior written permission from FIRICH ENTERPRISES CO., LTD.. Information provided in this manual is intended to be accurate and reliable. However, FIRICH ENTERPRISES CO., LTD. assumes no responsibility for its use, nor for any infringements upon the rights of third parties, which may result from its use.

The material in this document is for product information only and is subject to change without notice. While reasonable efforts have been made in the preparation of this document to assure its accuracy, FIRICH ENTERPRISES CO., LTD., assumes no liabilities resulting from errors or omissions in this document, or from the use of the information contained herein.

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 users 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℉) OR A BOVE 60°C (140°F). IT MAY DAMAGE THE EQUIPMENT.

Copyright

The information in this guide is subject to change without prior notice.

The manufacturer shall not be liable for technical or editorial errors or omissions contained herein, nor for incidental or consequential damages resulting from the furnishing, performance, or use of this material.

This manual contains information protected by copyright. No part of this manual may be photocopied or reproduced in any form without prior written consent from the manufacturer.

© 2012 All rights reserved.

The software described in this guide is furnished under a license agreement or nondisclosure agreement. The software may be used or copied only in accordance with the terms of the agreement.

Product names mentioned herein may be trademarks and/or registered trademarks of their respective companies.

First Edition May 2011

Table of Content

Chapter 1 7

Introduction 7

Gladius Smart Characteristics 7

A Quick Tour of GLADIUS SMART 9

GLADIUS SMART Dimension 10

Rear I/O Panel (with variety types of Second IO board) 11

Packing List 12

How to Use This Manual 13

Chapter 2 14

Hardware Setup 14

GLADIUS SMART Assembly 14

Access to jumper setting and RAM 14

1. Turn off system power 14

2. Remove four screws to detach the panel 14

3. Pull up the panel and access to M/B(Jumper setting please refer to the 4th chapter) 14

Adapter Installation 14

1. Turn off system power and unplug the cable 14

2. Remove one screw and iron kit 14

3. Change the adapter under the terminal and beware of the direction 15

4. Fix with a iron kit and one screw 15

5. Link the DC power connector to terminal 15

2.5" Hard Disk Drive Installation 15

Magnetic Card Reader Installation 16

VFD Customer Display Installation 17

Cash Drawer Installation 18

Chapter 3 19

Software Setup 19

Driver Download from FEC Website Model 19

Chipset Driver Installation 20

VGA Driver Installation 21

LAN Driver Installation 23

Audio Driver Installation 24

ELO Touch Installation 25

ELO Control Panel 28

EETI TouchKit Tools Installation 31

TouchKit Control Panel 34

Wireless LAN Driver Installation 35

Chapter 4 37

Specifications ***37***
Gladius Smart Specifications *37*
I/O Pin Definition *38*
Jumper Setting *41*
Chapter 5 **50**
Troubleshooting ***50***
Power is on, but there is no Panel Display *50*
Cannot Detect HDD *50*
Touch Panel does not Work *50*
ELO Touch Panel Cannot Calibrate Correctly *50*
Second LCD Panel is Not Functioning Properly *51*
PS/2 Keyboard is not functioning normally *51*
MCR is not functioning properly *51*
VFD Display is not functioning properly *51*
LAN is not functioning properly *52*
COM1 and COM2 are not functioning properly *52*
Cash Drawer Port is not functioning Properly *52*

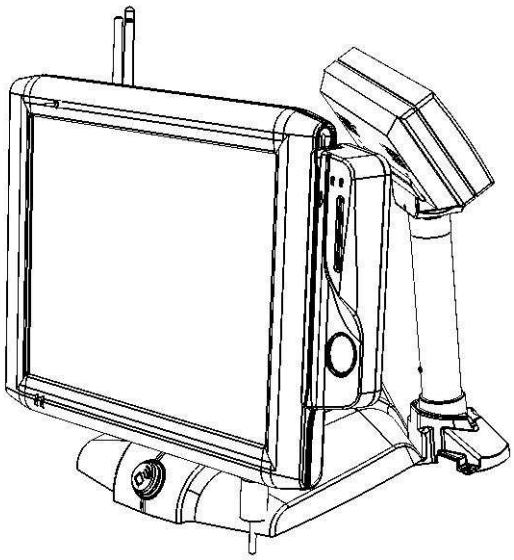
Chapter 1

Introduction

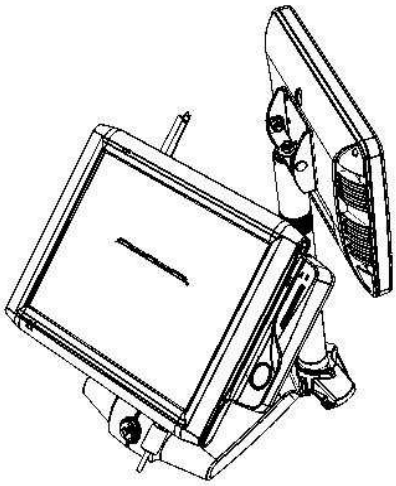
Gladius Smart Characteristics

Gladius Smart is a flagship system of FIRICH ENTERPRISES CO., LTD. All-in-one fan-less POS solution. The extensible, robust and fan-less design makes it a perfect solution for retail and hospitality market.

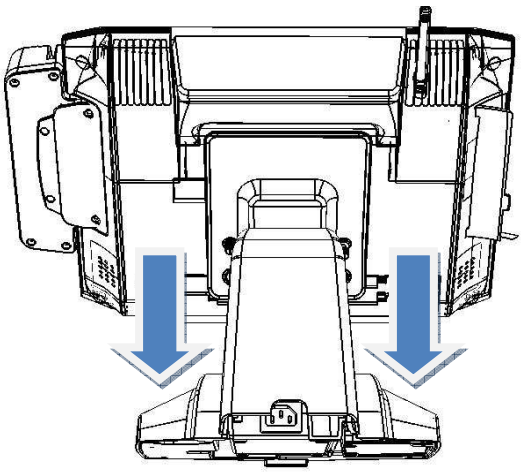
- **System:** A high speed fan-less processor enables to process a high capacity of data efficiently.
- **Housing:** The solid aluminum housing dissipates the heat inside the system and makes it a perfect fan-less solution; additionally it also assures the compliance to EMI radiation testing.
- **Display**: The LCD display can be tilted at multiple angles for operator ease of use.
- **Extensibility:** It can be adapted to a variety of uses with the addition of any of the following options: Magnetic Card Reader, VFD/LCD customer display and Cash drawer, biometric reader and a wide variety of USB devices (all available upon request)



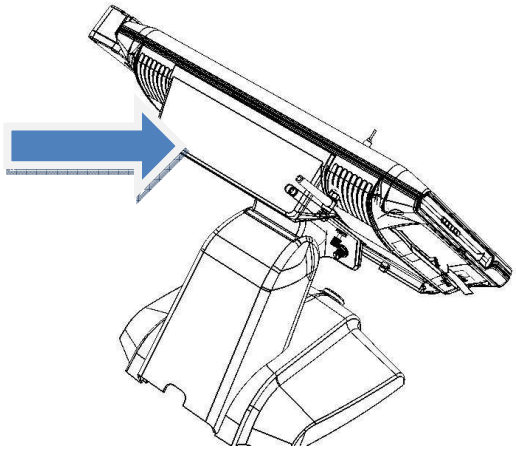
Gladius Smart with VFD



Gladius Smart with 2nd Display



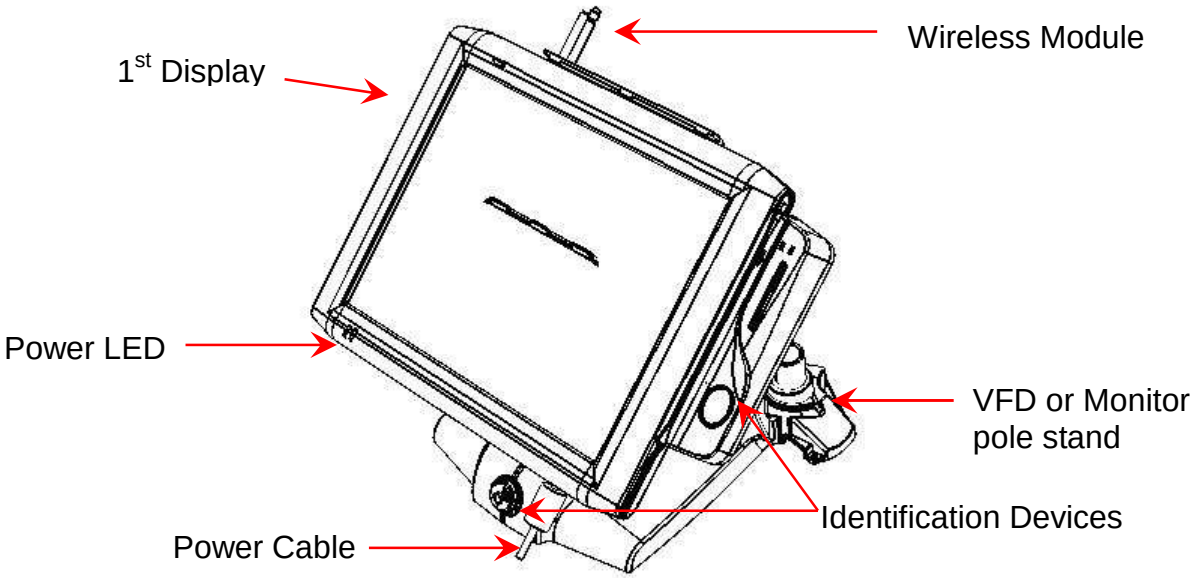
Detachable Stand

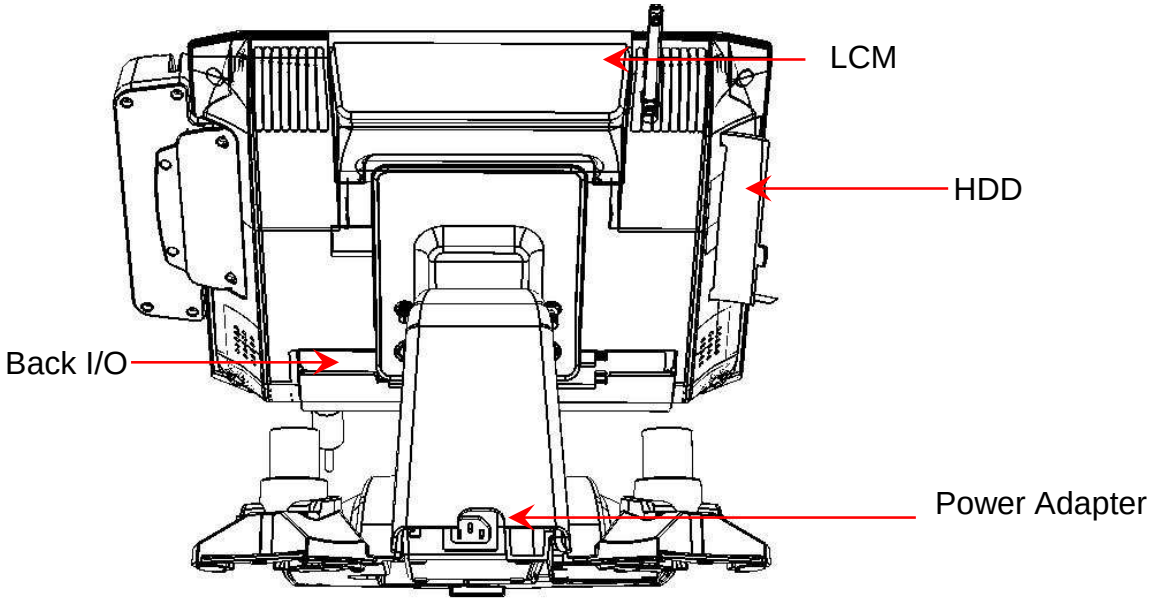


Optional LCM

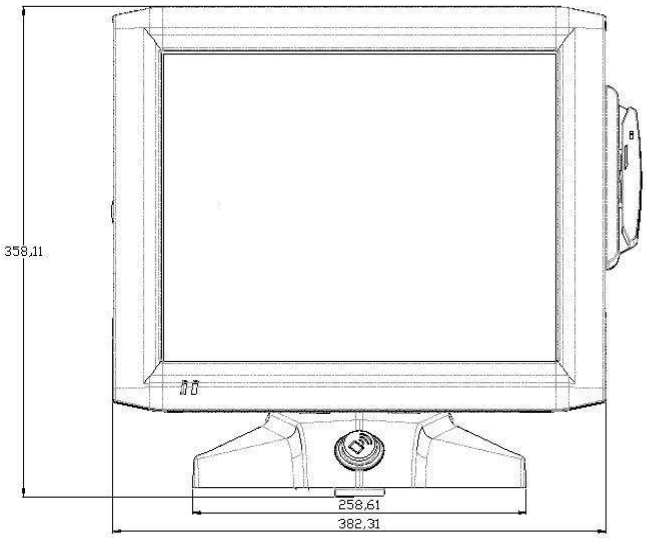
A Quick Tour of GLADIUS SMART

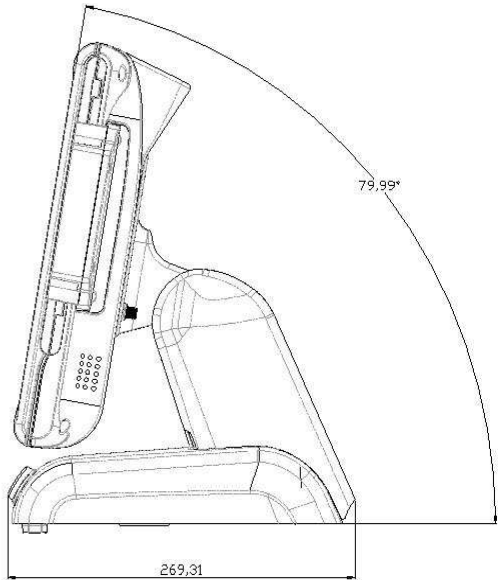
Before you start, please take a moment to become familiar with **GLADIUS SMART**.





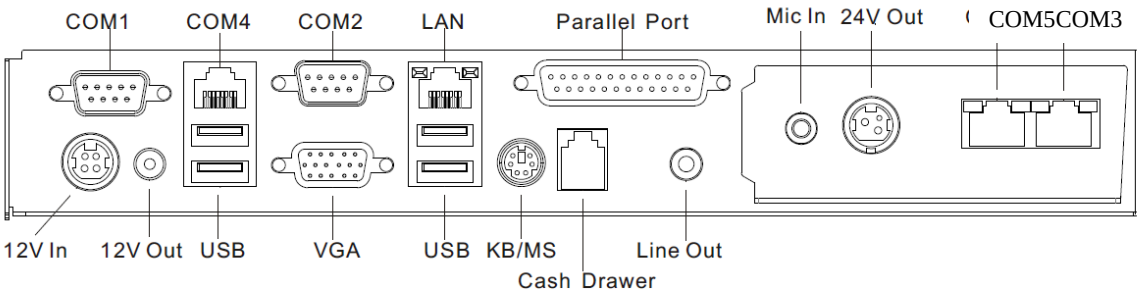
GLADIUS SMART Dimension





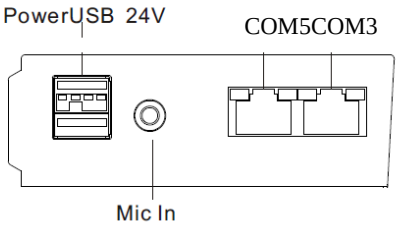
Rear I/O Panel (with variety types of Second IO board)

Gladuis Smart I/O

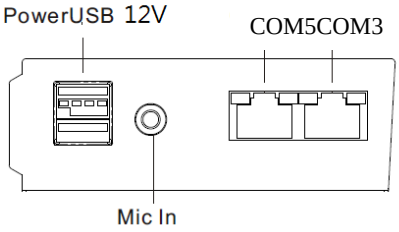


second I/O-A

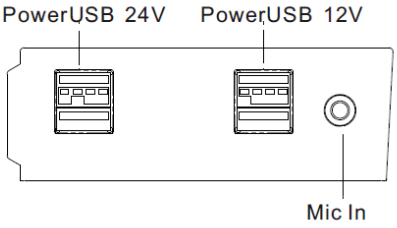
second I/O-B



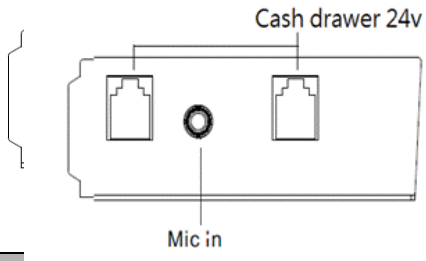
second I/O-C



second I/O-D



second I/O-E



I/O Port	Connector Type	Description
Power	DC Power Connector	Connects Gladius Smart to the power supply.
USB	USB	The USB (Universal Serial Bus) port can be used to connect USB devices.
LAN	LAN RJ45 Connector	The LAN port is used to hook Model H700 to a local area network.
KB/MS	PS/2 Connector	The K/B or Mouse port for an external keyboard.
COM1 **COM2**	RS232 Connector	The serial ports COM1/COM2 can be used to connect serial devices
VGA	15 PIN VGA Connector	The Ext VGA port is used to attach an external 2nd Panel display or CRT monitor.
DC 12V Out	2 PIN Socket	This is used for the 2nd Panel display.
DC 24V Out	3 PIN Socket	24V power out support
Cash Drawer	RJ11 Connector	Cash Drawer Connector, 12 V Actuation support for solenoid.
Cash Drawer 24V (Optional)	RJ11 Connector	Cash Drawer Connector, 24V as default

COM4/COM5 /COM3(Optional)	RJ45 Connector	COM4 is used for VFD, the rests are optional to connect to other devices
Power USB 12V /24V(Optional)	USB	12V/24V power out support
Line Out	Earphone Connector	The audio port is for speakers.
Mic In(Optional)	Microphone Connector	This is used for allowing usage of microphone
LPT1	26 PIN SCSI II Connector	The parallel port LPT1 can be used to connect parallel devices, such as a printer.

Packing List

- Main System x 1
- Power Adaptor x 1 / AC Power Cord x 1

How to Use This Manual

This manual contains all the information you need to set up and use Gladius Smart. In addition, you can also refer to the manuals for the operating system and added hardware.

Chapter 1 Provides an introduction to Gladius Smart and this manual.

Chapter 2 Provides all necessary information for all hardware setup.

Chapter 3 Provides the necessary information for installing the Intel Chipset driver, Video drivers and the touch screen tools, Audio, USB and LAN drivers.

Chapter 4 Lists all Gladius Smart specifications and information for the I/O board configuration.

Chapter 5 Troubleshooting of Gladius Smart

Chapter 2

Hardware Setup

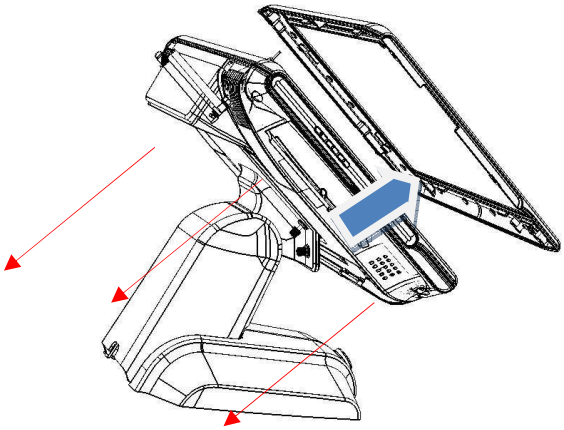
GLADIUS SMART Assembly

Please make sure that the system power is turned off and the power supply is disconnected when making any hardware changes to GLADIUS SMART.

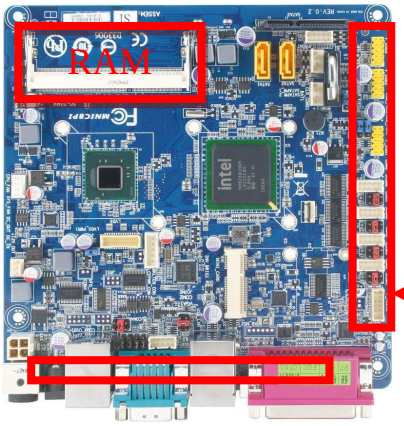
Access to jumper setting and RAM

1. **Turn off system power**

2. **Remove four screws to detach the panel.**



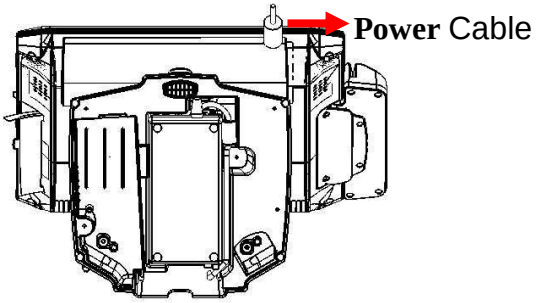
3. **Pull up the panel and access to M/B(Jumper setting please refer to the 4th chapter)**



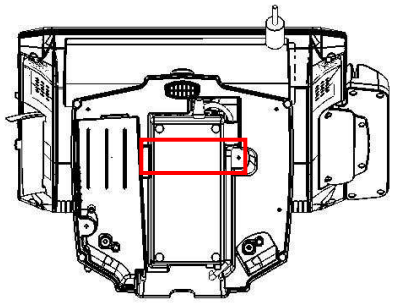
Adapter Installation

1. **Turn off system power and unplug the cable**

2. **Remove one screw and iron kit**

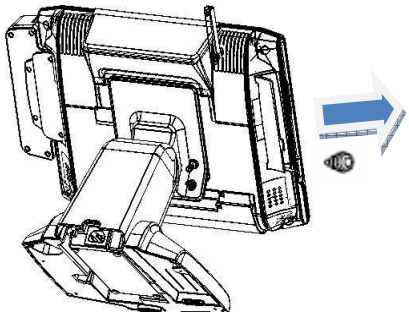


3. **Change the adapter under the terminal and beware of the direction**
4. **Fix with a iron kit and one screw**
5. **Link the DC power connector to terminal**

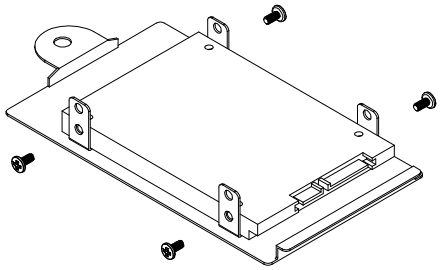


2.5” Hard Disk Drive Installation

1. **Turn off system power**
2. **Open the cover on the left of terminal and turn off system power**
3. **Remove one screw**



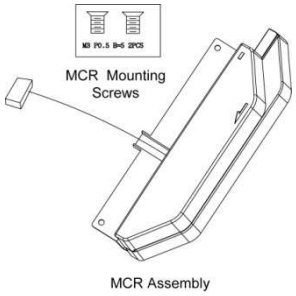
4. **Pull out whole HDD bracket**
5. **Mount SATA HDD into the bracketed space with 4 screws provided.**
6. **Put the bracket back and lock back the screw**



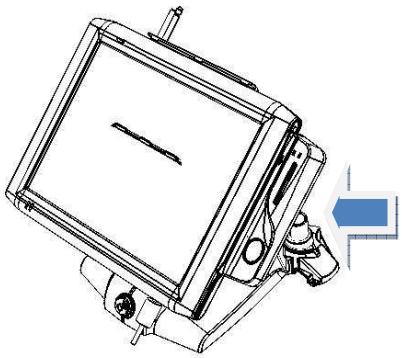
Note: If the HDD does not work normally, please refer to **troubleshooting**

Magnetic Card Reader Installation

1. **Turn off system power.**



2. **The MCR socket can be found on the right side of terminal**
3. **Attach the MCR Assembly to terminal and connect the MCR cable to the MCR socket.**
4. **Lock MCR to terminal with 2 screws.**



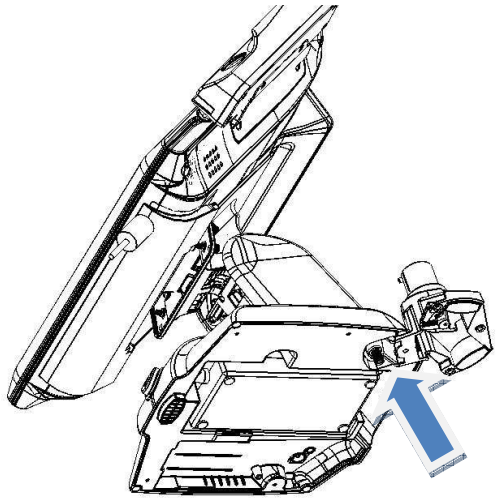
Note: If the MCR does not work normally, please refer to **troubleshooting**.

MCR Parameter Modification

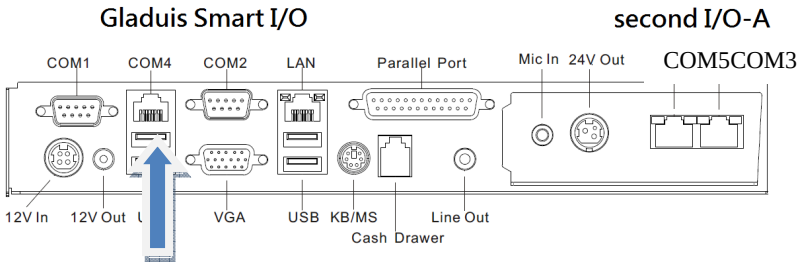
This option is for users who need to customize the MCR parameters for a particular task.
The MCR parameters can be modified by using the supplied utility program.
The utility can be found on the DVD that came with your system in the "\Utilities\USB MSR\Software" folder. The program name is HID_MSR_PSW00003.exe.
And the utility user manual can be found in "\Utilities\USB MSR\Documents\ HidMsrUserManual_TM970001.pdf."

VFD Customer Display Installation

1. **Turn off system power.**
2. **<u>Important</u>, make sure that the jumpers on the I/O board are set correctly. It's important to note that the supply voltage for the VFD customer display is set to +12V. If an LCD customer display is chosen, please change it to +5V.**
3. **Please refer to jumper setting in the 4th chapter.**
4. **Attach the VFD Mounting stand to the terminal and lock with one screw**



5. **Connect the VFD RJ45 cable to COM4 on the I/O board**



6. **Turn on VFD power switch and turn on system power.**

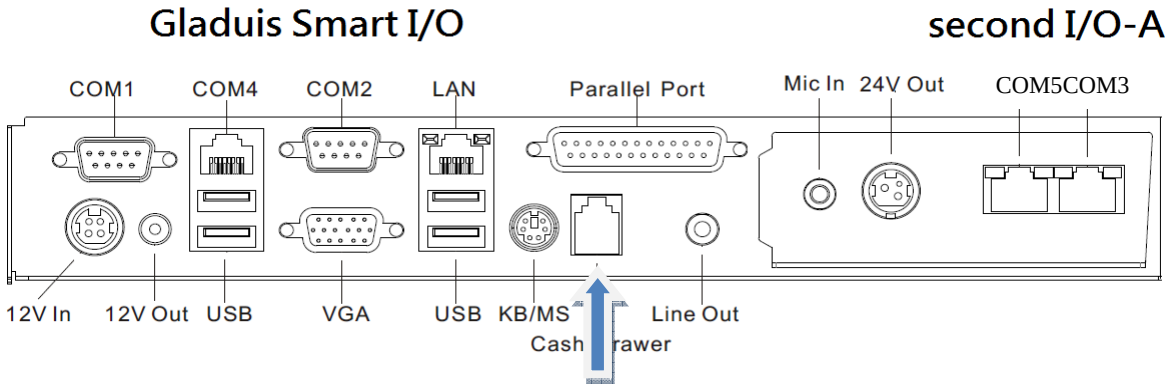
Note: If the VFD does not display correctly after an application is loaded, please refer to **<u>troubleshooting</u>.**

Cash Drawer Installation

Before connecting the cash drawer to the **GLADIUS SMART**, please make sure the drive voltage and cable pin assignment of the cash drawer matches the definition of the cash drawer port of **GLADIUS SMART**.

For programmers, please refer to the folder “Utility” → “Cash Drawer” in the driver DVD, where you may find the test programs and DLL Library files for your application.

Plug cash drawer cable into cash drawer port.



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

Up to two cash drawers may be driven from this port. Driving voltage of the solenoid is DC+12V. I/O port 284 is used for drawer operation. A test program is supplied, for Linux and Windows, source code of which is available on request by software developers.

Value	Description
0x284	Output address.
0x284 read 8bit	Bit 2 => 0: low 1: high
0x200	Sleep 200ms
0x01	Open cashdrawer1 value.
0x02	Open cashdrawer2 value.
0x04	Close cash-drawer value.
0x04	Cash-drawer status mask.

Chapter 3

Software Setup

Driver Download from FEC Website Model

A: Please go to FEC website and download Gladius Smart(AL-7435) driver.

B: The installation sequence: Chipset Driver -> VGA Driver -> LAN Driver -> Audio Driver - >Touch Driver ->Other Driver (optional)

C: Then, you can start to install.

Please follow this installation sequence accordingly.

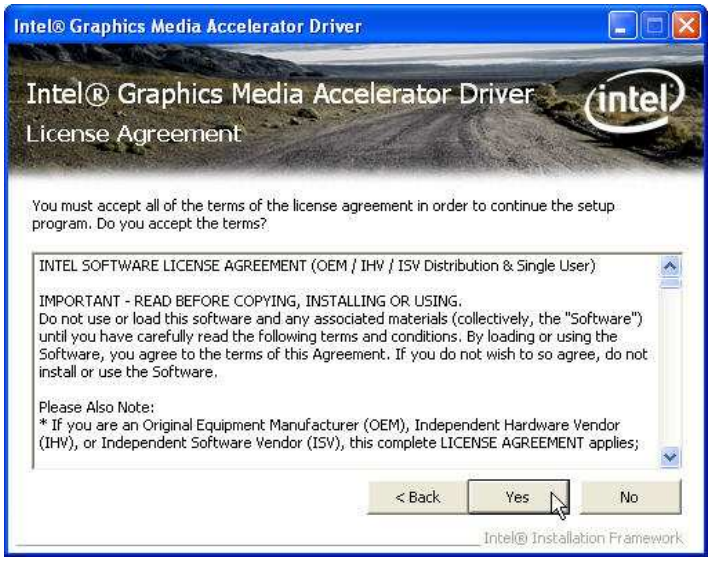
Chipset Driver Installation

Intel ATOM D525 Chipset Installation Utilities for Windows XP

Step 1. Please download the Intel chipset driver from website.

Step 2. Click Next

Step 3. Read the License Agreement and click **Yes**.



Step 4. Click **Next** and the drivers for the Intel Chip set will install.

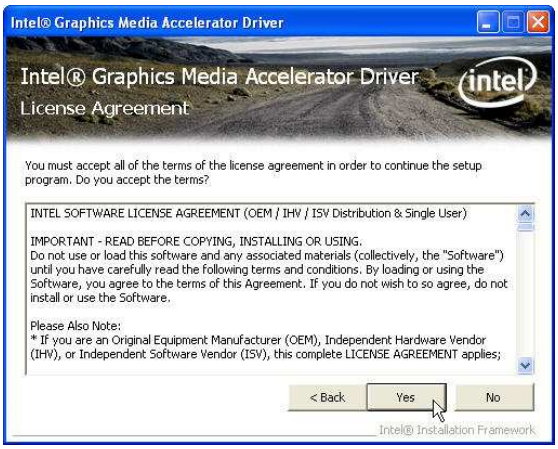
Step 5. Please wait while the setup program processing.

Step 6. When the 'Setup COMPLETE' message appears click **Finish** to restart your computer.

VGA Driver Installation

Step 1. Please download the VGA driver from website

Step 2. Click Next and click Yes of License Agreement Page

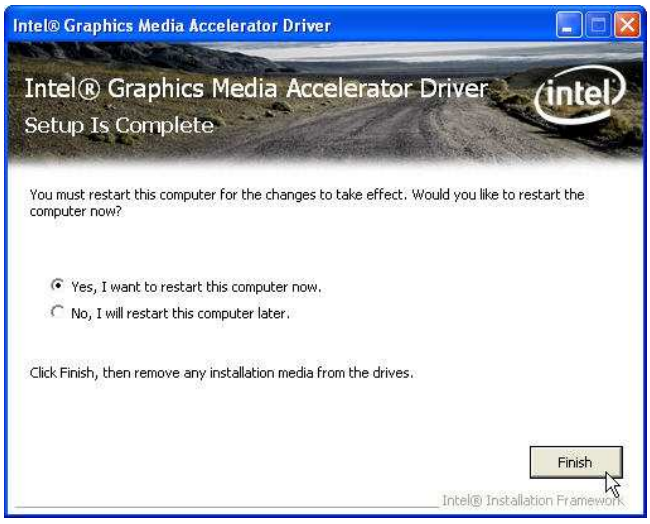


Note:

When installing the IEGD driver for VGA under POSready 2009, the default setting is 800x600 with Clone mode; if you need to use Extension Mode, please set the 2nd panel as primary as below. (**Warning: After you set the panel to Extension Mode, it won't be available to set back to Clone Mode due to the driver issue.**)

Step 3. Select **Next** to continue driver installation.

Step 4. Finally, **Finish** and **Restart** the system

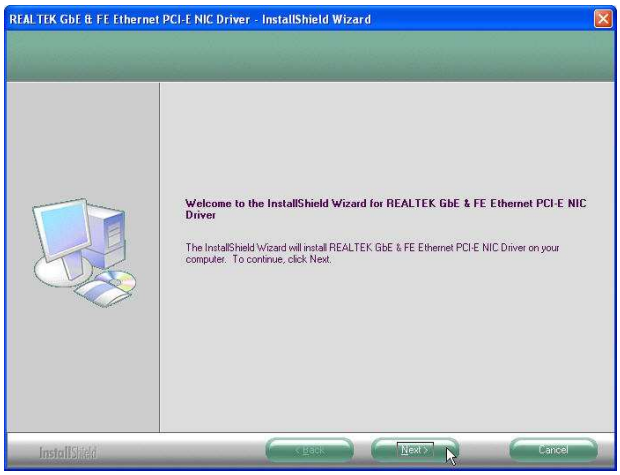


LAN Driver Installation

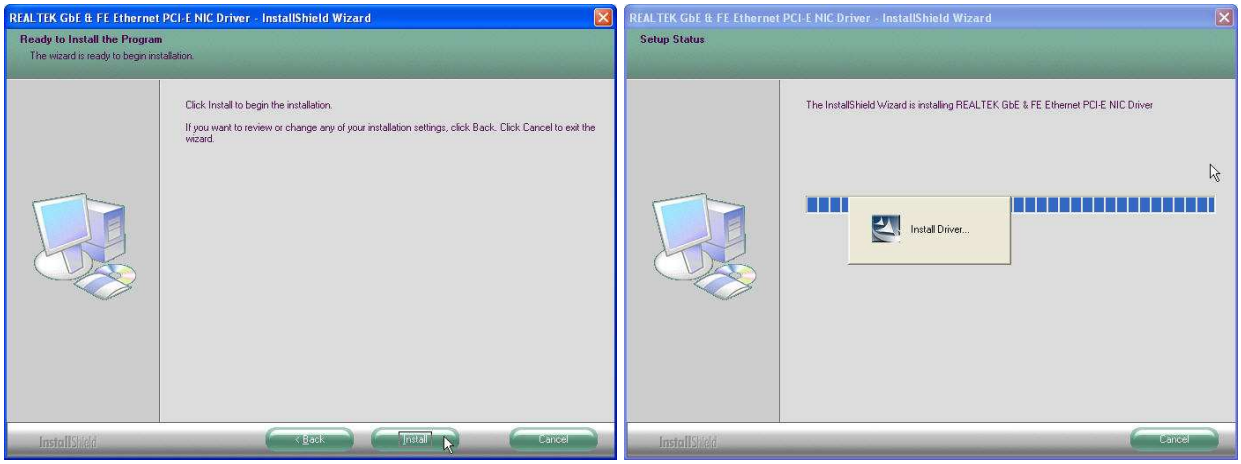
Step 1. Please double confirm the LAN driver from website.

Step 2. Click “Next” to continue

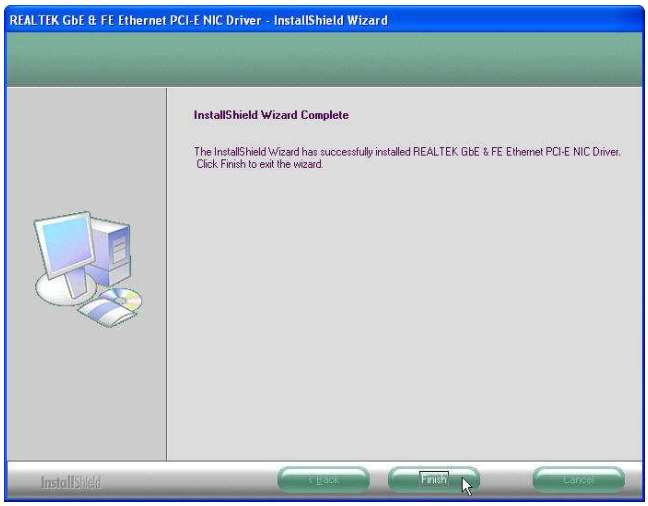
Step 3. Click “Next” to continue



Step 4. Click **Next** to continue



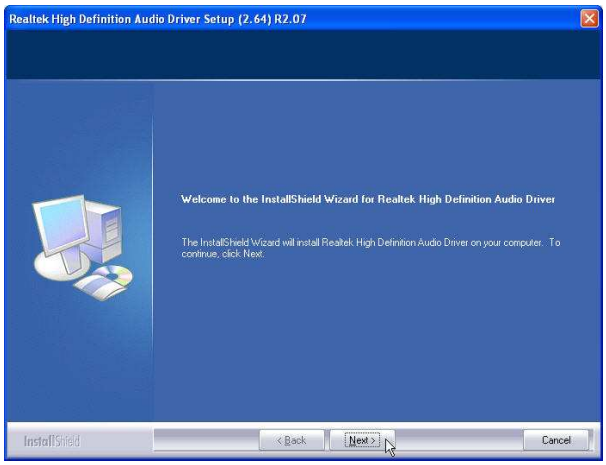
Step 5. Click **Finish** to complete the installation procedure.



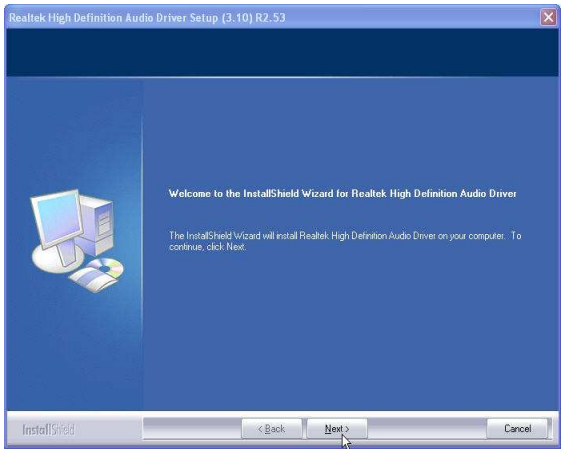
Audio Driver Installation

Step 1. Please download the Audio driver from website.

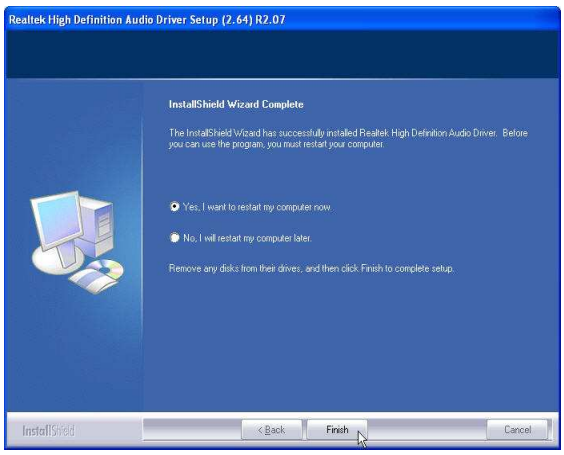
Step 2. Click “Next” to continue



Step 3. Click **Next** to continue.



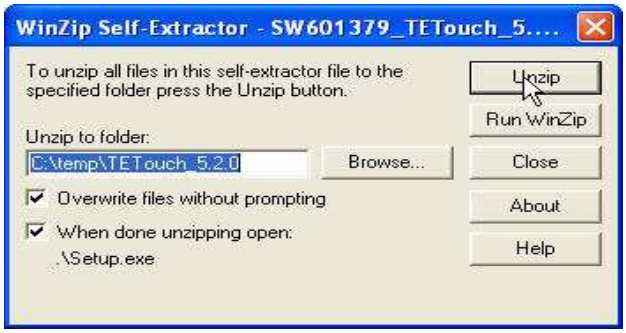
Step 4. Click **Finish** and restart the system.



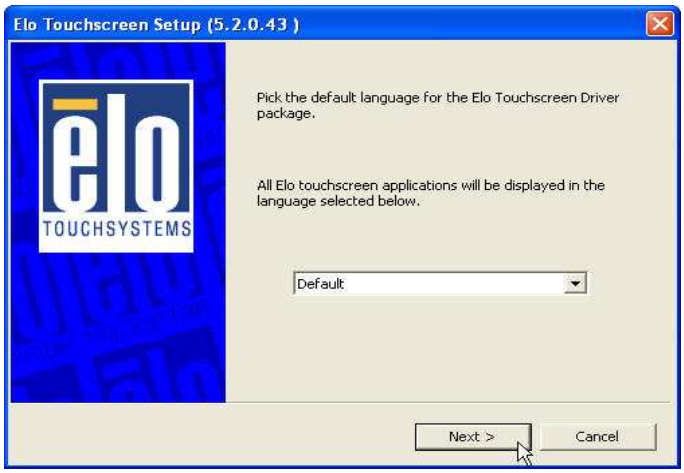
ELO Touch Installation

Step 1. Please double confirm the ELO driver from website

Step 2. Click “OK” to continue unzip the driver(for latest version, please reference to FEC website)

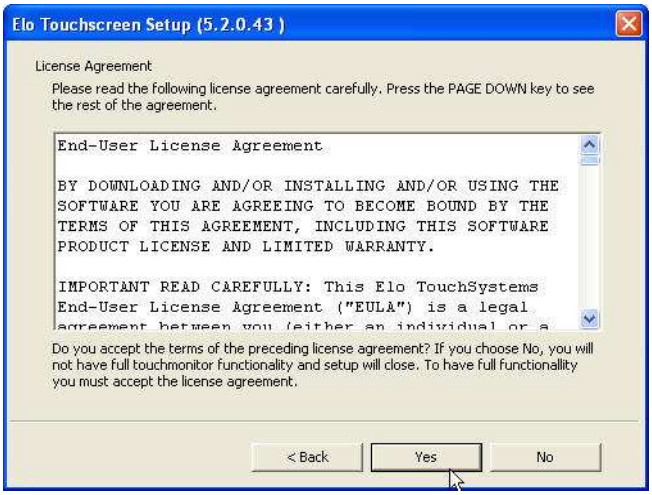


Step 3. Install Elo Touch drivers and utilities.

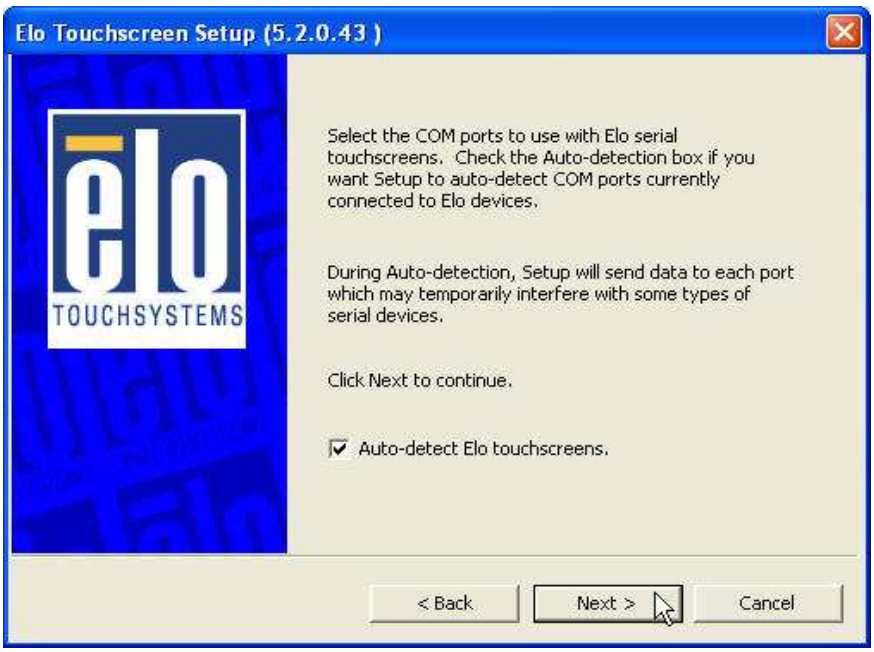


Step 4. Tick the Install **USB** Touchscreen Drivers and click Next to continue

Step 5. Read the **"License Agreement"** and click **Yes** if you accept it.

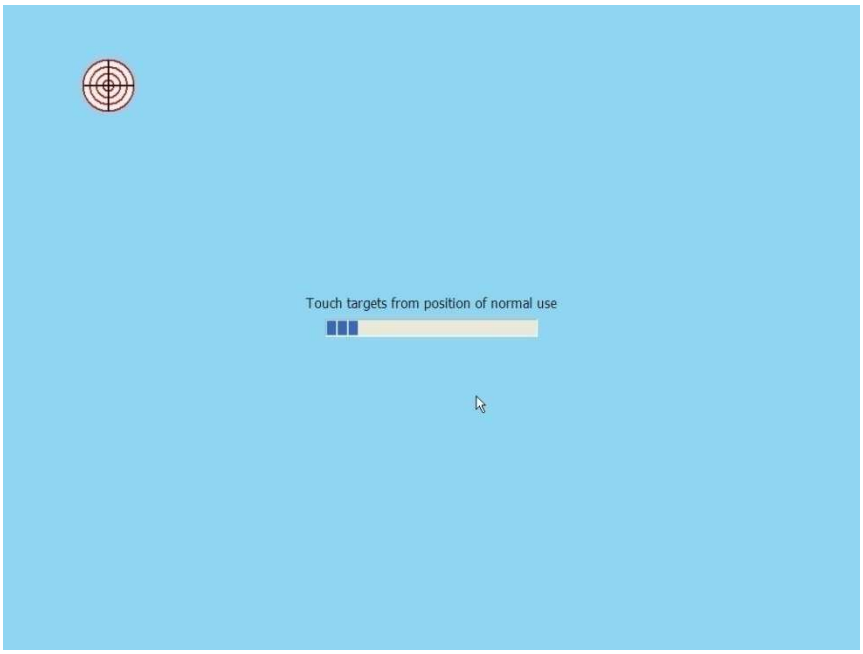


Step 6. Select **“Auto-detect Elo devices.**” and click **Next.**



Step 7. Click **Calibrate Elo Touchscreen monitors**

Step 8 . Using a soft tip object such as finger to calibrate the touch screen (Red bull's eye will pop up three time on different position)



ELO Control Panel

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

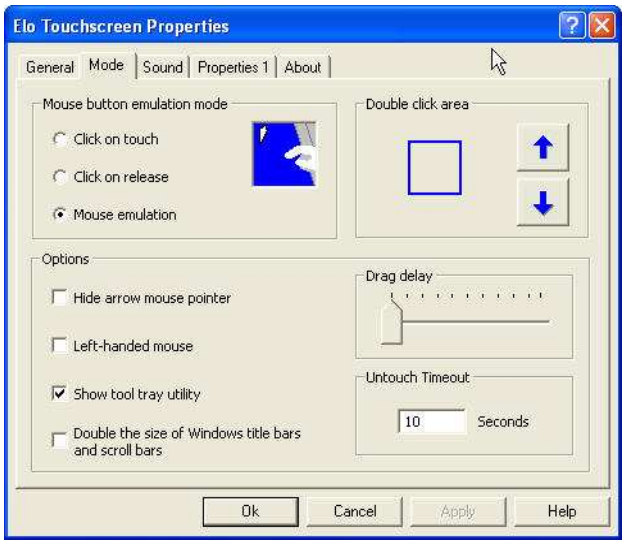
General tab

The General tab allows you to calibrate the touch screen with the **Align** button.

Mode tab

The Mode tab allows you to:

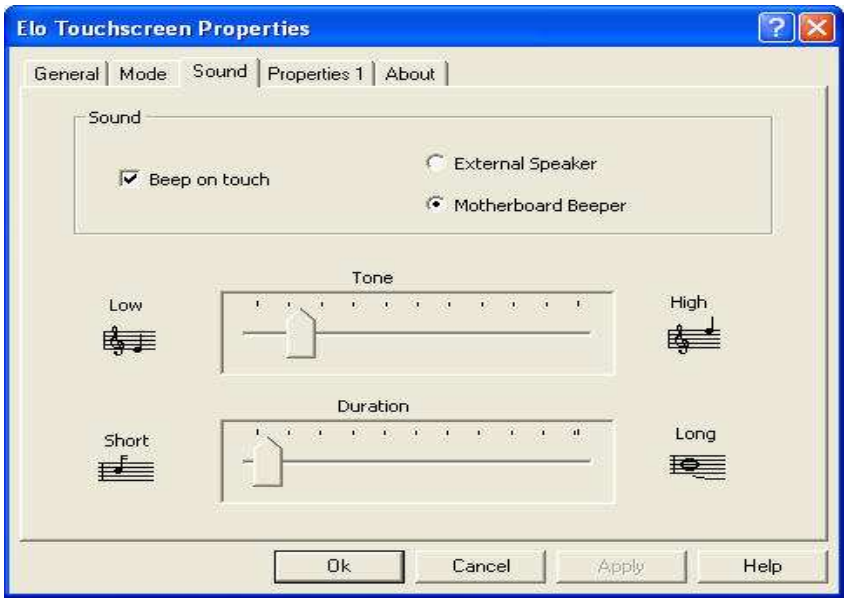
- Adjust all mouse emulation controls.
- Change cursor properties
- Enable or disable right mouse button utility.



Sound tab

The Sound tab allows you to:

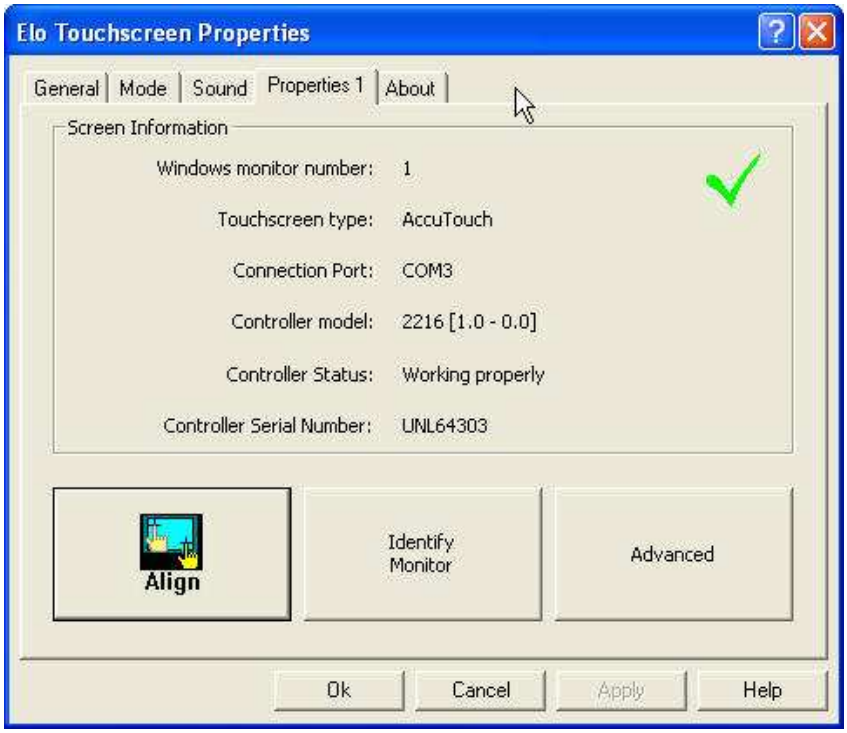
- To change sound properties for ELO touch tools.



Properties tab

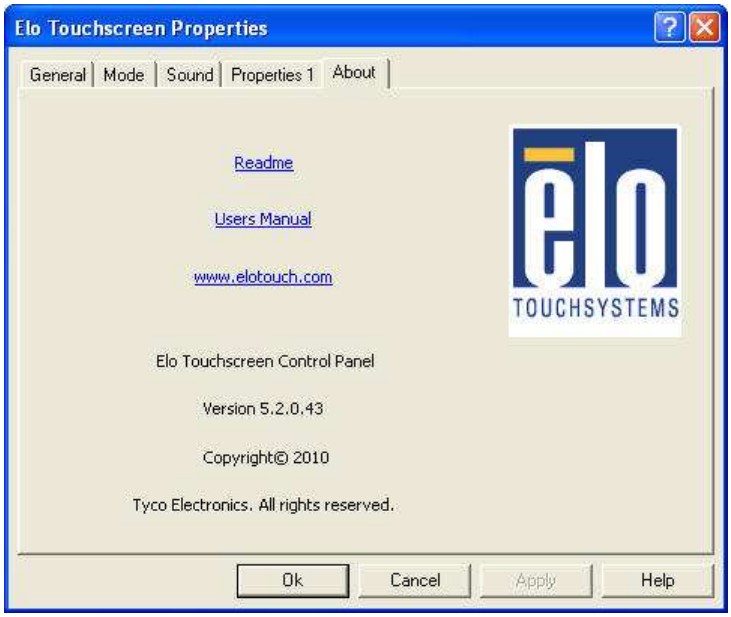
The Properties tab allows you to:

- View Controller Information.



About tab

The About tab displays Information about ELO Touch systems

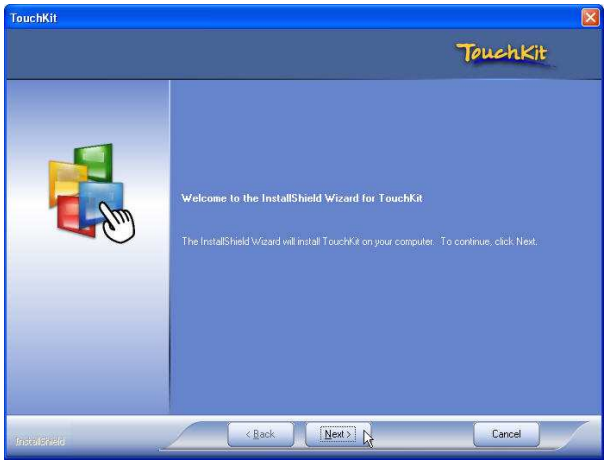


EETI TouchKit Tools Installation

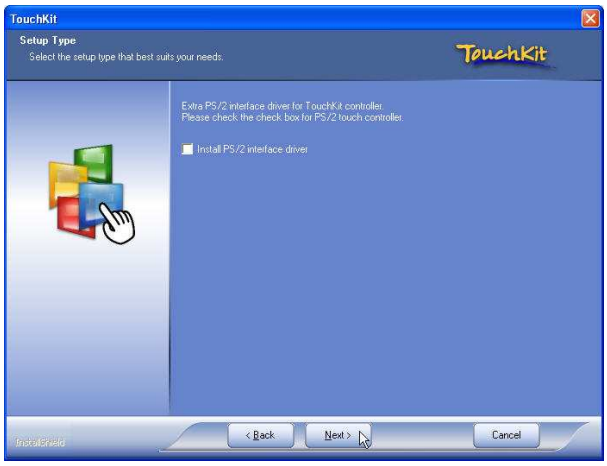
Step 1. Please double confirm the EETI driver downloaded from website

Step 2. Click “OK” to continue unzip the driver

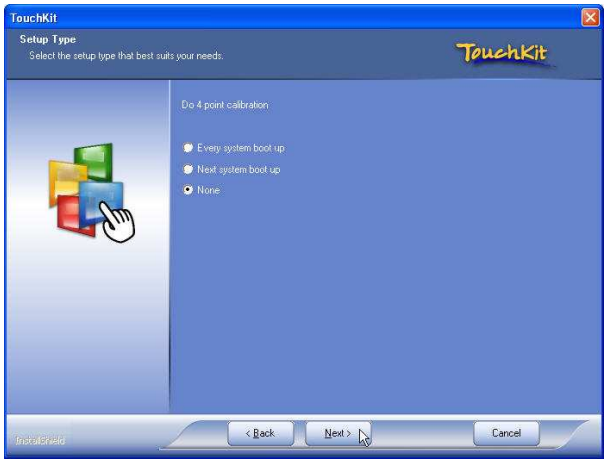
Step 3. Open Setup.exe



Step 4. Click Next



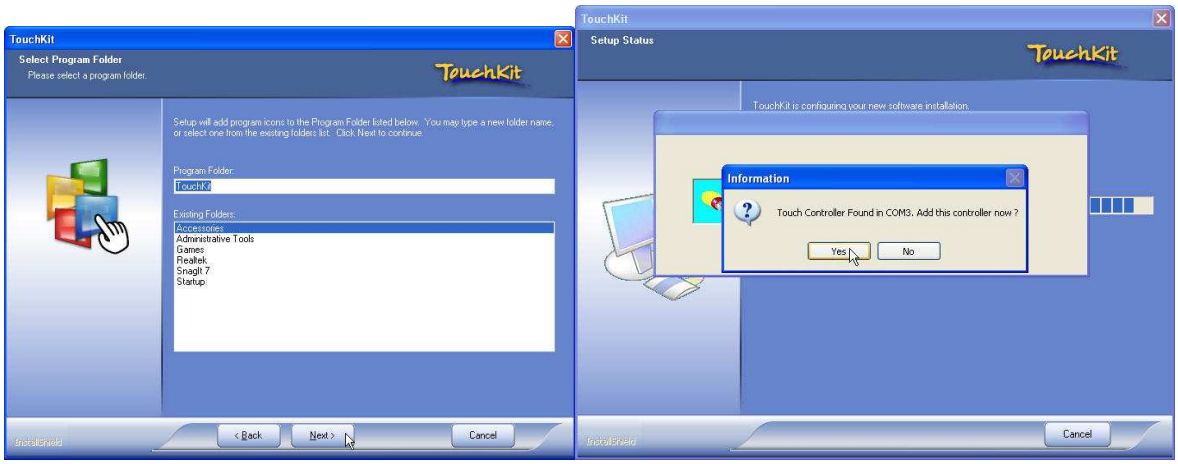
Step 5. Click Next



Step 6. Click **OK** to close the pop-up dialog.

Step 7. Click “Support Multi-Monitor System” and then Next to continue.

Step 8. Click Next



Step 9. Click **OK** and turn off the computer to restart your system again.

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

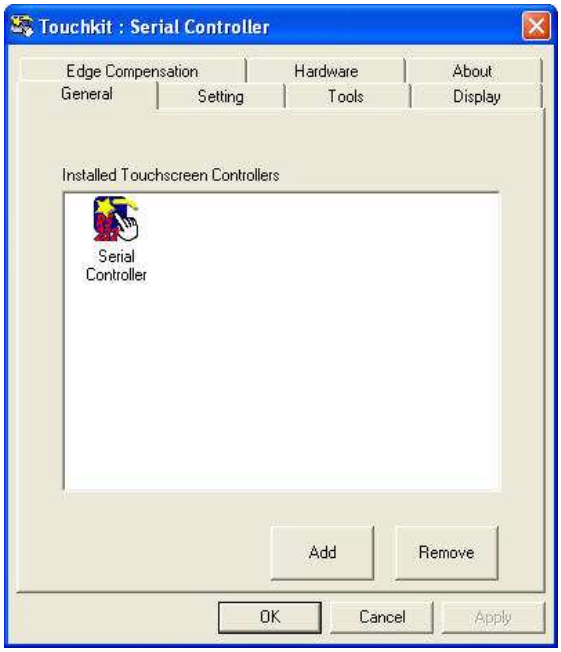
TouchKit Control Panel

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

General tab

The general tab allows you to:

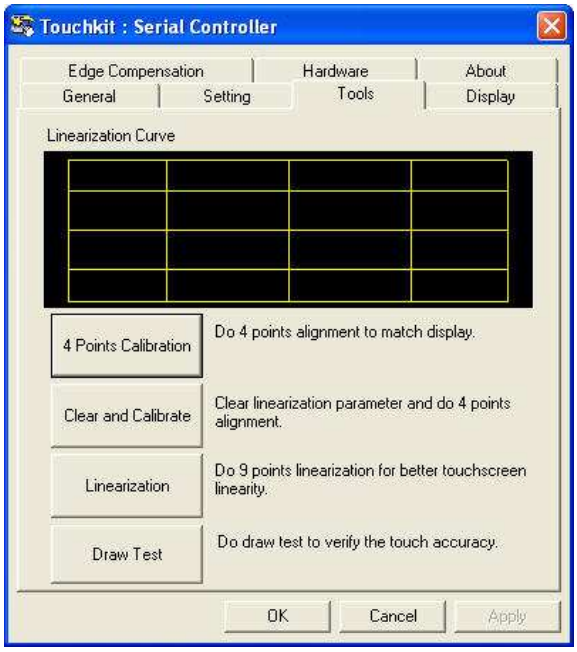
- Manage the touch screen controller you installed.



Tools tab

The tools tab allows you to:

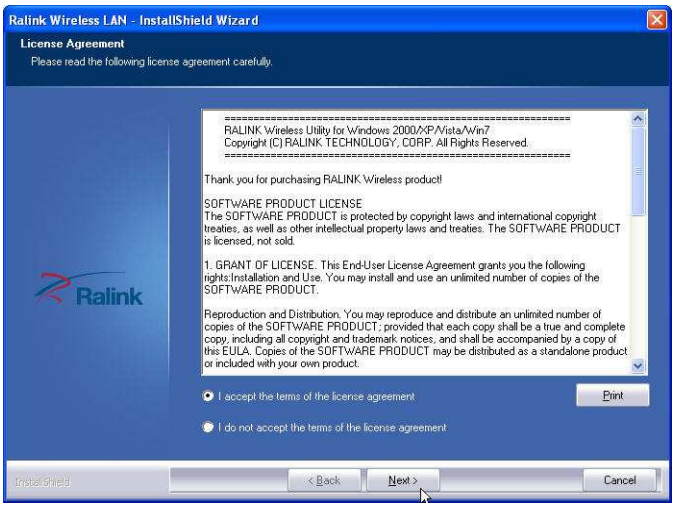
- Calibrate the touch screen with the **4 Points Calibration** button.



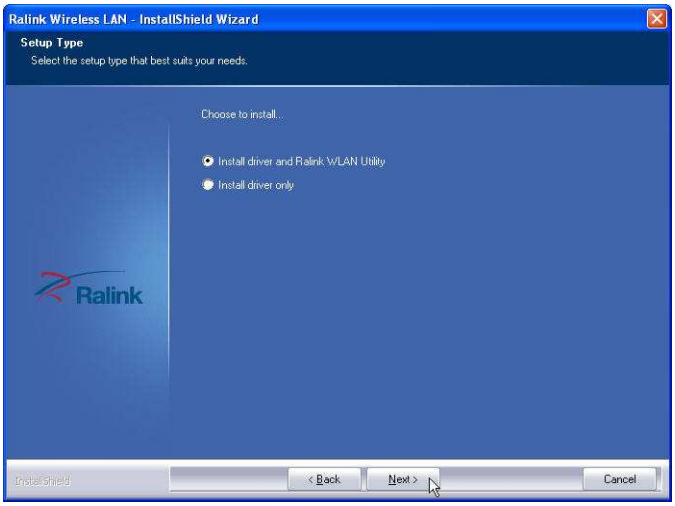
Wireless LAN Driver Installation

Step 1. Please double confirm the Wireless LAN driver from website.

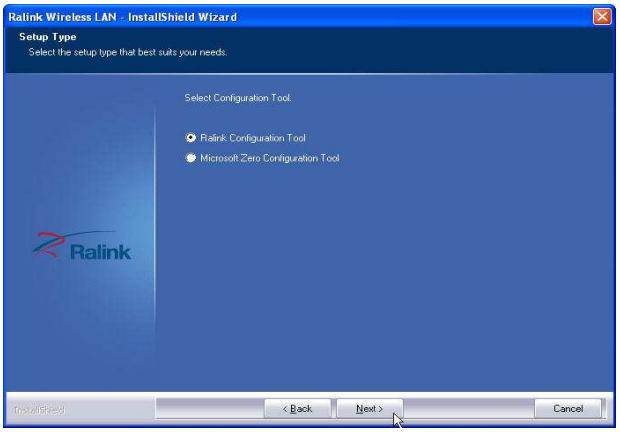
Step 2. Click “Next” to continue



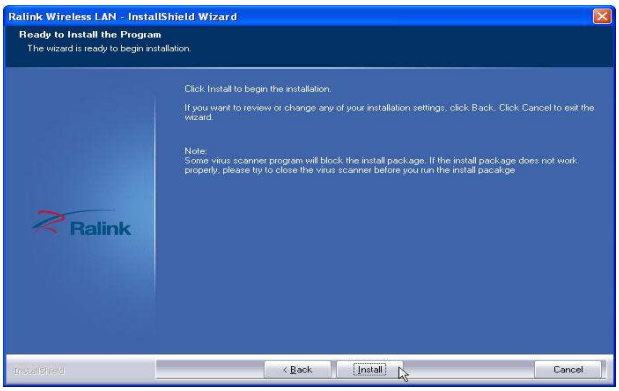
Step 3. Select Install driver and Ralink WLAN Utility



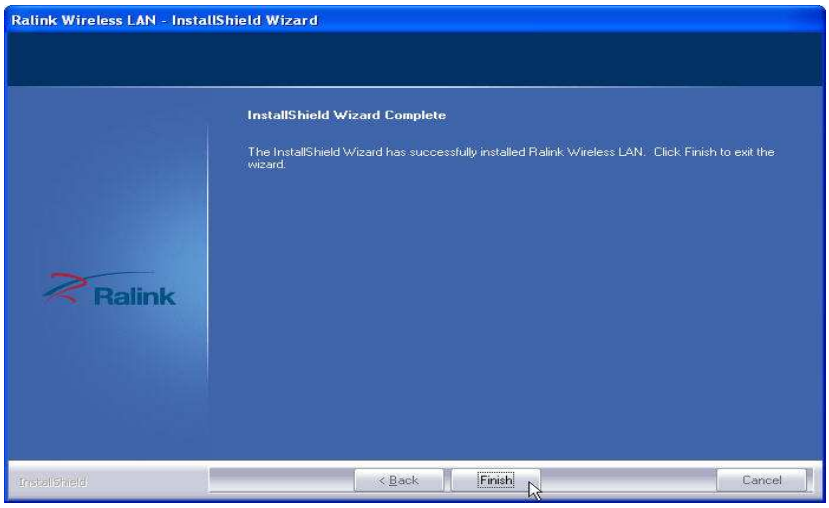
Step 4. Select **“Ralink Configuration Tool”**Select **“Optimize for WiFi mode”**



Step 5. Select **Install** to continue



Step 6. Select **Finish** to complete the installation



Chapter 4

Specifications

Gladius Smart Specifications

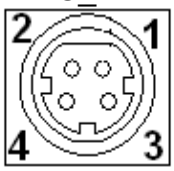
System Configuration	
Processor	Intel D525 1.8GHz (Dual Core, L2 cache 1MB)
Chipset	D525+ICH8M
Memory	1 x DDRIII 800MHz SO-DIMM (Up to 4GB)
Size / Resolution	15" LED / 1024 x 768 / 100K hrs (Option: CCFL / 1024 x 768 / 30K hrs)
Brightness	450 nits (Option:250 nits)
Touch Screen	5w Resistive touch
Serial Port	2 x COM ports (DB-9 male) 1 x COM port (RJ-45) for Customer display (Option: 2 x COM port (RJ-45))
Parallel Port	1 x Parallel port
Standard USB Port	5 x USB 2.0
Powered USB Port	12V or 24V supported
Cash Drawer Port	1 x 12V RJ11 port (Option: 24V x 2)
Keyboard / Mouse Port	1 x PS/2 port
LAN Port	1 x RJ45 Giga LAN, RealTek RTL8111E
VGA Port	1 x VGA port for 2nd LCD Display
Audio Port	1 x Line-out

Hard Disk Drive	1 x 2.5" SATA type
Speaker	Integrated 2W x 2 stereo speakers
Power Supply	150W 12V External Power Adaptor
Construction	Whole Aluminum
Housing Color / ID	Black
Optional LCM	Use COM6 with 5V as default
Thermal Conditions	Fanless Thermal Design
Operating Temperature	0℃ ~ 40℃
O/S Supported	Windows XP (Pro, Embedded), WEPOS, POS Ready2009, Win 7
Dimensions (W x H x D)	258.61mm x 358.11mm x 269.31mm
EMI/Safety	CE, FCC, RoHS

I/O Pin Definition

A. DC_IN (DC Adapter 12V in)

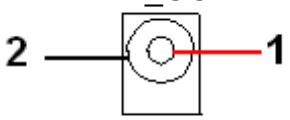
DC_IN



Pin	Definition
1	12V
2	GND
3	12V
4	GND

B. +12V_OUT (12V OUT)

+12V_OUT

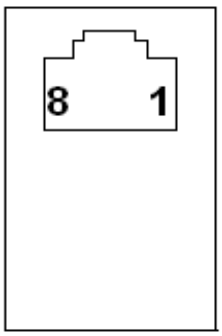


Pin	Definition
1	12V
2	GND

C. COM4_USB1 (VFD & RS-232 port + USB 2.0/1.1 port)

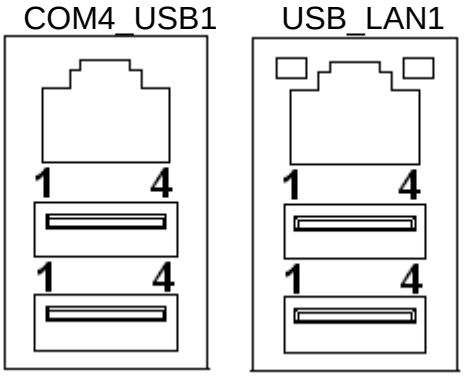
COM4_USB1

Pin	Definition
1	RI/ 5V /12V
2	CTS or RI/5V/12
3	GND
4	RTS or GND
5	DTR
6	DSR
7	TXD
8	RXD



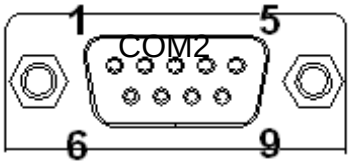
The definition of pin1 , pin 2 and pin4 are depending on jumper setting from JCOM4 and VFD_JR1

D. USB 2.0/1.1 Port



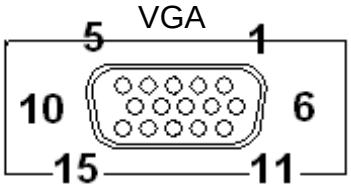
Pin	Definition
1	USB 5V
2	D-
3	D+
4	GND

E. COM2



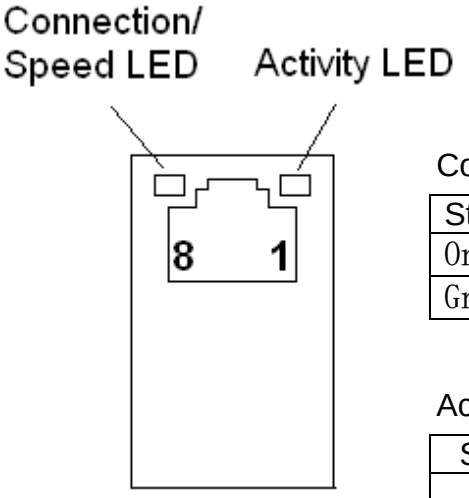
Pin	Definition
1	DCD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI/ 5V /12V

F. VGA



Pin	Definition
1	RED
2	GREEN
3	BLUE
4	NC
5	GND
6	GND
7	GND
8	GND
9	VCC 5V
10	GND
11	NC
12	DDC Data
13	H-SYNC
14	V-SYNC
15	DDC Clock

G. USB_LAN1 (LAN connector RJ45+USB 2.0/1.1 Port)



USB_LAN1

Connection/Speed LED:

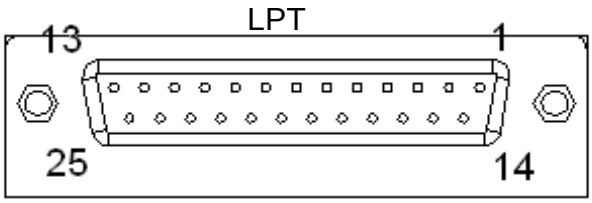
State	Description
Orange	Speed:1 Gbps
Green	Speed:1 00 Mbps

Activity LED:

State	Description
On	Transmitting
Off	Not Transmitting

Pin	Definition
1	Data 0+
2	Data 0-
3	Data 1+
4	Data 1-
5	Data 2+
6	Data 2-
7	Data 3+
8	Data 3-

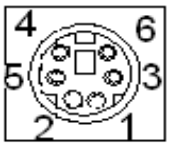
H. LPT Port



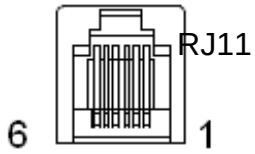
Pin	Definition	Pin	Definition
1	STB-	14	AFD-
2	PD0	15	ERR-
3	PD1	16	INIT-
4	PD2	17	SLIN-
5	PD3	18	GND
6	PD4	19	GND
7	PD5	20	GND
8	PD6	21	GND
9	PD7	22	GND
10	ACK-	23	GND
11	BUSY	24	GND
12	PE	25	GND
13	SLCT		

I. KB_MS1 (PS/2 Connector)

Pin	Definition
1	Keyboard Data
2	Mouse Data
3	GND
4	Mouse Clock
5	5V
6	Keyboard Clock



J. RJ11 Port

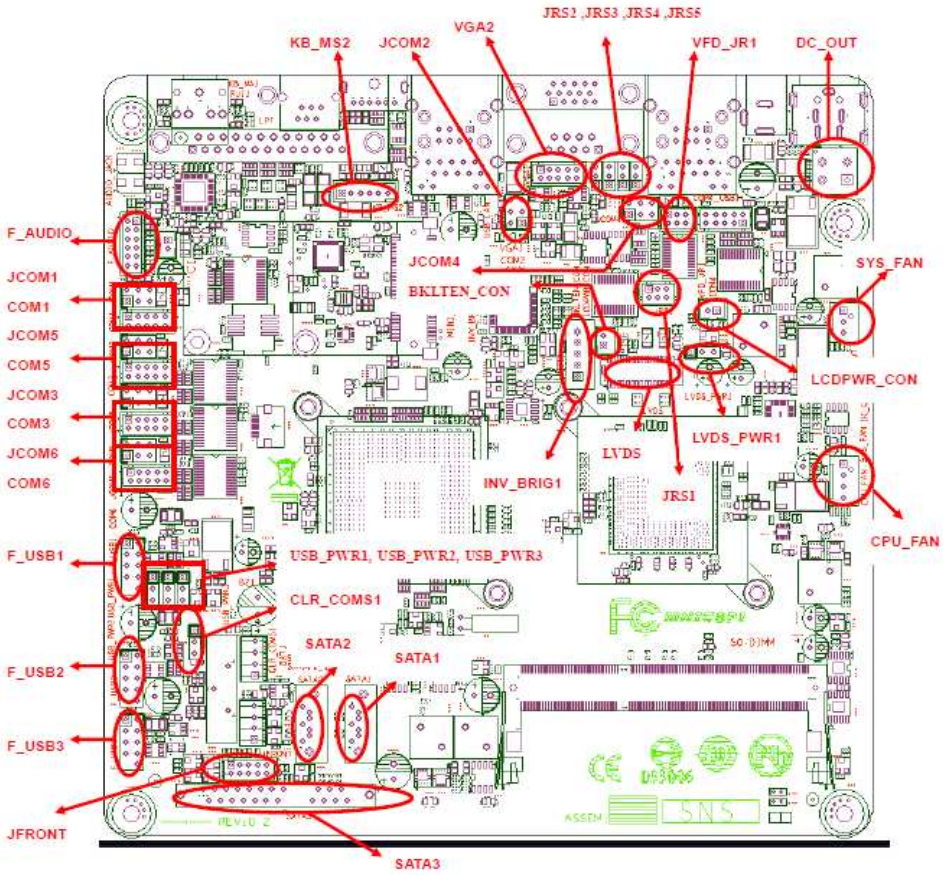


Pin	Definition
1	GND
2	GPIO-0
3	CASH Drawer Switch
4	12V
5	GPIO-1
6	GND

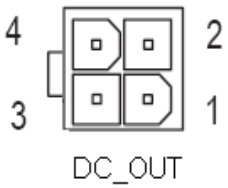
K. AUDIO_JACK (Audio Line Out)

Pin	Definition
1	GND
2	Line Out (L)
3	AUDIO_JD
4	-ACZ_DET
5	Line Out (R)

Jumper Setting



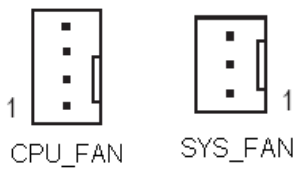
1. DC_OUT (12V for external/internal use, This connector is reserved for future use)



DC 12V OUT:

Pin	Definition
1	GND
2	GND
3	12V
4	12V

2. CPU_FAN (CPU FAN)
3. SYS_FAN (System FAN)



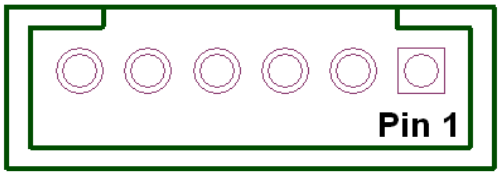
CPU_FAN:

Pin	Definition
1	GND
2	+12V/RPM control
3	RPM detect
4	RPM control

SYS_FAN:

Pin	Definition
1	GND
2	+12V/RPM control
3	RPM detect

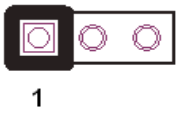
4. KB_MS2 (PS/2 Keyboard and PS/2 Mouse)



KB_MS2:

Pin	Definition
1	GND
2	KDAT
3	F_KDAT
4	KCLK
5	F_KCLK
6	5V

5. LVDS_PWR1 (LVDS 3V/5V selection)



LVDS_PWR1: Default: 1-2

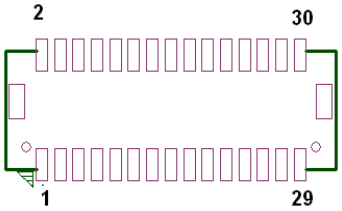
Pin	Definition
1	3.3V
2	DC input
3	5V

6. INV_BRIG1 (Inverter with Box-header)

INV_BRIG1:

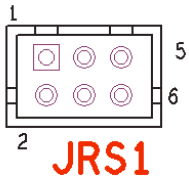
Pin	Definition
1	12V DC out
2	12V DC out
3	GND
4	Backlight Controller
5	Backlight Enable

7, LVDS 18 bit Connector



Pin	Definition	Pin	Definition	Pin	Definition
1	GND	12	Backlight Enable	23	LVDS Clock+
2	NC	13	GND	24	Backlight 5V
3	EDID Data	14	Backlight Controller	25	GND
4	GND	15	Data1+	26	GND
5	EDID Clock	16	GND	27	Data2-
6	NC	17	Data1-	28	LVDS Power 3.3V
7	GND	18	GND	29	Data2+
8	NC	19	GND	30	LVDS Power 3.3V
9	Data0+	20	Backlight 5V		
10	NC	21	LVDS Clock-		
11	Data0-	22	Backlight 5V		

8. JRS1, JRS2, JRS3, JRS4, JRS5 (Only COM2 available for RS232,RS422 or RS485 selections)



Default 1-2

Pin	Definition
1	RS232
2	UART RXD
3	RS422
4	UART RXD
5	RS485
6	UART RXD

JRS2, JRS3, JRS4, JRS5

JRS2: Default 2-3 short

Pin	Definition
1	RS485 D-
2	COM2 Pin 1
3	RS232 DCD

JRS3: Default 2-3short

Pin	Definition
1	RS485 D+
2	COM2 Pin 2
3	RS232 RXD

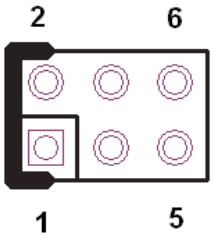
JRS4: Default 2-3

Pin	Definition
1	RS422 D-
2	COM2 Pin 4
3	RS232 DTR

JRS5: Default 2-3

Pin	Definition
1	RS422 D+
2	COM2 Pin 3
3	RS232 TXD

9. JCOM1, JCOM2, JCOM3, JCOM4,JCOM5,JCOM6 for D-sub 9's Pin 9 output 5V,12V or RI (COM4 output on RJ-45's Pin1&2)

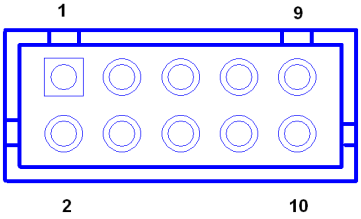


Default 3-4 Short

Pin	Definition
1-2 Short	5V
3-4 Short	RI
5-6 Short	12V

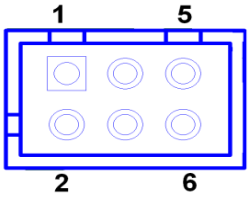
***PS: JCOM4 is pre-set as 5-6 short for 12V customer display
JCOM6 is pre-set as 1-2 short for 5v built-in LCM display

10. COM1, COM3, COM5, COM6 (Serial Port with Box-header)



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

11. VFD_JR1 (VFD & RS232 Mode select)

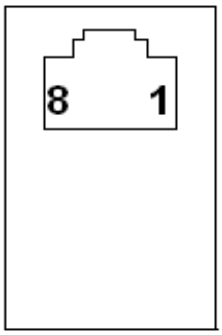


Pin	Definition	Pin	Definition
1	CTS4-	2	RTS4-
3	Signal for PIN2 of COM4 port	4	Signal for PIN4 of COM4 port
5	RI4-/1_5V/12V_F	6	GND

*****PS: JCOM4 is set to 5-6 short for 12V VFD display as default.**

Pin	Definition
1	12V
2	12V
3	GND
4	GND
5	DTR
6	DSR
7	TXD
8	RXD

VFD Mode	VFD_JR1[1-2], [3-5], [4-6] Short JCOM4[5-6] Short

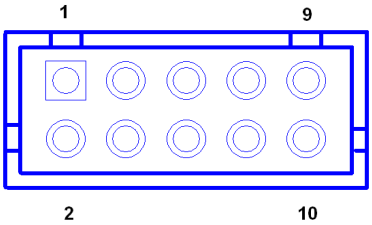


COM4_USB1 Port

Pin	Definition
1	RI
2	CTS
3	GND
4	RTS
5	DTR
6	DSR
7	TXD
8	RXD

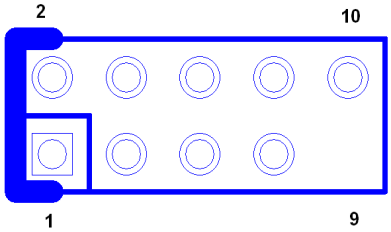
RS232 Mode	VFD_JR1[1-3], [2-4] Short JCOM4 [3-4] Short

12. JFRONT (Front Panel Connector with Box-header)



Pin	Definition	Pin	Definition
1	Stand-by LED	2	Power LED
3	Power Switch#	4	GND
5	LAN Action LED	6	Stand-by 5V
7	HDD LED#	8	VCC 5V
9	System Reset#	10	GND

13. F_USB1, F_USB2, (USB Pin-header)



Pin	Definition	Pin	Definition
1	USB Power 5V	2	USB Power 5V
3	USB Dx-	4	USB Dy-
5	USB Dx+	6	USB Dy+
7	GND	8	GND
9	NC	10	NC

F_USB3, (USB Pin-header)

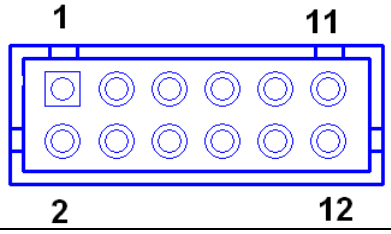
Pin	Definition	Pin	Definition
1	USB Power 5V	2	USB Power 5V
3	USB Dx-	4	NC
5	USB Dx+	6	NC
7	GND	8	GND
9	NC	10	NC

14. USB_PWR1, USB_PWR2, USB_PWR3 (Jumper for Stand-by ,5V or VCC 5V selections)

Default 1-2 short

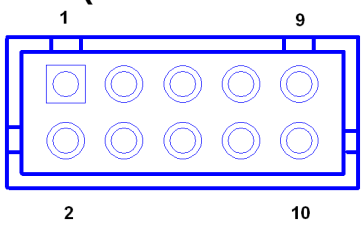
Pin	Definition
1	VCC 5V
2	USB DC IN
3	Stand-by 5V

15. F_AUDIO (Front Audio Box-header)



Pin	Definition	Pin	Definition
1	Amplifier Out_R+	2	MIC_L
3	Amplifier Out_R-	4	MIC_R
5	GND	6	Line In_R
7	Amplifier Out_L+	8	Line In_L
9	Amplifier Out_L-	10	Line In_JD
11	GND	12	MIC_JD

16. VGA2 (VGA Connector with Box-header)



Pin	Definition	Pin	Definition
1	V-SYNC	2	H-SYNC
3	GND	4	GND
5	RED	6	GND
7	GREEN	8	DDC Clock
9	BULE	10	DDC Data

17. CLR_COMS1 (Clear CMOS Pin-header)

1

Default 2-3 short

Pin	Definition
1	GND
2	Battery 3V
3	Battery 3V

18. SATAPW_1, SATAPW_2 (SATA HDD Power 5V & 12V)

Pin	Definition
1	+12V
2	GND
3	GND
4	5V

19. LCDPWR_CON (LCD Power ON/OFF)

Default 1-2 Open

ON	Short 1-2
OFF	Open 1-2

20. BKLTEN_CON (Back light Inverter Enable/Disable)

Default 1-2 Open

Enable	Short 1-2
Disable	Open 1-2

Chapter 5

Troubleshooting

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

Power is on, but there is no Panel Display

A) Enter BIOS setup program and then get into the Boot Display option. Check if the default setting is [Auto]; if not, change the setting to [Auto] and press **F10** to save the settings.

B) Due to the chipset limitation, while two displays are connected to the system, both display contents will shrink and cannot show properly in size under DOS mode. After the system booting completed and running under the Windows OS, the display will show in normal size.

Cannot Detect HDD

A) SATA cable is not connected properly to mainboard SATA1/SATA2 or it could be defective.

B) HDD power cable is not connected properly to the mainboard or it could be defective.

C) Check CMOS setup, set SATA HDD to Auto detects.

Touch Panel does not Work

A) Check if the ELO driver has been properly installed. Or try to reinstall again (Please refer to the ELO driver installation).

B) Check that the ELO controller on USB port has been detected during the ELO driver installation. If yes, then check that the flat cable from the ELO touch screen has been properly connected to the ELO controller (**Attention:** Pin1 mark should be on the same side as the ELO controller).

C) Check if the ELO controller Green LED is blinking?

If not, there is no DC+5V support for the ELO controller from the mainboard.

D) 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 it 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.

Second LCD Panel is Not Functioning Properly

A) Check that the VGA driver is installed properly (Please refer to the VGA driver installation section).

B) Connect a VGA CRT monitor to the VGA 2(onboard wafer) connector, if there is a display, then the second LCD panel could be defective or is not installed properly.

B-1) Please check that both the VGA signal cable and second LCD power cable are connected properly (Shut the power off before connecting the 2 above mentioned cables).

B-2) Check that the VGA cable is connected to A/D board. Or it could be defective.

B-3) Check that the LCD signal cable is properly connected to A/D board and LCD panel. Or it could be defective.

Please re-connect both ends of the LCD signal cable in the correct location. Or replace with a new cable.

B-4) There will be no backlight if the is inverter is defective.

C) Check the 10 PIN VGA cable is well connected to main board VGA2

D) The main board VGA chip could be defective.

PS/2 Keyboard is not functioning normally

A) Make sure the keyboard is properly connected to the PS/2 keyboard port before the system is powered up. If the keyboard is connected after OS has been booted, the keyboard will not work.

B) Check that the LED on the keyboard goes on then off after power on. If yes, the keyboard is getting power correctly.

C) If the MCR is not required. Please make sure the loopback is plugged into the MCR connector board.

D) Check that the 6 wire cable has been properly connected between the MCR connector board and mainboard MCR1.

E) The mainboard could be defective.

MCR is not functioning properly

A) Check if the green MCR LED is on.

A-1) Check if the MCR is properly connected to the MCR connector board on main system.

A-2) Make sure the 6 wire cable is properly connected between mainboard MCR1 and the MCR connector board.

A-3) The MCR connector board could be defective.

A-4) The MCR module could be defective.

VFD Display is not functioning properly

A) Ensure that COM4 is enabled in the CMOS setup, and data is written to COM4 in the application.

B) Check if there is any display when system power is ON, if the screen is blank, please follow the steps below.

B-1) Make sure the power switch on the VFD display is on before powering the main system.

C) Check RJ-45 cable is properly connected to I/O

D) Check the cable is properly connected to main board

E) The on-board COM4 I/O chips 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 and COM2 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 is 284

C) The motherboard could be defective.