



AerPOS User's Manual

Version 0.4

AP-3615 15" Bezel Free Performance POS Terminal

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Record of Revision

Date	Specs Ver.	Description	Note

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.

Table of Content

Chapter 1	1
Introduction	1
AerPOS (AP-3615) Introduction	1
A Quick Tour for AP-3615	2
AP-3615 Dimension	3
Rear I/O Panel Connectivity	4
Aer POS AP-3615 Packing List	5
Chapter 2	6
Hardware Installation and Upgrading	6
2.5" Hard Disk Drive Installation	6
MSR / Finger Print Reciever / RFID / iButton Installation	
MB / Heatsink & Smart Fan / Memory Installation	
Memory (DDRIII RAM) & CPU Installation / MB Pin Define, Battery and Clear CMOS Setting	9
COM Port Power Setting	
Integrated VFD / LCM Installation	
15" / 11.6" 2 nd Display Installation	
15" 1 st Touch Display Installation & Swapping	13
OSD Function and Adjustment	14
Cash Drawer Installation	15
Chapter 3	16
Software Installation and Setup	16
Chipset Driver Installation	17
Intel Chipset Installation Utilities for Windows XP	
Intel Chipset Installation Utilities for Windows 7	18
.Net Framwork 3.0 Tool Installation	19
.Net Framework 3.0 Tool for Windows XP	19
VGA Driver Installation	21
VGA driver installation for Windows XP	21
VGA driver installation for Windows 7	23
Intel Management Engine Components Driver Installation	25
VGA driver installation for Windows 7	25
LAN Driver Installation	
Realtek RT8111E LAN Driver Installation for Windows XP	
Realtek RT8111E LAN Driver Installation for Windows 7	
Audio Driver Installation	
Realtek ALC887 Audio Driver Installation for Windows XP & Windows 7	
FEC-AUO Capacitive Touch Tools / Driver Installation	
FEC-ELO Capacitive Touch Driver Installation for Windows XP / POS Ready 2009	
FEC-AUO Capacitive Touch Calibration	
FEC-AUO Capacitive Touch Utility	
EETI TouchKit Tools Installation	33

EETI TouchKit Installation for Windows XP	33
EETI TouchKit Installation for Windows 7	36
TouchKit Control Panel	39
Wireless LAN Driver Installation	40
Wireless LAN Driver Installation for all Windows Operating Systems (Optional)	40
Chapter 4	41
Specifications	41
AP-3615 Specifications	41
Chapter 5	42
Troubleshooting	42
Touch Panel Does Not Work	42
OSD Panel Cannot Work Precisely	42
Cannot Detect SATA Storage HDD/SSD	42
LAN Is Not Functioning Properly	43
COM1 ~ COM5 Are Not Functioning Properly	
Cash Drawer Port Is Not Functioning Properly	43

Chapter 1

Introduction

AerPOS (AP-3615) Introduction

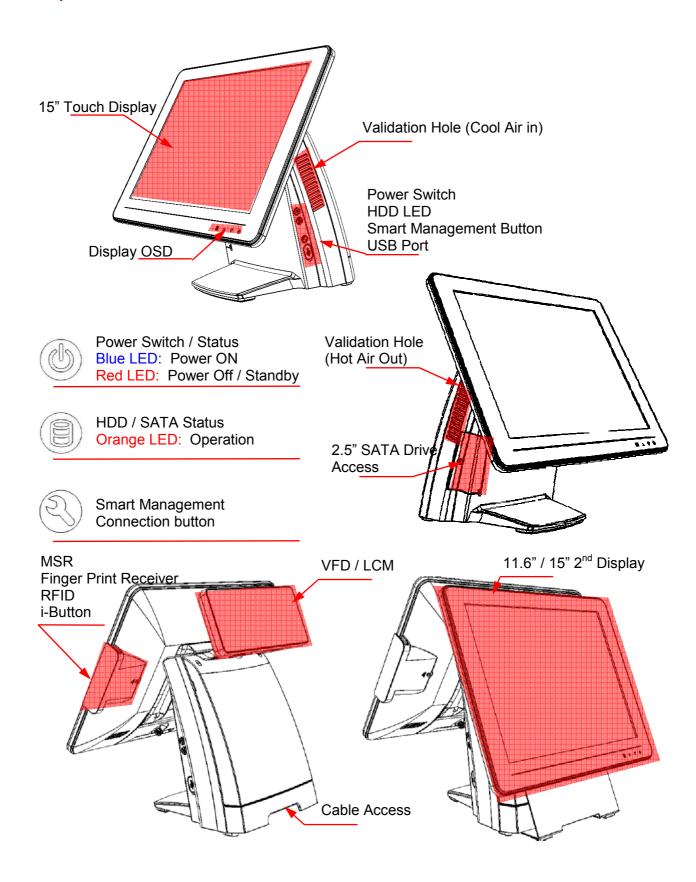
AerPOS is the perfect combination of reducing the Total Cost Ownership and enhanced quality requirement for POS system. With the design base on quality, space-effective and performance, its modularized design helps user no matter on the maintenance but the further upgrade in a very easy way.

Main Features:

- The high quality of resistive touch or durable tempered glass of projective capacitive touch both are IP65 front panel compliant.
- Desktop solution with high performance is perfect for heavy loading environment.
 Mobile platform aims for green and energy saving requirement
- Modularized design and easy maintenance for the key parts of its system, such as storage device, CPU module and touch display.
- With various devices support and sufficient I/O connectivity requirements.
- Integrated VFD and the 2nd 15" / 11.6" LCD display.



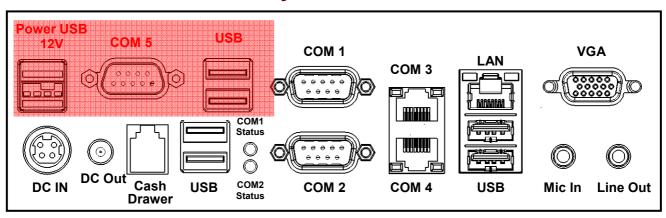
A Quick Tour for AP-3615



AP-3615 Dimension



Rear I/O Panel Connectivity



I/O Port	Connector Type	Description		
VGA D-sub 15		Connect 2 nd LCD screen or CRT monitors		
Line Out Earphone connector		Connect speakers to this port		
Mic In	Microphone Connector	Connect microphone to this port		
LAN RJ-45		Connect to Ethernet		
USB	A type USB	Connect to standard A type USB devices		
COM 3	RJ-45	Serial port COM 3—simple COM		
		RI—NA LED ; 5V—Green Light ; 12V – Orange Light		
COM 4 RJ-45		Serial port COM 4		
		RI—NA LED ; 5V—Green Light ; 12V – Orange Light		
COM 1 D-sub9		Serial Port COM 1		
COM 2	D-sub9	Serial Port COM 2		
COM Status	LED	RI—NA LED; 5V—Green Light; 12V – Orange Light		
USB	A type USB	Connect to standard A type USB devices		
Cash Drawer	RJ-11	Connect to 12V Cash Drawer		
DC out	DC out connector	12V DC out put connect to 12V peripherals or devices		
DC IN	DC IN connector	Connect the 12V power adaptor to this port		
Optional Second IO Board is only available as pre-installed in FEC factory				
Power USB	Power USB 12V (optional)	Connect to standard A type USB devices with 12V Power Supply		
COM 5	D-sub9 (optional)	Serial Port COM		
USB	A type USB (optional)	Connect to standard A type USB devices		



Before you unplug the power USB cable from I/O panel, please ensure unplug the A/C Cord in advanced.

AerPOS Series AP-3615

Aer POS AP-3615 Packing List

Standard			Optional & Peripherals	
1	15" AP-3615 AerPOS Touch Terminal	1	Optional IO Board	
2	12V 150W Power Adaptor	2	RJ-45 to D-sub9 Convert Cable	
3	AC Power Cable	3	MSR / RFID / Finger Print Receiver / I-Button	
		4	20x2 VFD / 20x2 LCM / 240x64 LCM	
		5	15" / 11.6" 2 nd Display Bracket	
		6	Wireless Lan Module	

Chapter 2

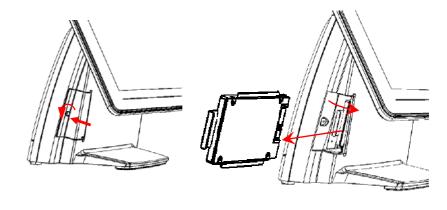
Hardware Installation and Upgrading



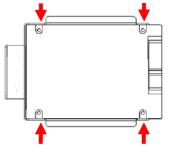
Do not remove the Display Module without switch off the terminal. Power must be switched off and power cord must be unplugged. Every time you service the system, please be aware of this.

2.5" Hard Disk Drive Installation

- 1. Turn off power and remove power cord from the terminal
- 2. Unscrew the maintenance door at the front side of the terminal body
- 3. Flip the maintenance door and Extract 2.5" SATA storage bracket out (no cable connected)



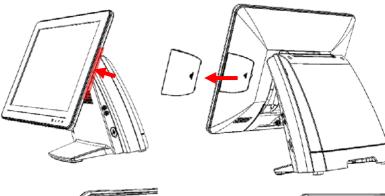
4. Place storage driver on the bracket and fasten it with 4 screws.



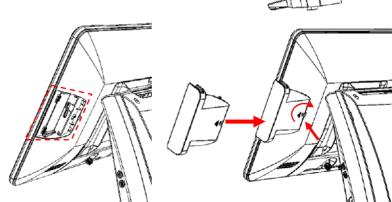
- 5. Restore the maintenance door to the system.
- 6. Fix the maintenance door with a screw.
- 7. Connect power cord to the system.

MSR / Finger Print Reciever / RFID / iButton Installation

1. Remove the plastic cover at the back of Touch Display Module



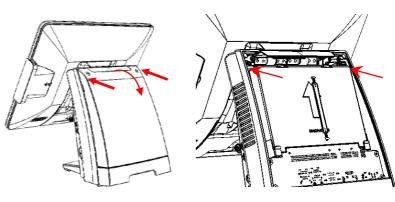
2. Insert the MSR / RFID /
Finger Print Receiver / Ibutton Module into USB AType Connector. Fix the
Touch Display Module with
one screw.



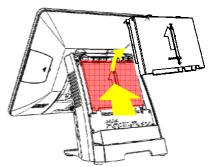
- 3. Make sure the USB connected and screw is fastened well.
- 4. If you are looking for the detail Utility of MCR, Finger Print Reader, I-button Reader, RFID Reader, please contact FEC's FAE.(Please refer to FEC website for more information, http://www.fecpos.com)

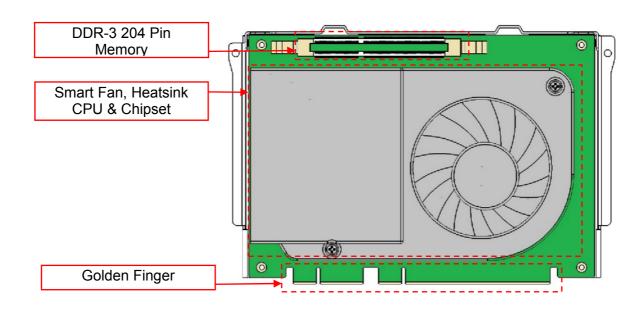
MB / Heatsink & Smart Fan / Memory Installation

- 1. Remove back cover of the terminal by two screws on the top side.
- 2. Anther two screws at the both side of MB Module should be removed for the further disassembly.

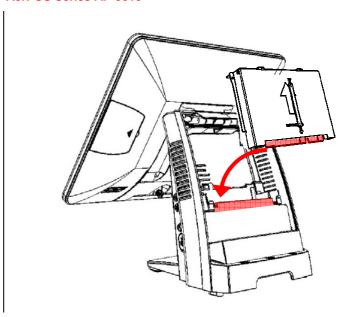


3. Lift up and Pull out the MB Module from the Terminal Chassis.



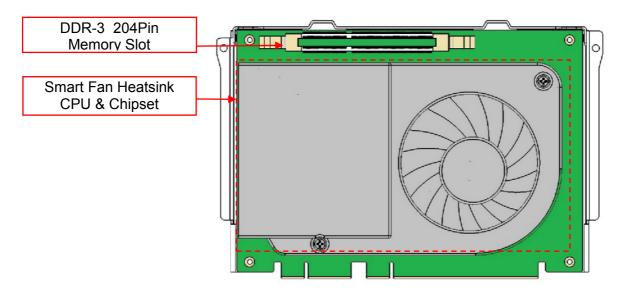


4. During the MB installation, Please Make sure the MB Golden finger is well connected with IO Board Slot.



Memory (DDRIII RAM) & CPU Installation / MB Pin Define, Battery and Clear CMOS Setting

 Disassembly the MB Module, then Memory installation can be done from the top side of MB Module. CPU installation has to remove Thermal Fan Module by 2 screws, after the CPU installation, please ensure the thermal pads between CPU, chipset and heatsink are well contacted.



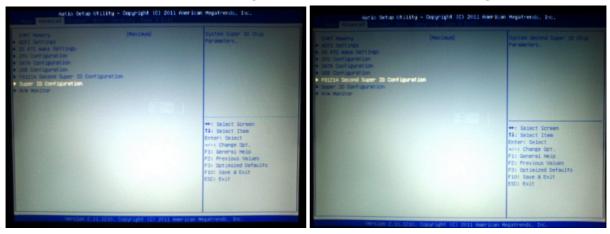
2. According to the MB on-board connectors or golden finger pin define and Battery Setting, CMOS Clear, please refer to the FH-H611 MB Manual. (Will update soon)

COM Port Power Setting

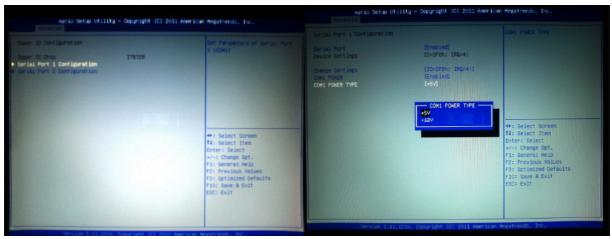
AP-3615 COM Port Power can adjust via BIOS or Smart Management Tool.

- 5. COM Port Power Configuration:
- 6. Advance > Super IO Configuration > Serial Port 1 or 2 Configuration

 Advance > F81214 Super IO Configuration > Serial Port 3 or 4 Configuration



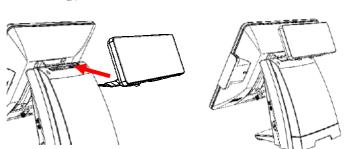
COM 1 or 2 or 3 or 4 Port Power > Enable
 COM 1 or 2 or 3 or 4 Power Type > +5V or +12V (select the proper power output for proper com port devices)



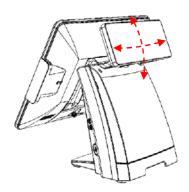
If you need more information about the BIOS setting or Smart Management Setting, please refer to the MB Manual or Smart Management Manual or contact FEC's FAE.

Integrated VFD / LCM Installation

- 1. Remove the VFD Plastic cover from the terminal
- 2. Connect the COM 3 internal cable between Terminal and VFD / LCM Module and install the VFD/ LCM module with Terminal. Fasten one screw back and make sure VFD/LCM module is fixed.

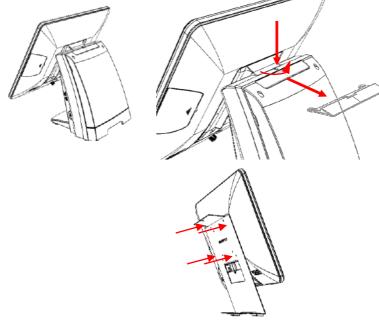


- 3. VFD is connected to the COM3 (COM3 has internal power which has been pre-set as 12V power)
 - ** Please note When VFD/LCM is integrated, please remove the device which connects to the external COM3 on Rear IO panel to prevent I/O interrupt.
- 4. Adjust the VFD / LCM angle into proper position.



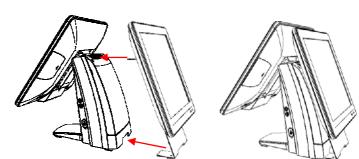
15" / 11.6" 2nd Display Installation

1. Remove the VFD plastic cover

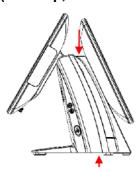


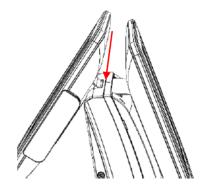
2. Assemble the 2nd screen with bracket with 4 screws

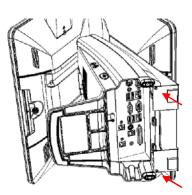
Assemble the 2nd Screen with bracket to Terminal.



4. Fasten 3 screws(1 on top, 2 underneath)

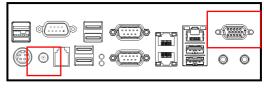






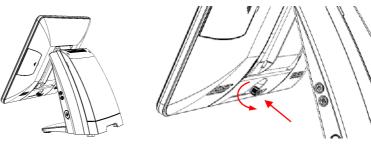
5. Connect the monitor to AP-3615 by VGA & DC cable



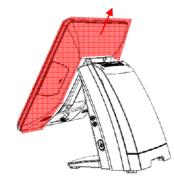


15" 1st Touch Display Installation & Swapping

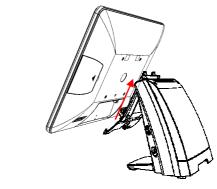
1. Release 1 thumb screw at the back side of Display



2. Lift the Display Module up to disassemble from the main unit of terminal

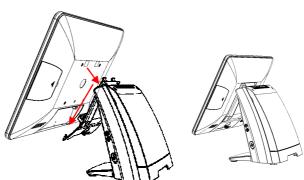


3. Display and main body units are separated.



4. Reverse the process can assembly back the Touch Display Module.

** please make sure the touch display module is firmly connected to the docking slot **

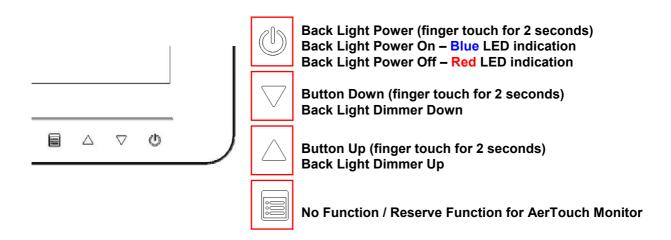


During the process of disassembly and installation, please ensure the terminal is "Power Off" and remove AC cord. "Hot Swap" could casue the internal protection to block touch display functionality.

^{**}Note**

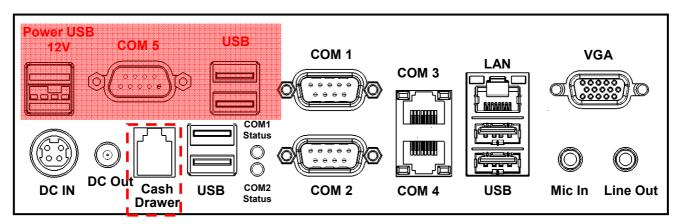
OSD Function and Adjustment

OSD function and adjustment



Cash Drawer Installation

Before connecting the cash drawer to the **AP-3615**, please make sure the drive voltage and cable pin assignment of the cash drawer matches the definition of the cash drawer port of **AP-3615**.



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

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
Byte 1 (0xA0)	0x00	GPIO / 0x01 or DIO / 0x00.
Byte 2-3 (0xA1 ~ 0xA2)	0xA07	Output address.
Byte 4-5 (0xA3 ~ 0xA4)	0xA07	Inpute address.
Byte 6 (0xA5)	0xFD	Open cashdrawer1 value.
Byte 7 (0xA6)	0xFB	Open cashdrawer2 value.
Byte 8 (0xA7)	0xFF	Close cashdrawer value.
Byte 9 (0xA8)	0x01	Cashdrawer status mask.

Chapter 3

Software Installation and Setup

AP-3615 comes with a variety of drivers for different operating systems.

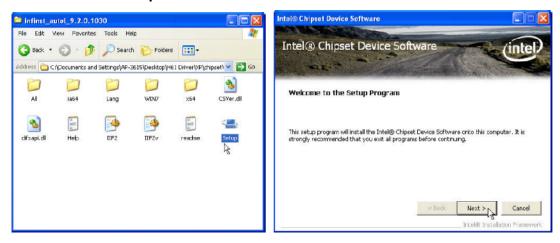
You can download all the necessary drivers and utilities from http://www.fecpos.com.

Or send an e-mail to the Customer Service Department of FEC for further assistance.

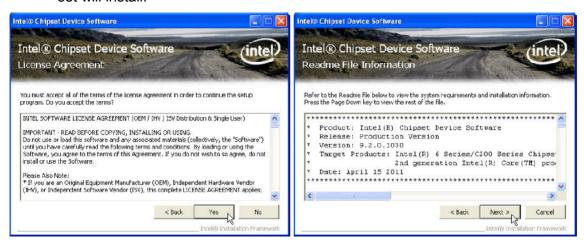
Chipset Driver Installation

Intel Chipset Installation Utilities for Windows XP

- 1. Download drivers from website or insert the Driver CD into your CD ROM Drive.
- 2. Execute **Setup.exe** and Click **Next**.



3. Read the License Agreement and click **Yes** & Click **Next** and the drivers for the Intel Chip set will install.

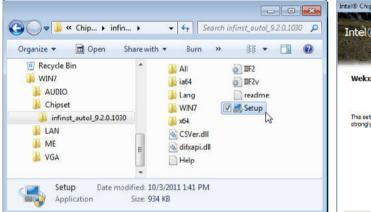


4. Click Next and choose "restart computer", then click to Finish.



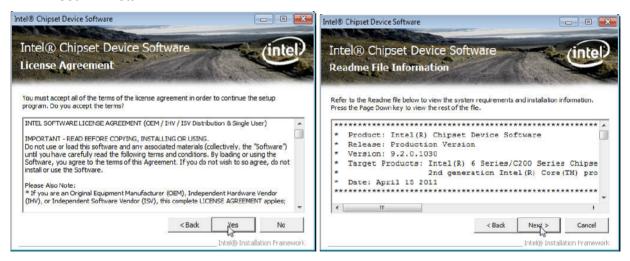
Intel Chipset Installation Utilities for Windows 7

- 1. Download drivers from website or insert the Driver CD into your CD ROM Drive.
- 2. Execute Setup.exe and Click Next.

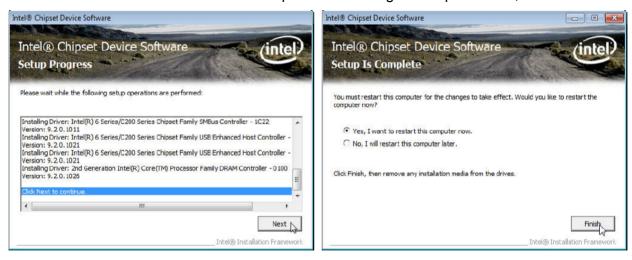




Read the License Agreement and click Yes & Click Next and the drivers for the Intel Chip set will install.



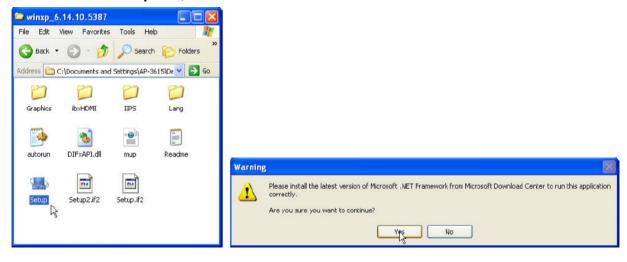
4. Click Next and choose restart computer for finishing the Chipset Driver, click to Finish.



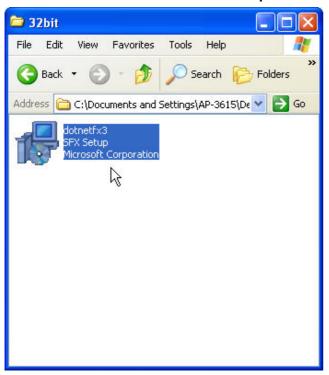
.Net Framwork 3.0 Tool Installation

.Net Framework 3.0 Tool for Windows XP

- 1. Download drivers from FEC website or insert the Driver CD into your CD ROM Drive.
- 2. Double click Setup.exe, and Click Next to start tool installation

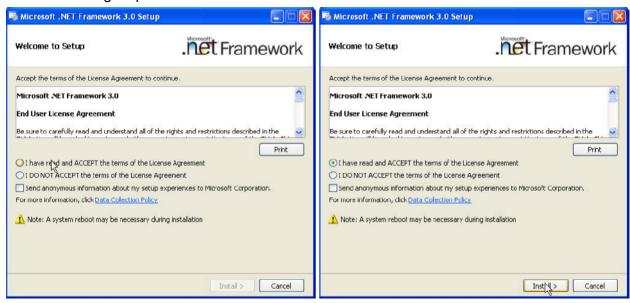


3. Execute dontnetfx3 for further setup

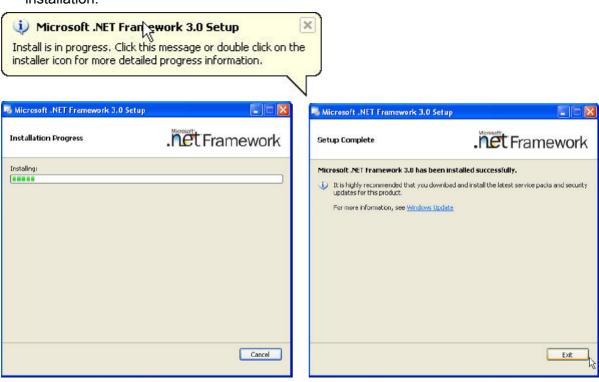


AerPOS Series AP-3615

4. choose I have read and ACCEPT the terms of the license Agreement and click Install for the following steps



Click the message pop out to check for the detail process. Finally, click Exit to finish the installation.



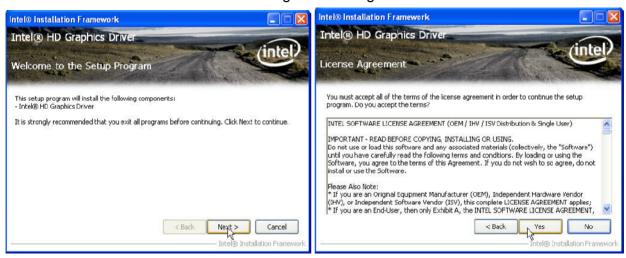
VGA Driver Installation

VGA driver installation for Windows XP

- 1. Download drivers from website or insert the CD into your CD ROM Drive.
- 2. Execute Steup.exe

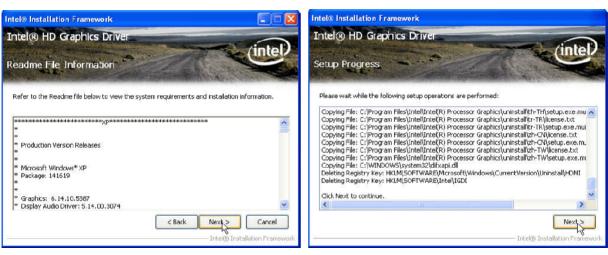


3. Select **Next** and click **Yes** of License Agreement Page.



4. Select **Next** to continue driver installation.

AerPOS Series AP-3615

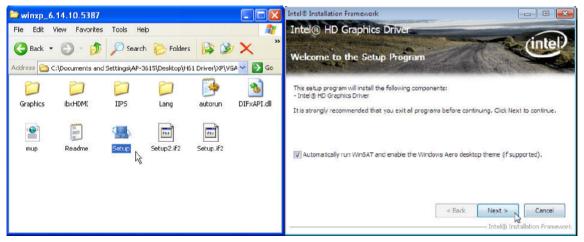


5. Finally, Finish and Restart the system



VGA driver installation for Windows 7

- 1. Download drivers from website or insert the CD into your CD ROM Drive.
- 2. Execute Steup.exe and select Next

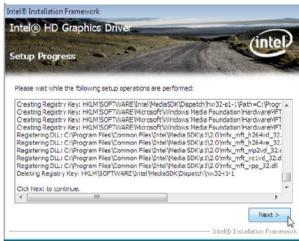


3. Click Yes of License Agreement Page.



4. Select **Next** to continue driver installation.





AerPOS Series AP-3615

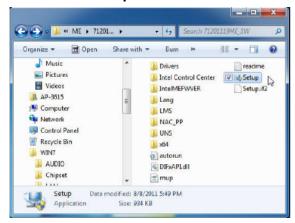
5. Finally, Finish and Restart the system



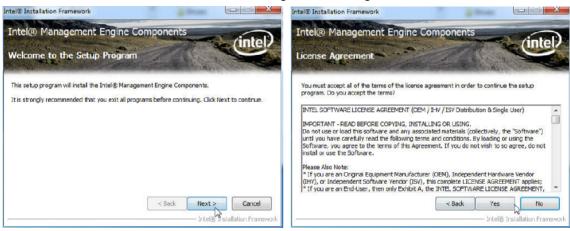
Intel Management Engine Components Driver Installation

VGA driver installation for Windows 7

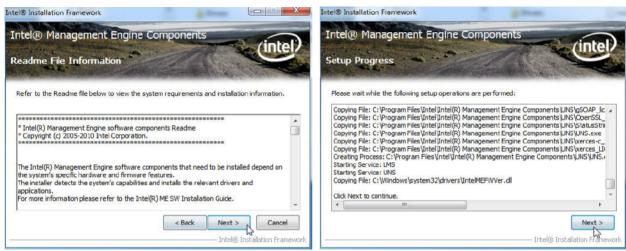
- 1. Download drivers from website or insert the CD into your CD ROM Drive.
- 2. Execute Steup.exe



Select Next and click Yes of License Agreement Page.



4. Select **Next** to continue driver installation.



AerPOS Series AP-3615

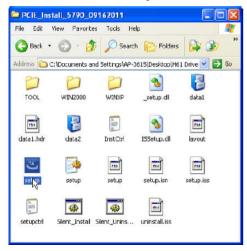
5. Finally, **Finish** and **Restart** the system



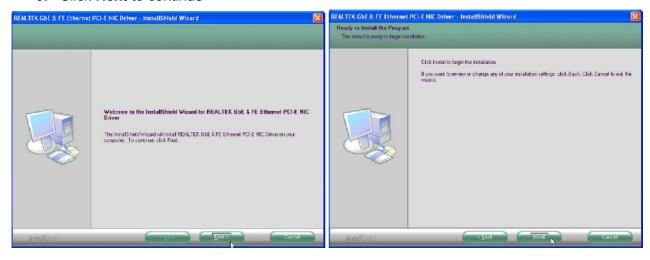
LAN Driver Installation

Realtek RT8111E LAN Driver Installation for Windows XP

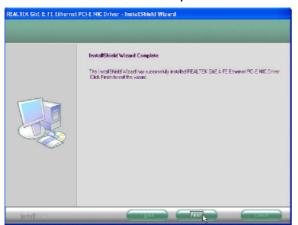
- 1. Download drivers from website or insert the CD into your CD ROM Drive.
- 2. Execute Setup.exe.



3. Click Next to continue

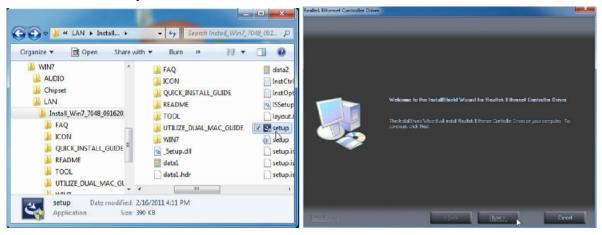


4. Click Finish to complete the installation procedure.

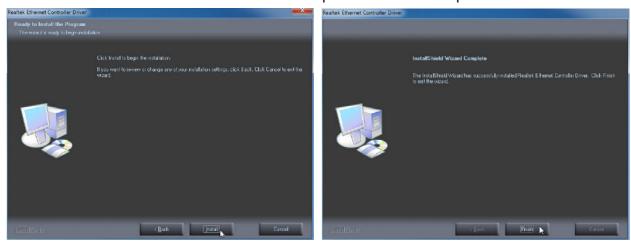


Realtek RT8111E LAN Driver Installation for Windows 7

- 1. Download drivers from website or insert the CD into your CD ROM Drive.
- 2. Execute Setup.exe.



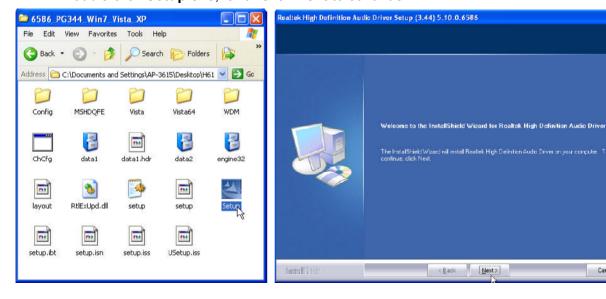
3. Click **Next** to continue and **Finish** to complete the installation procedure.



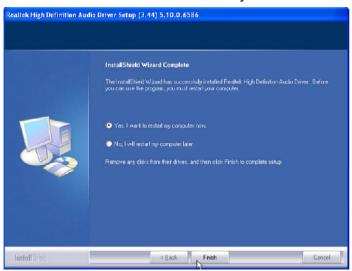
Audio Driver Installation

Realtek ALC887 Audio Driver Installation for Windows XP & Windows 7

- 1. Download drivers from website or insert the CD into your CD ROM Drive.
- 2. Double click Setup.exe, and Click Next to continue



3. Click **Finish** and restart the system.



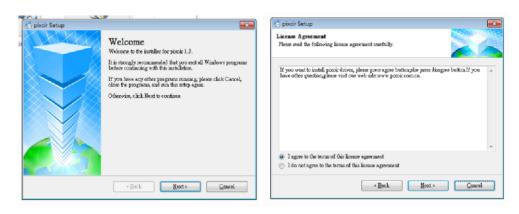
FEC-AUO Capacitive Touch Tools / Driver Installation

FEC-ELO Capacitive Touch Driver Installation for Windows XP / POS Ready 2009

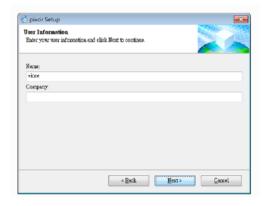
- Download drivers from FEC website or insert the Driver CD into your CD ROM Drive.
- 2. Execute Setup.exe



3. Click Next to continue.

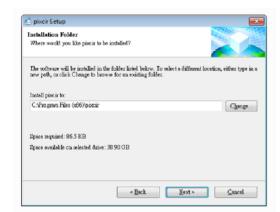


4. Fill the user information and Click Next to continue

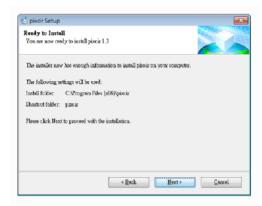


AerPOS Series AP-3615

5. Finish the Installation folder and Click **Next** to continue.

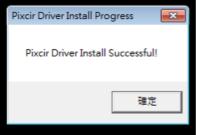






6. Installation finished, and click "finished" and Installation success





NOTE

The FEC AUO CAPACITVE TOUCH Driver is mandatory for Windows XP / POS Ready 2009. However, the Win7 / POS Ready 7 OS environment can automatically recognized FEC-AUO capacitive devices without any driver installation.

For the further information, please refer to "Windows XP USB Driver application_v13.pdf"



FEC-AUO Capacitive Touch Calibration

This Capacitive Touch has auto calibration controller via USB interface. There are two different methods which can initiate the touch auto calibration: (1) Reboot the Terminal. (2) Switch Off the Display Module then Switch On Again

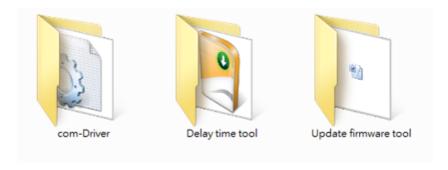
Note Capacitive touch screen will not operate with either a gloved hand or with a mechanical stylus. It is made of glass, which makes it extremely durable and scratch resistant. Capacitive touch might need the calibration when too many water or liquid stays on the glass during touch operation or the humidity goes too high to meet 80%~90%. Thus, FEC recommends users to keep the liquid from the touch glass and calibrate the touch screen.

FEC-AUO Capacitive Touch Utility

This section explains the different folders of FEC AUO Capacitive Touch Utility.

Three Utilities include:

- COM-Driver Utility
- Delay Time Tool
- Update Firmware Tool



^{**}Note**

"com-Driver" and "update firmware tool" relate to touch controller main firm and major functionality. "Delay Time Tool" relates to Multi Click (multi Click) improvement. These three utilities are for engineering and maintenance purposes. If there is any question, please contact FEC's FAE for further assistance.

EETI TouchKit Tools Installation

EETI TouchKit Installation for Windows XP

- 1. Down load Touch Kit for WinXP from FEC website or Driver CD
- 2. Execute Setup.exe



3. Click Next



4. Choose "None" and Click Next for further installation process



5. Click **OK** to close the pop-up dialog.



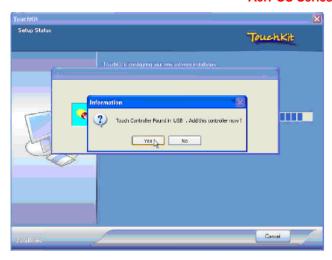
6. Click "Support Multi-Monitor System" and then Next to continue.



7. Click Next and choose a program folder to "Touch Kit", then "Next"



8. Touch Controller found in USB, then Click Yes



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

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



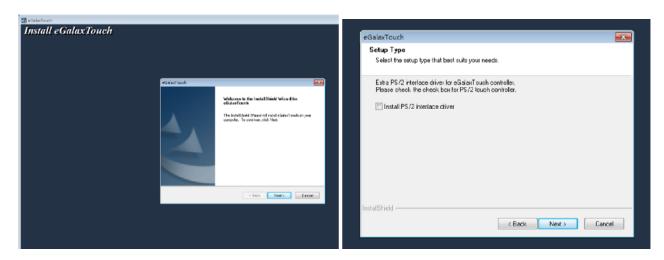


EETI TouchKit Installation for Windows 7

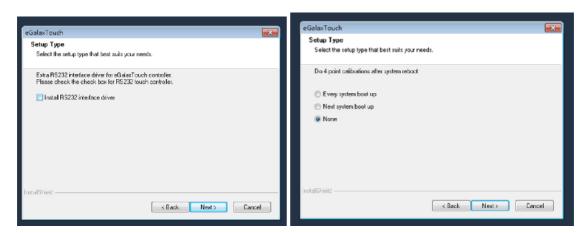
- 1. Down load Touch Kit for Win 7 from FEC website or Driver CD
- 2. Execute Setup.exe



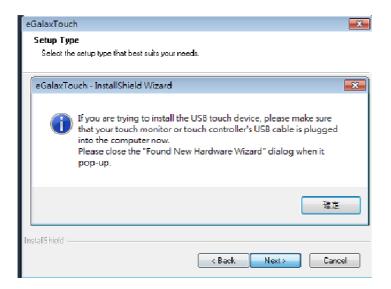
3. Click Next



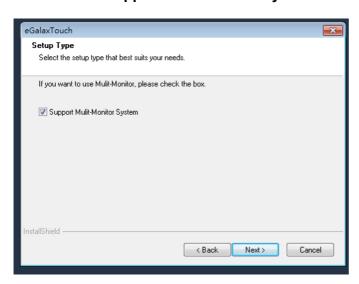
4. Un-tick "Install RS232 interface driver" and Click "Next" to go for further process.



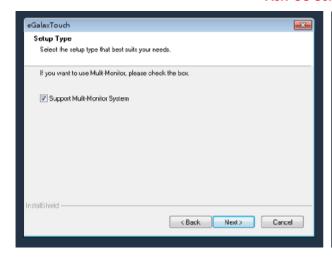
5. Click "Yes" and confirm the USB touch controller is plugged.



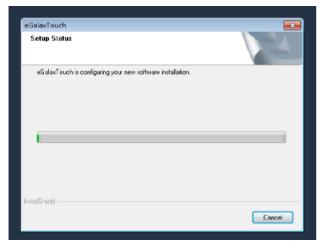
6. Click "Support Multi-Monitor System" and then Next to continue.



7. Click Next







8. 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.





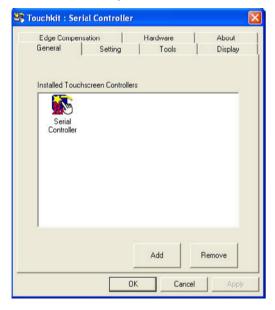
TouchKit Control Panel

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

General tab

The general tab allows you to:

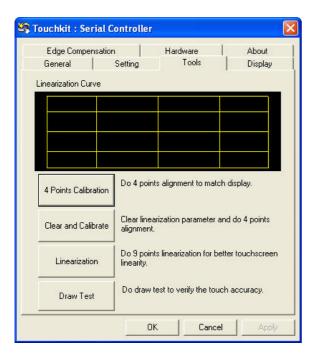
Manage the touch screen controller you installed.



Tools tab

The tools tab allows you to:

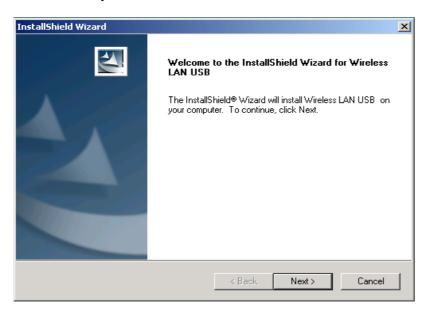
Calibrate the touch screen with the 4 Points Calibration button.



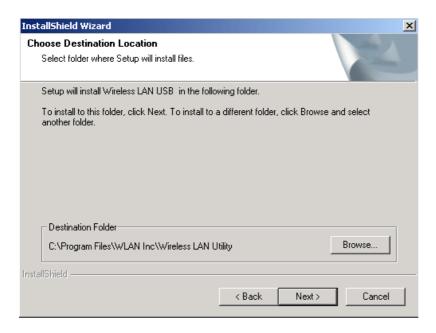
Wireless LAN Driver Installation

Wireless LAN Driver Installation for all Windows Operating Systems (Optional)

- 1. Download drivers from website or insert the CD into your CD ROM Drive.
- 2. Run Setup.EXE



3. Click Next



4. Click Next

Chapter 4

Specifications

AP-3615 Specifications

Aer POS		AP-3615 Pe	rformance
Main Specifications	Chipset	Intel Sandy Bridge H-61	
	Processor	Intel Dual Core Celeron G540 2.5G Intel i3 2120 3.3G Intel i5 2400S 2.5G	
	Memory	DDR3 Standard 2GB, Max 8GB	
	Power Supply	12V 150W	
	Thermal	Smart Fan	
	Storage Device	1 x 2.5" SATA Driver Bay	
	Speakers	Internal Speaker 2W x 2	
Touch Display	Display Design	15" True Flat (Ultra Slim) Bezel Free	
	Touch	Projective-Capacitive (Tempered Glass)	5W Resistive
	Backlight	LED	CCFL
	Brightness	350 nits	250 nits
	Backlight MTBF	50 K hours	30 K hours
Peripherals & Optionals	MSR	Track 1/2/3 , USB interface	
	Finger Print Receiver	Optical Finger Print Receiver, USB interface	
	RFID Reader	13.56M Hz RFID reader , USB interface	
	I - Button Reader	USB interface	
	Optional COM Port	Additional Stand USBx1; COM 5; 12V Power USB x 1	
	Wireless LAN	802.11.b.g.n wireless LAN , USB interface	
	VFD	(Integration Type) 20x2 (9mm) Character Mode	
	LCM	(Integration Type) 20 x 2 Character Mode (Integration Type) 240x64 Graphic Mode	
	2 nd Display	(Integration Type) 11.6" / 15" 2nd Monitor	
	Brochure	B5 Brochure Bracket	

Chapter 5

Troubleshooting

Please note that the following troubleshooting guide is designed for engineer who has strong computer hardware knowledge or Engineers and Maintenance.

Touch Panel Does Not Work

- A) Check "Touch Display Module" is connected well with terminal.
- B) Check HID USB touch device is detected by OS.
- C) (Resistive Touch) Check if the EETI driver or the TouchKit driver has been properly installed. Or try to re-install again (Please refer to the EETI driver and touch kit installation).
- **D)** (Capacitive Touch) Check if the FEC-AUO Capacitive touch is automatically detected by Windows 7, or properly installed the touch driver in Windows XP.
- **E)** (Capacitive Touch) Please do not keep the capacitive touch in high humidity and condensing environment, such as out door or bathroom, where might affect the touch performance or might need to be calibrate more frequently.
- F) Check if the cable connects well between touch panels and touch controller
- **G)** (Capacitive Touch Calibration) Reboot the system, and the Capacitive Touch can be calibrated automatically.

OSD Panel Cannot Work Precisely

- A) Please touch each single OSD button for more than two seconds in order to trigger the function.
- **B)** Make sure the finger is not touching more than one button each time.

Cannot Detect SATA Storage HDD/SSD

- **A)** Make sure storage device is well connected in the SATA Connector.
- **B)** HDD FFC cable is not connected properly to the main board or it could be defective.
- **C)** Check CMOS setup, set SATA HDD to Auto Detect.
- **D)** On-board SATA port could be defective.

LAN Is Not Functioning Properly

- A) Check if the LAN driver is installed properly.
- 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 ~ COM5 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 main board or I/O board could be defective.
- **D)** (Reminder) The COM3 is shared by the read I/O and VFD, if you connector the VFD, please remove the device which is connected with external COM3.

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 if the digit I/O port address and bit are correct.
- C) The main board could be defective.