

PP-9645

Aer PPC

User Manual

ver. 0.1

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Revision Record

Date	Version	Description	Note
2015/08/15	0.1	Draft	Ben Hu

Safety Precaution

Please observe the following precautions to ensure safe use of equipment.

1. Disconnect the equipment from AC outlet before cleaning.
Use only moist cloth (with water). Do not use detergent.
2. Power outlet must be easily accessible and near the equipment.
3. Keep the equipment away from humid and dusty environment.
4. Place the equipment on a stable surface during installation and operation.
5. Do not place any load on the power cord.
6. All cautions and warnings on the equipment should be noted.
7. When the equipment is not in use, disconnect it from the power source to avoid damage by transient over-voltage.
8. Liquid into the equipment may cause fire or electrical shock.
9. Only qualified service personnel should be allowed to open the equipment.
10. If any of the following situations arises, ask service personnel to check the equipment:
 - A. Power cord / plug is damaged
 - B. Liquid penetrates into the equipment
 - C. The equipment does not function properly and/or cannot work according to the User Manual
 - D. The equipment has been dropped
 - E. The equipment shows signs of damage
11. Temperature below -20° C (-4°F) or above 60° C (140° F) may damage the equipment

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Chapter 1

Introduction

PP-9645 (Aer PPC)

PP-9645 is the latest member of Aer PPC series that features a slim all-in-one design with great versatility. It can be easily configured to meet the demand of different store environments as a desktop, wall-mount or pole-mount POS system.

PP-9645 is a performance system in die-cast aluminum chassis that withstands harsh environments. It is equipped with the Intel 4th Generation Core Processor i3-4330TE, i5-4570TE and Intel Celeron G1820TE those are both powerful and energy efficient.

Key Features

- Performance and Powerful
- Slim & Sleek
- Desktop, Wall-Mount or Pole-Mount
- Resistive (bezel & bezel free) and Projected Capacitive Touch (IP65 compliant panel)
- Rich in I/O Connectivity



PP-9645 (bezel)



PP-9645 (bezel free)

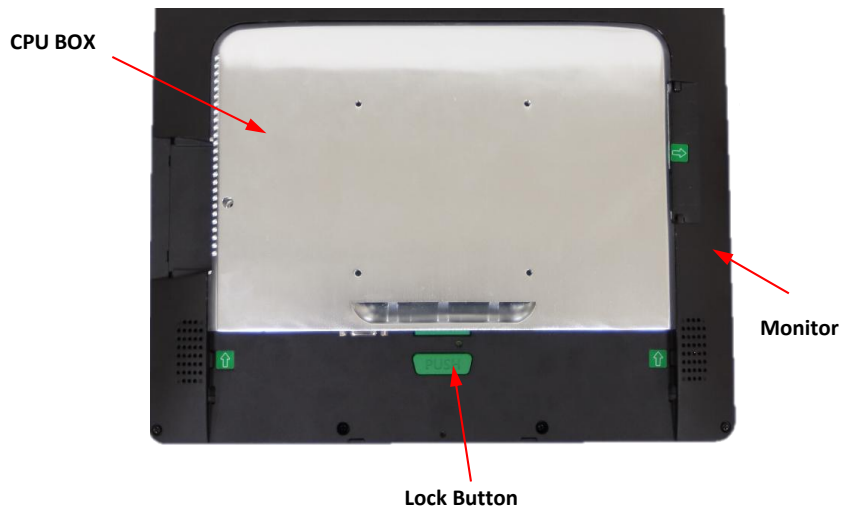
PP-9645 Aer PPC

Overview



How to disassembly PP9645 for maintenance

1. Locate the button that is at the bottom of the machine.



2. Push lock button and Slide down the CPU Box



PP-9645 Aer PPC

- 3. Separate the CPU BOX from main system, return CPU BOX to your local service center for maintenance**



PP-9645 Aer PPC

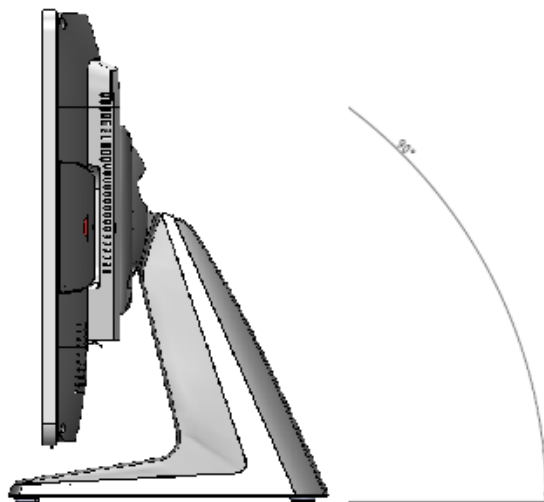
Dimension



Mounting

When mounted on a desktop pedestal, PP-9645 can be tilted up and down as indicated below.

註解 [i1]: 組裝方式需要說明嗎?



PP-9645 Aer PPC

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I/O Connectivity



I/O- Default



I/O – Type C



I/O – Type G



I/O – Type K



I/O Port	Connector Type	Description
12v DC- in	DC-in (4 pin)	12V Power Adapter
12V DC-out	DC-out	12V DC Jack 2.5 mm

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24v PUSB 2.0	24v USB	24v USB device
Cash Drawer	RJ11	12v / 24v Cash Drawer
VGA	D-Sub 15	2 nd LCD
HDMI	HDM Type A	Type A HDMI
Ethernet	RJ-45	Gigabit LAN
USB	USB Type A	USB 3.0
USB	USB Type A	USB 2.0
COM1	RJ45	RI / 5v / 12v (select in BIOS) 5v : Green / 12v : Orange
Option Type C		
12v PUSB 2.0	12v USB	12v USB device
COM 3	RJ45	RI / 5V / 12V (select in BIOS)
COM 2	RJ45	RI / 5V / 12V (select in BIOS)
Option G		
12v USB 2.0	12v USB	12v USB device
12v USB 2.0	12v USB	12v USB device
12v USB 2.0	12v USB	12v USB device
Option K		
12v USB 2.0	12v USB	12v USB device
12v USB 2.0	12v USB	12v USB device
COM 2	D-Sub 9	RI / 5V / 12V (select in BIOS)

Packing List

Standard		Optional	
1	PP-9645	1	2nd I/O
2	Power Adapter (150w)	2	MSR / iButton / RFID / FingerPrint
3	AC Power Cord	3	9mm 20x2 VFD / 20x2 LCM / 240x64 LCM
4	RJ45-DB9 Cable	4	5mm 20x2 LCM / 192x32 LCM
		5	2 nd Monitor

Chapter 2

Hardware Installation and Upgrade



SWITCH OFF POWER AND UNPLUG POWER CORD BEFORE SATA STORAGE IS REMOVED

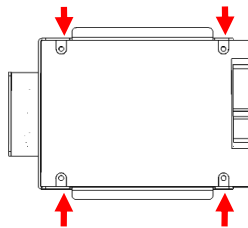
2.5" SATA Storage (HDD / SSD)

1. Power off and unplug power cord from PP-9645

2. remove SATA storage cover
with a COIN from your pocket



3. fix SATA storage to metal bracket via
4 screws



4. install SATA storage with bracket
5. fix the bracket via 1 x M3 screw



PP-9645 Aer PPC

6. Replace SATA storage cover with hands.

7. Plug in power cord and power on

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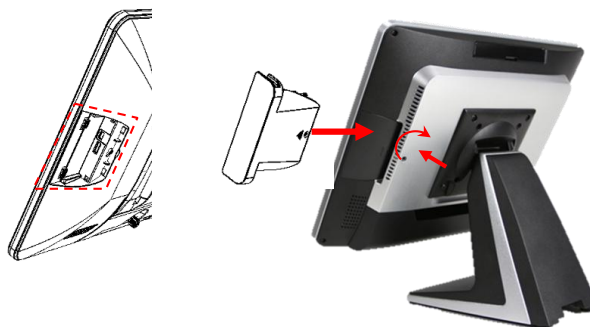
MSR / iButton / RFID / FingerPrint (ID Device)



1. remove plastic cover



2. plug in ID device (USB) and fix it via 1 x M3 screw

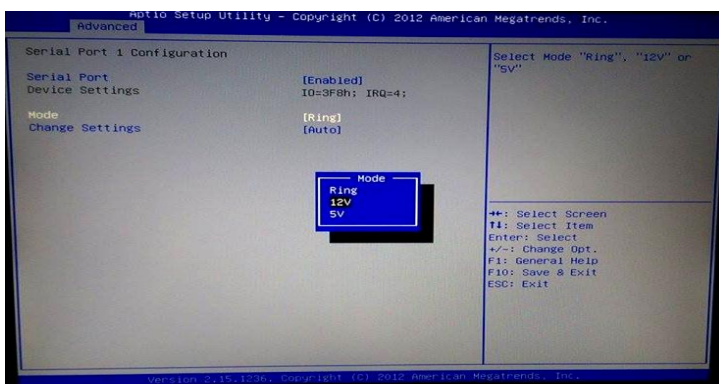
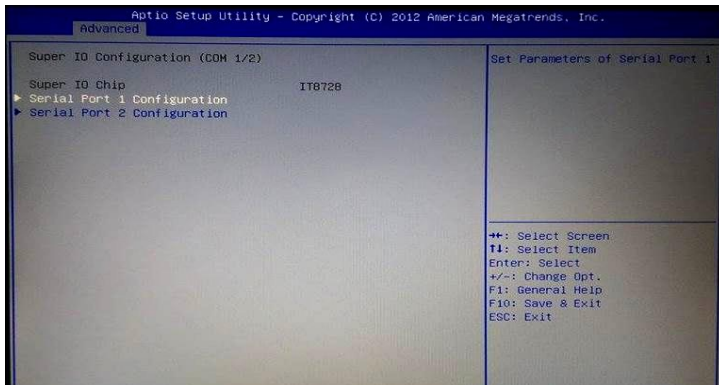
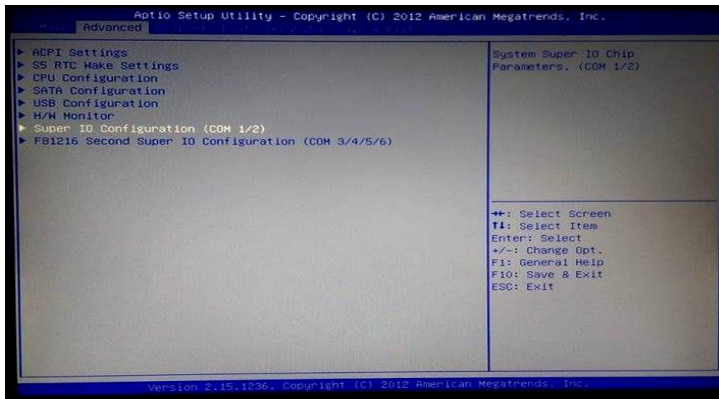


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Power Setting (COM / Cash Drawer Port)

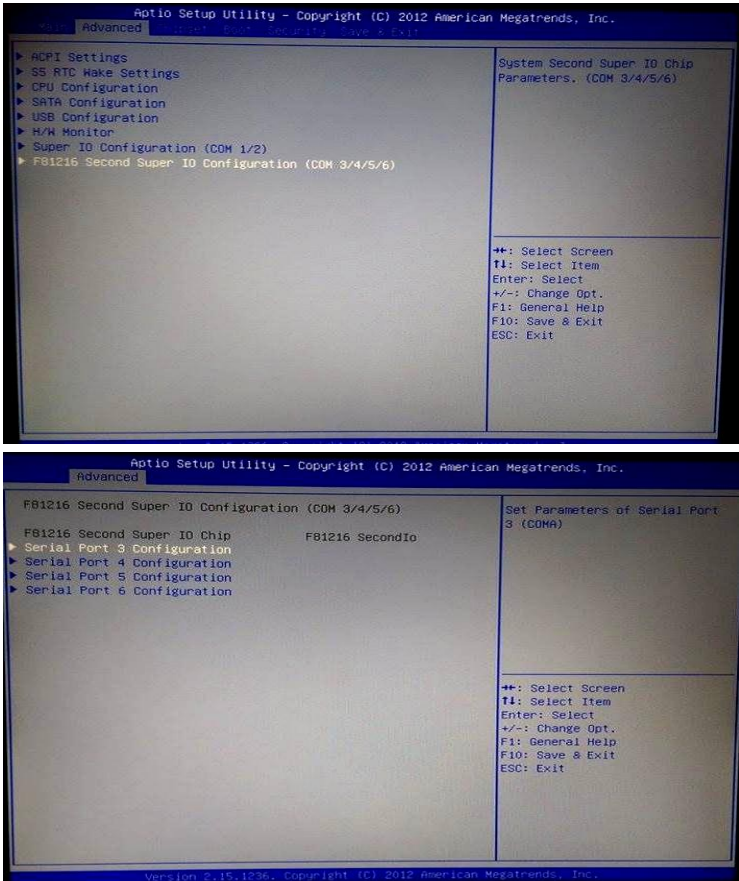
You may select the power (5v / 12v) of COM and Cash Drawer Port in BIOS

<COM1/2>



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<COM3/4/5>



***Make sure the device voltage matches the power setting before connection**

Cable Cover and Cabling

1. Connect the adapter to 12v DC-in



2. Connect all devices



3. Install cable cover



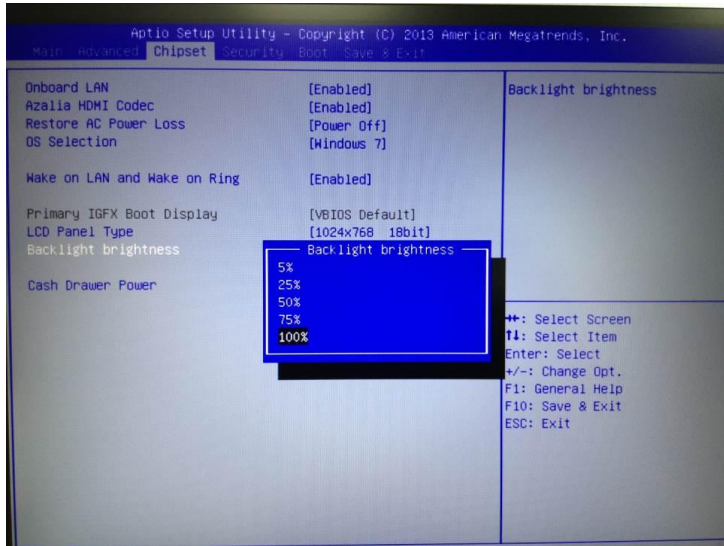
4. Tighten 1 x M3 screw



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LED Backlight Brightness

5 levels of backlight brightness (5, 25, 50, 75, 100%) can be selected in the BIOS



Integrated VFD / LCM

1. Remove the back cover



2. Connect customer display
via serial cable and tighten
3 x M3 screw



AP-2025

AP-2029

3. Customer display (integrated type) is connected to COM4
5mm LCM Module (AP-2025) is **5v**
9mm VFD (AP-2029), 9mm LCM 20x2 (AP-2024), LCM 240x64 (AP-240G) are **12v**

*** Make sure the power setting of COM4 is correct before customer display is connected**

4. **Do not** exceed the tilt angle as this
may damage internal cable



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2nd Monitor (15" Pole Type)

1. Fasten PP-9645 and 2nd monitor together with 2 x M5 screw



2. Connect VGA and 12v DC cables



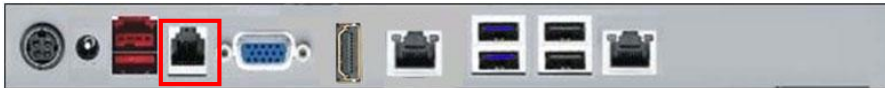
Cash Drawer

PP-9645 Aer PPC

Please make sure the voltage and cable pin assignment of your cash drawer matches the cash drawer port on PP-9645.

You may find the jumper setting and pin definition in M/B H81 user manual.

Please refer to [trouble shooting](#) if the cash drawer cannot be detected by PP-9645



To open drawer 1 (the default):

```
port[openaddr] <= open1  
wait(sleep(ms))  
port[openaddr] <= close
```

To open drawer 2:

```
port[openaddr] <= open2  
wait(sleep(ms))  
port[openaddr] <= close
```

To get status:

```
StatusValue <= port[status] and statusmask
```

The parameters, which are in the cashdrawer.ini

```
openaddr=A05  
status=A05  
sleep=200  
open1=40  
open1=80  
close=1  
statusmask=10
```

Chapter 3

Software Installation and Setup

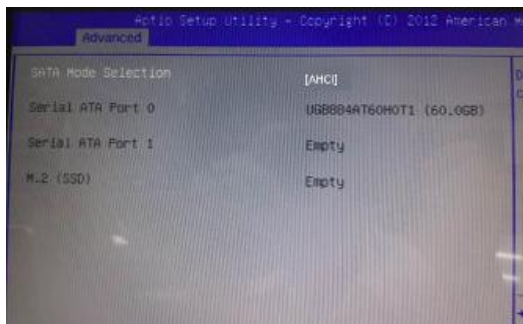
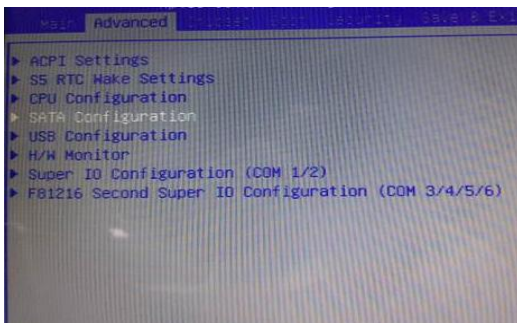
Please download drivers and utilities from www.fecpos.com/en-global/ams/Download

OS Installation Sequence

Install Windows system (Windows7 , Windows system, Windows 8 , Windows 8.1 , Window10)
32bit/64bit ,

Please press Del into BIOS when you login the system.

1、**Manu:** Advance → SATA configuration→ IDE/AHCI Mode select **AHCI** Mode



2、**Manu:** Boot

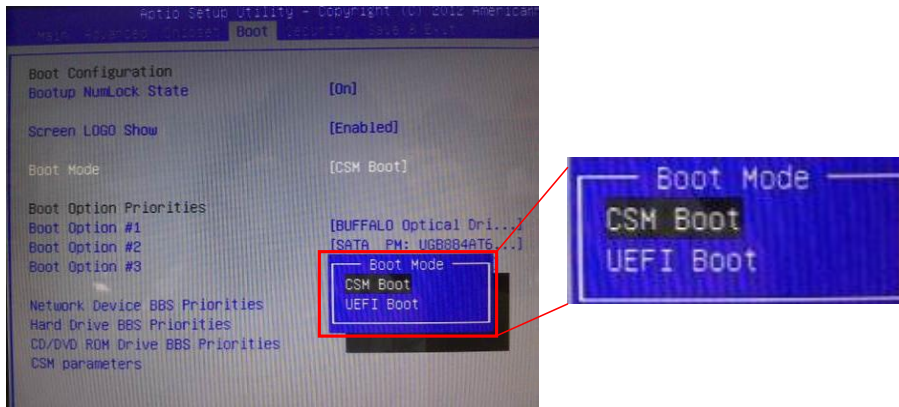
→Boot Mode →CSM/UEFI Boot select **CSM** Boot

→Boot Option Priorities

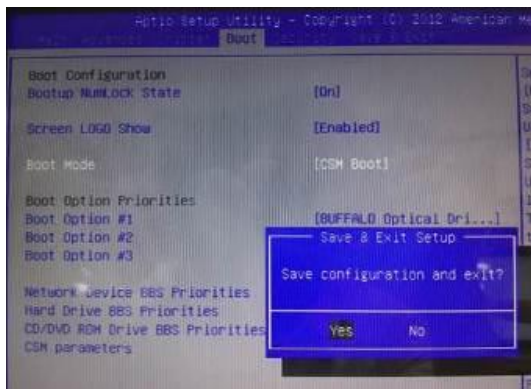
→Option #1 DVD device (Model name, type) · Windows system in DVDROM

→Option #2 Hard Driver device (Model name, type)

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3、Press **F10** to install OS



Please notice , While the PC is in UEFI mode, the Windows PE version must match the PC architecture. A PC in 64-bit UEFI firmware mode can only boot 64-bit versions of Windows PE. A PC in 32-bit UEFI firmware mode can only boot 32-bit versions of Windows PE. On PCs that support both UEFI mode and legacy BIOS mode, you may be able to run 32-bit Windows PE on a 64-bit PC by changing BIOS menu settings from “UEFI mode” to “BIOS mode”, assuming the manufacturer supports legacy BIOS mode.

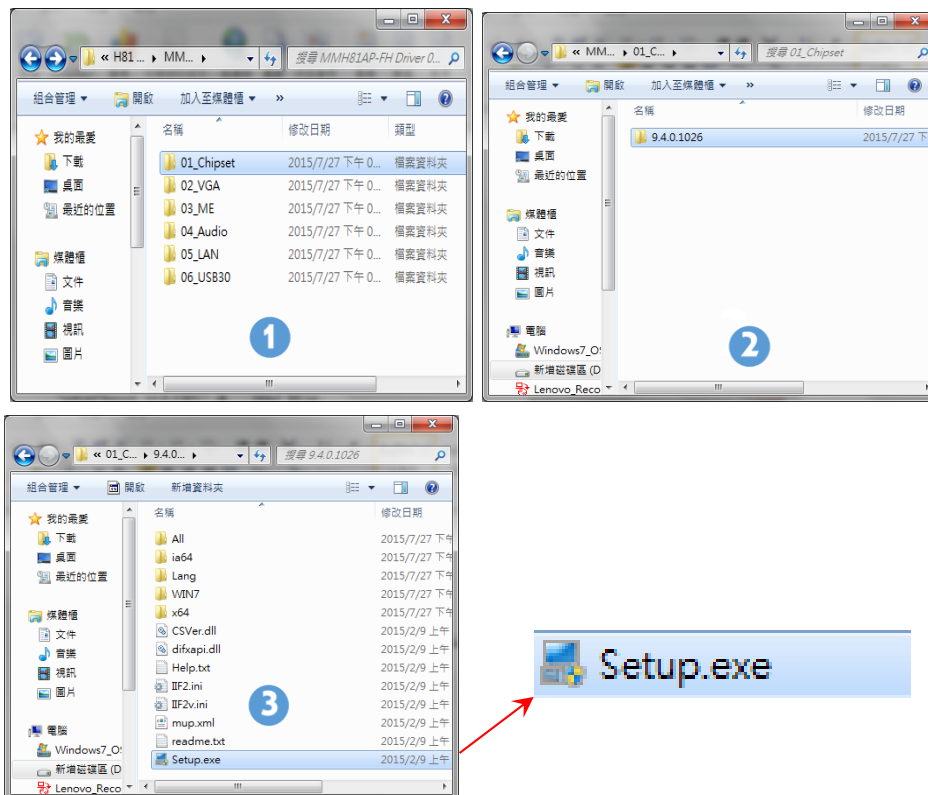
If you need more information about the UEFI Mode , you can check following website :
<https://msdn.microsoft.com/en-au/library/hh824898.aspx>

Device Installation Sequence

1. Chipset Driver
2. ME Driver
3. VGA Driver
4. Audio Driver
5. LAN Driver
6. USB 3.0 Driver
7. Touch Tools (Touch Utility)

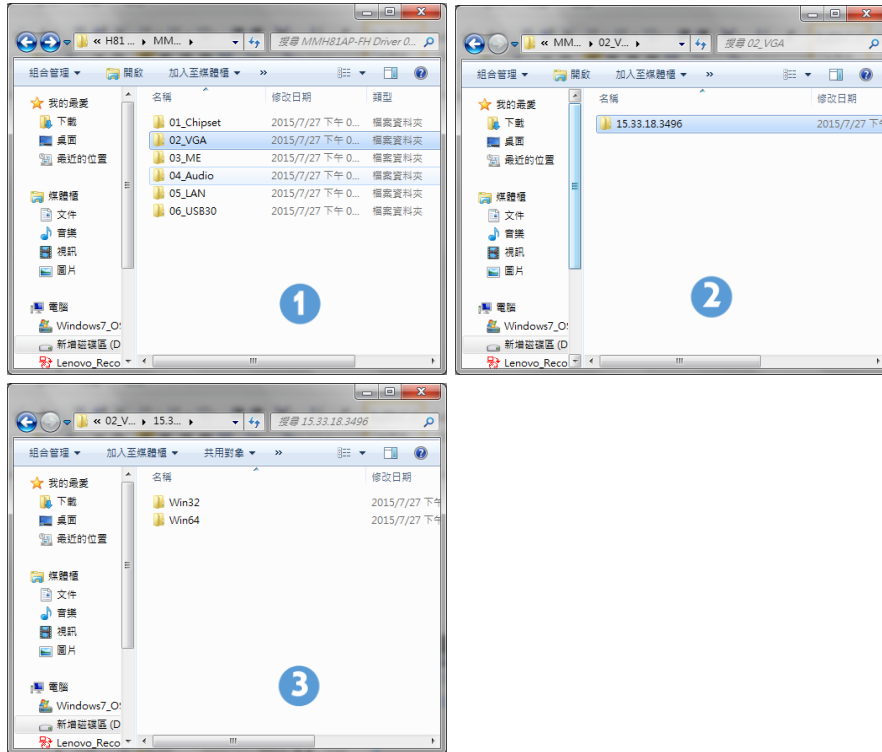
Intel H81 Chipset Utilities for Windows system

1. Download drivers from www.fecpos.com/en-global/ams/Download
2. Run **Setup.exe**



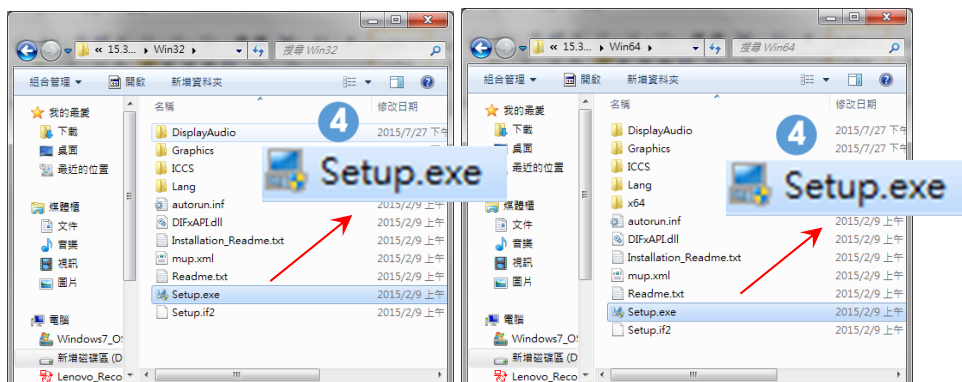
Intel VGA Driver for Windows system

1. Download drivers from www.fecpos.com/en-global/ams/Download



Win32(32bit)

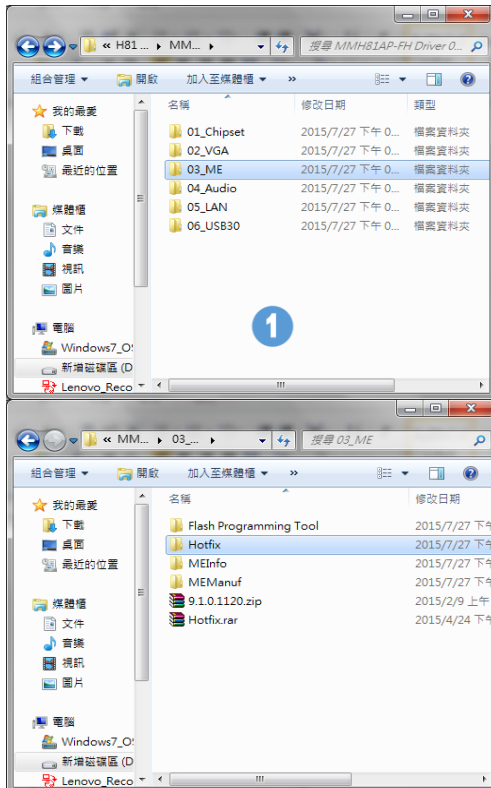
Win64(64bit)



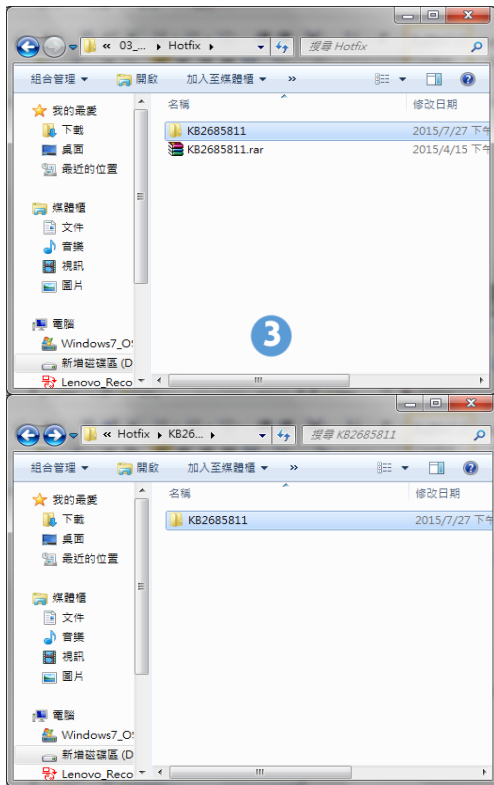
2. Run **Steup.exe**
3. Restart PP-9645 to complete installation

ME Update (Hotfix) for Windows system

1. Download drivers from www.fecpos.com/en-global/ams/Download



PP-9645 Aer PPC

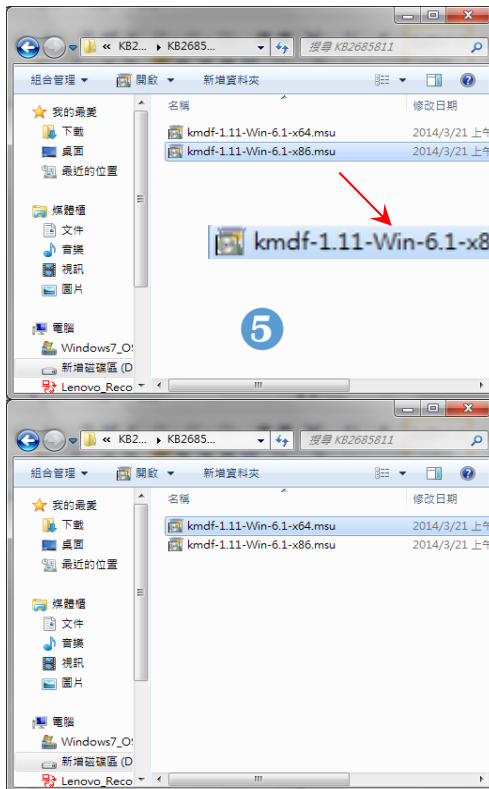


32 bit

4

64bit

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kmdf-1.11-Win-6.1-x64.msu

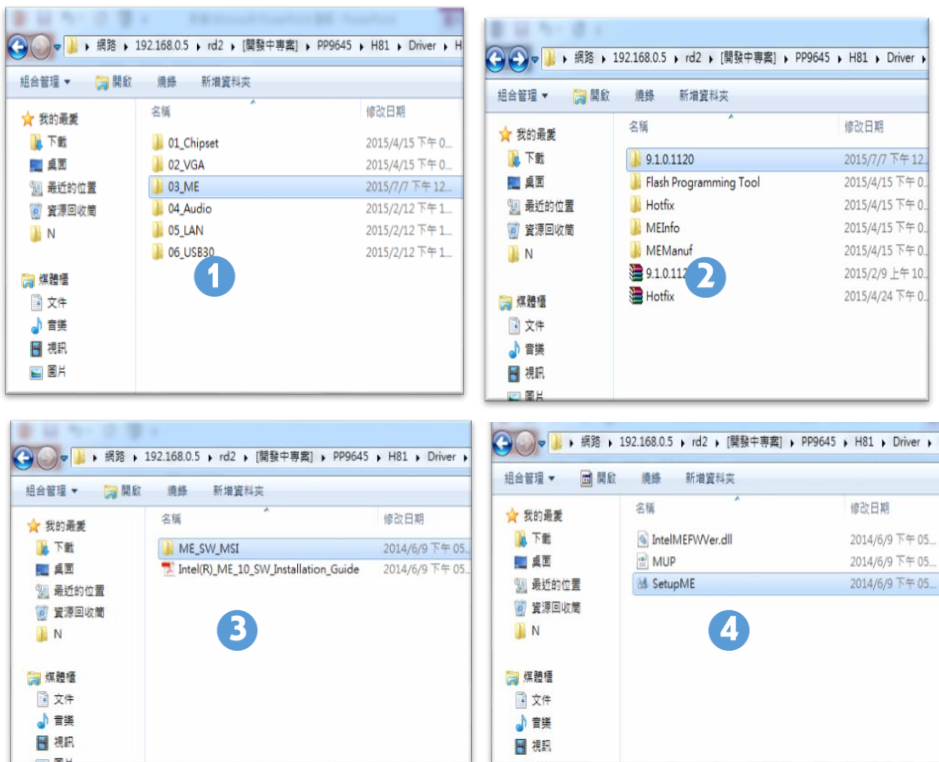
5

2. Run **kmdf1.11-win-6.1-x86/64.msu**
3. Restart PP-9645 to complete installation

PP-9645 Aer PPC

ME Driver for Windows system

1. Download drivers from www.fecpos.com/en-global/ams/Download
2. Run SetupME.exe



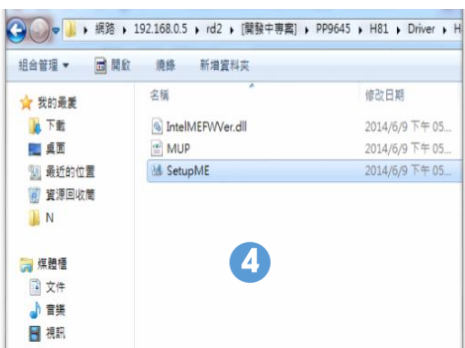
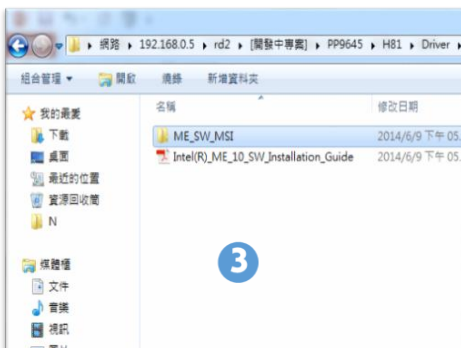
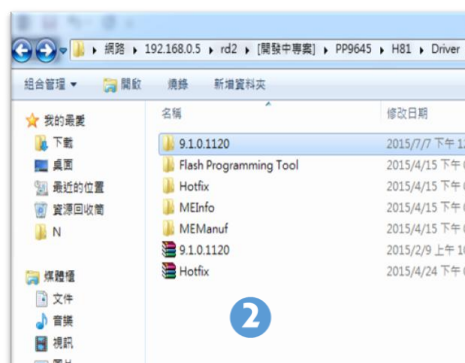
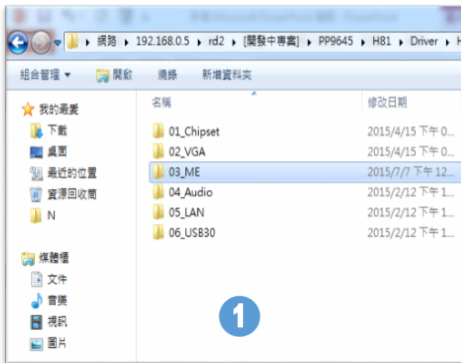
3. Restart PP-9645 to complete installation

***When the system is POSReady7 or Windows 7, you need to install Hotfix derive extra, but you don't need to install this derive that the system is Window 8 or Windows 8.1.**

PP-9645 Aer PPC

ME Driver for Windows system.

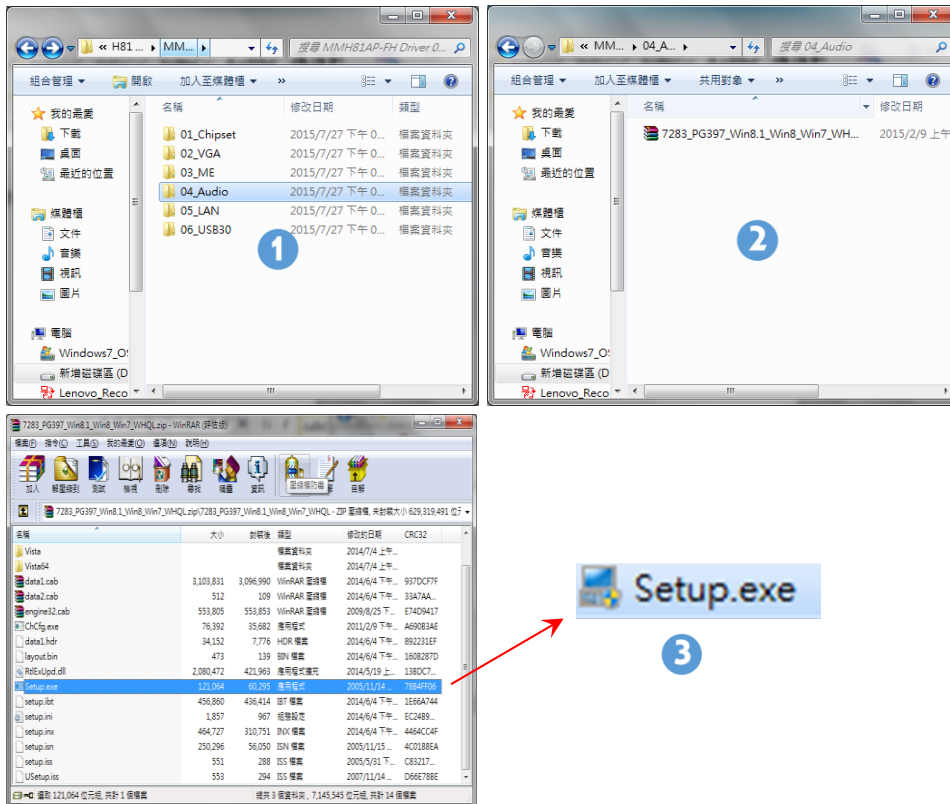
1. Download drivers from www.fecpos.com/en-global/ams/Download
2. Run **SetupME.exe**



3. Restart PP-9645 to complete installation

Audio Driver for Windows system

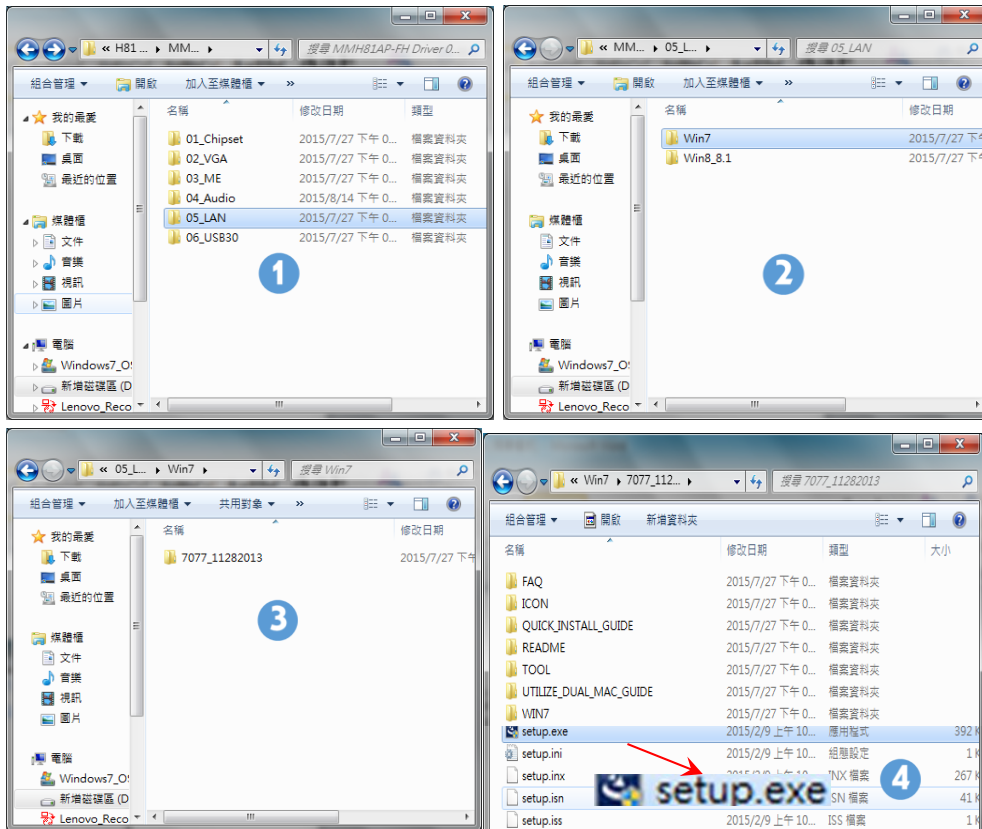
1. Download drivers from
2. Run **Steup.exe**



3. Restart PP-9645 to complete installation

LAN Driver for Windows system

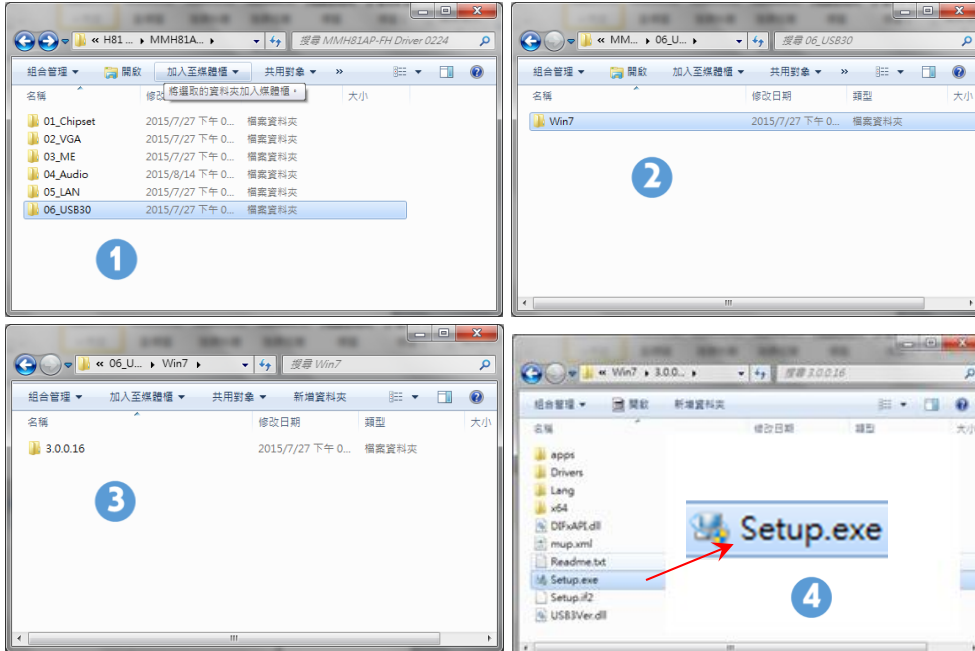
1. Download drivers from www.fecpos.com/en-global/ams/Download
2. Run **Steup.exe**



PP-9645 Aer PPC

USB 3.0 Driver for Windows system

1. Download drivers from www.fecpos.com/en-global/ams/Download
2. Run **Steup.exe**



3. Restart PP-9645 to complete installation

PP-9645 Aer PPC

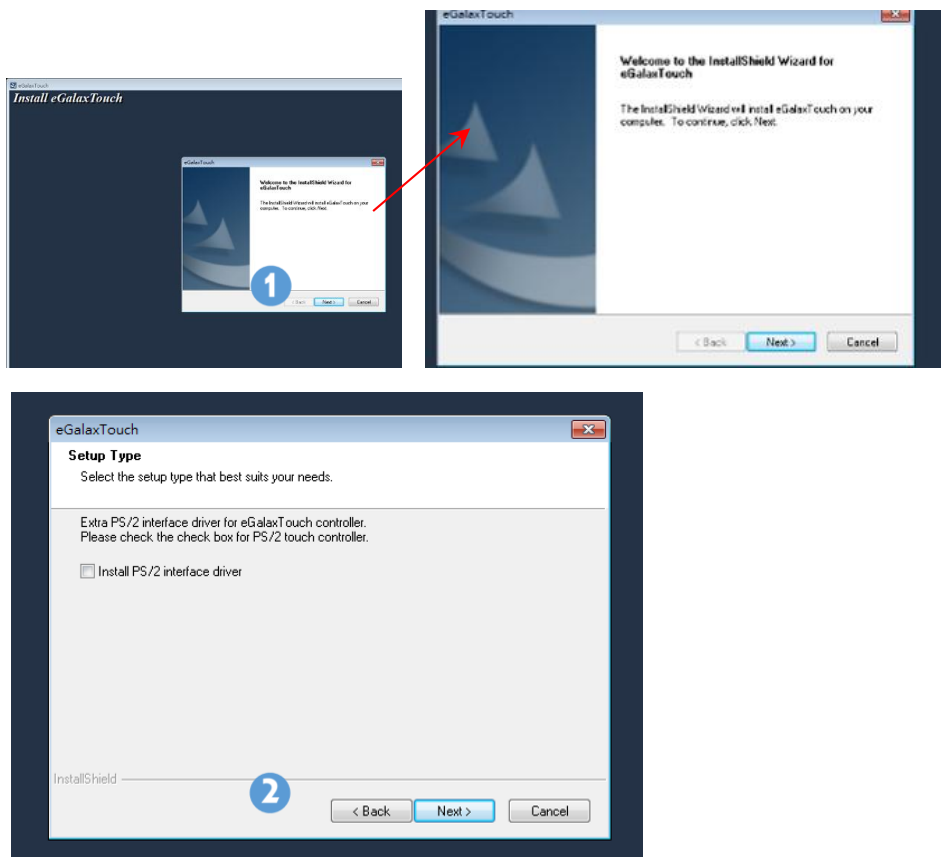
TouchKit

Please following those information to setup the program , and please be carefully , if the machine type is PP-9645 C which don't need to setup the ELO touchkit system .

Model	Touch Sensor	Touch Control Board
PP-9645A	ELO	EETI
PP-9645B	ELO	ELO
PP-9645C	AUO	EETI

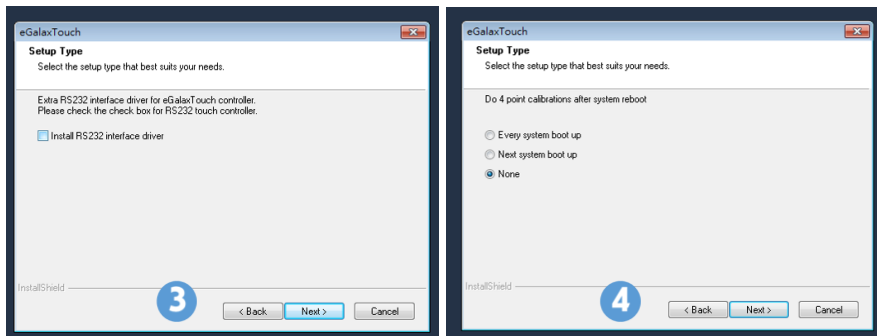
EETI TouchKit for Windows system

1. Download drivers from www.fecpos.com/en-global/ams/Download
2. Run **Steup.exe**

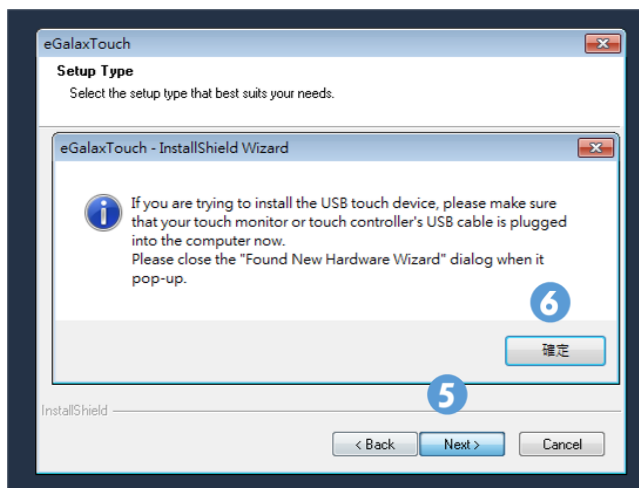


3. Do **NOT** check **Install PS/2 interface driver** and continue

PP-9645 Aer PPC

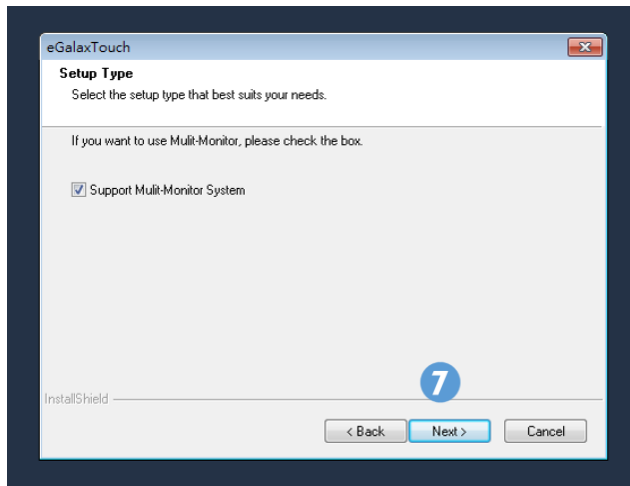


4. Do **NOT** check **Install RS232 interface driver** and continue
5. Confirm USB touch device is in use



6. Check **Support Multi-Monitor System** and continue

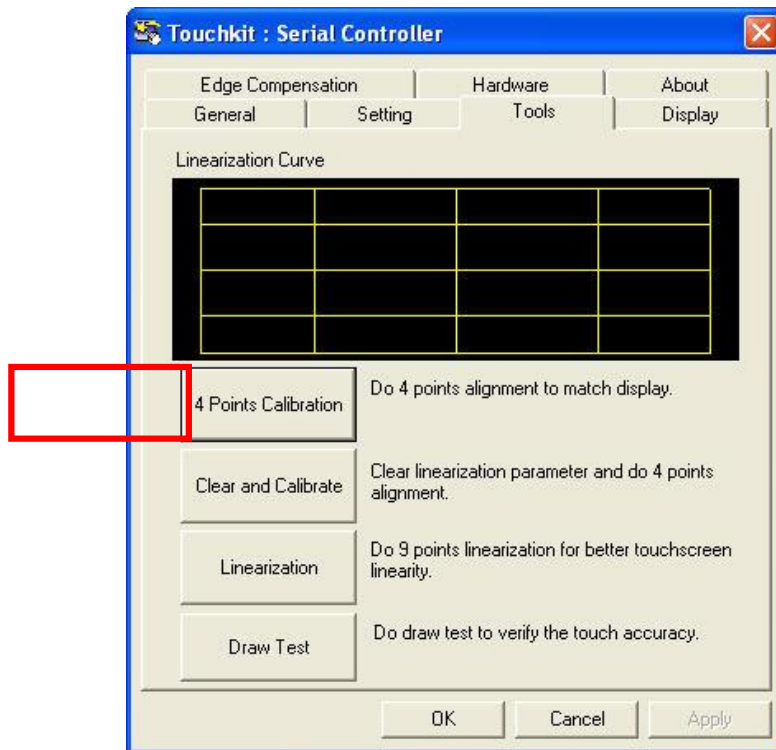
PP-9645 Aer PPC



7. Restart PP-9645 to complete installation

EETI TouchKit Control Panel

Tools allows the user to calibrate the touch panel via **4 Points Calibration**



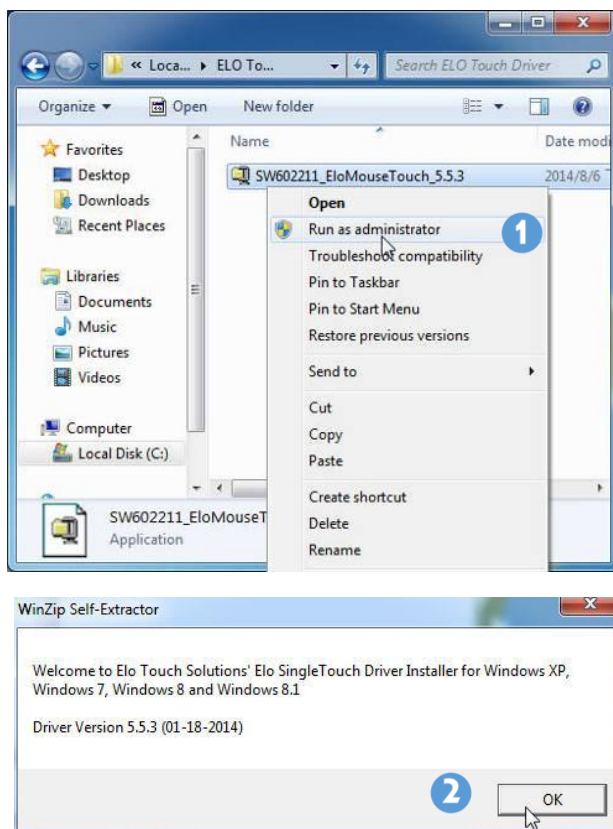
ELO TouchKit Tools Installation



Please notice the machine type you used .If is the machine type is **PP-9645 A or PP-9645 B**, both of them **Don't** need to update the TouchKit Tools . But if the machine is **PP-9645 C**, **please following the steps to update the TouchKit Tools version form T13 to T15.**

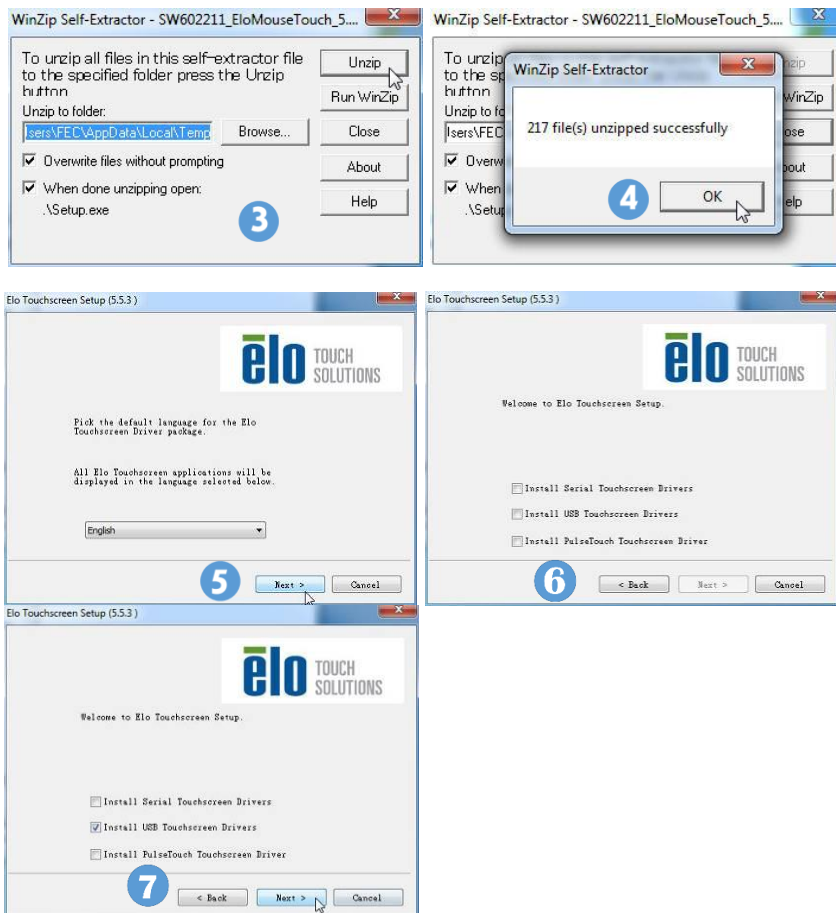
ELO TouchKit Installation for Windows system

1. ELO Touch (SW602211_ELOMouseTouch_5.5.3.exe)
2. Run as administrator

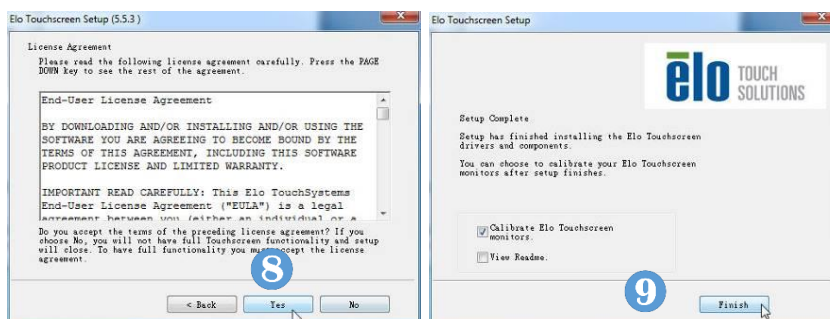


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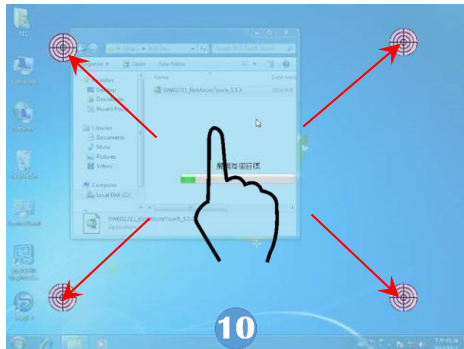
3. Unzip file and start to Install USB Touch Screen Driver



4. Start installation and choose "Calibrate ELO ToucScreen" as finished



5. Four Corners Calibration



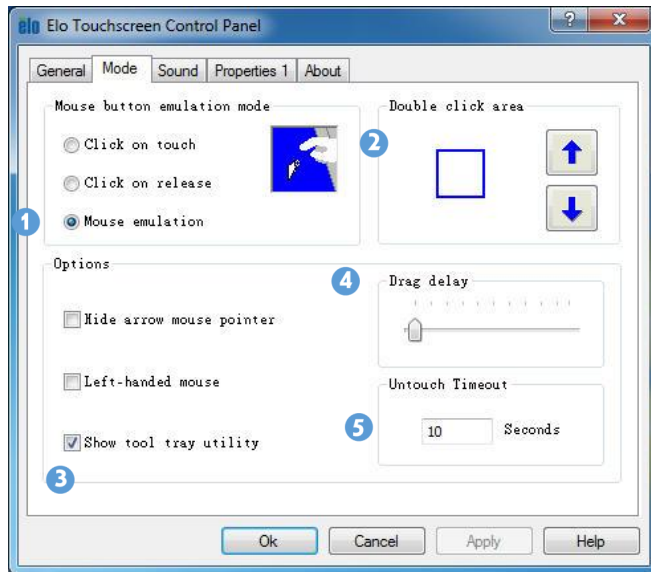
6. Elo Touchscreen Control Panel → General Page → can choose calibration mode for “Normal Mode” or “Enhance Mode”



7. Mode Page:

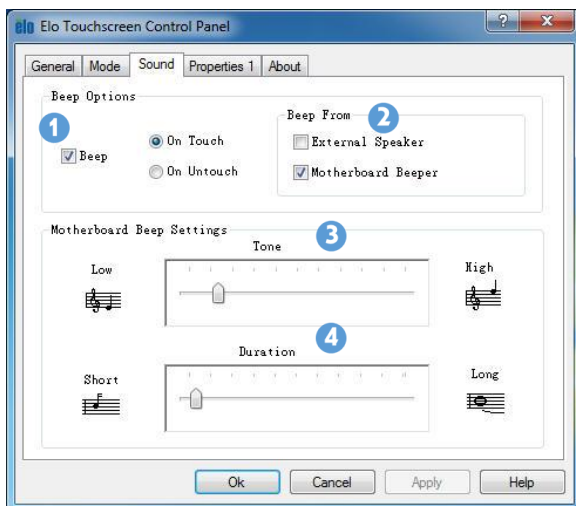
1. Mouse Button emulation mode → Click on Mouse emulation and Double Click Area
2. Options → Click on show tool tray utility → Adjust Drag delay → Adjust Untouch Timeout

PP-9645 Aer PPC



8. Sound Page:

1. Beep options → without Beep, Beep on touch, Beep on Untouch
2. Beep from → External Speaker, Motherboard Beeper
3. Motherboard Beep settings → Tone and Duration



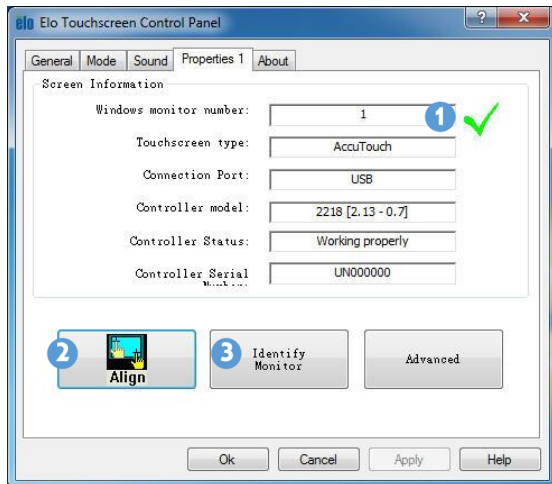
9. Properties 1:

1. Screen Information

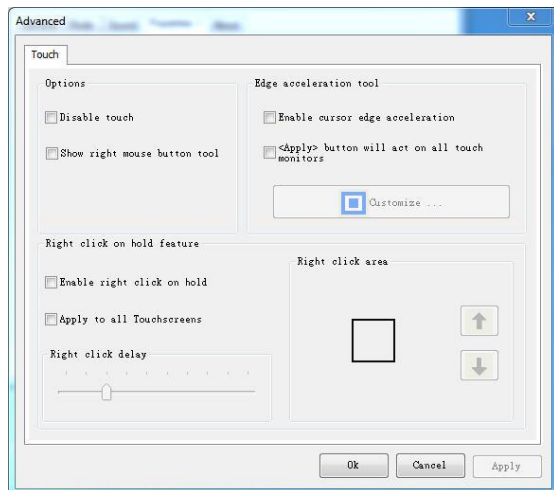
PP-9645 Aer PPC

2. Align → touch calibration

3. Identify Monitor → identification of 1st screen touch or 2nd screen touch



Advanced:



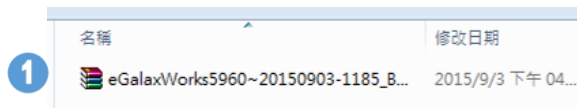
PP-9645 Aer PPC

ELO TouchKit Control Panel update



Please notice that only the machine type is **PP-9645C** need to update the version , please following the steps to update the TouchKit Tools version form T13 to T15.

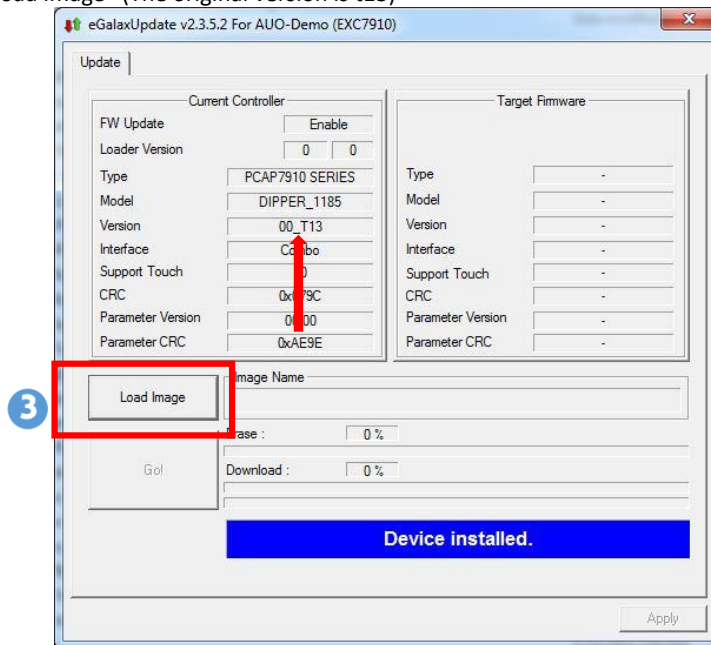
1. Decompress the ELO Touch update file (eGalaxWorks5960~20150903-1185_B100_00_T15_AUO-Device(Firich))



2. Run “eGalaxUpdate”

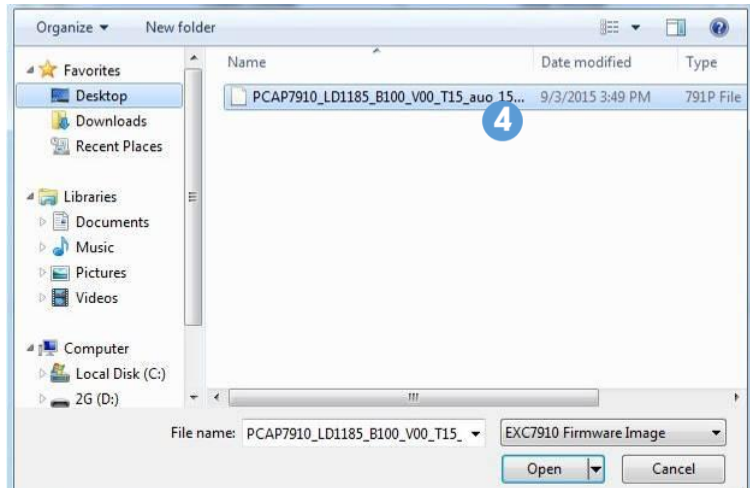


3. Click “Load image” (The original version is t13)

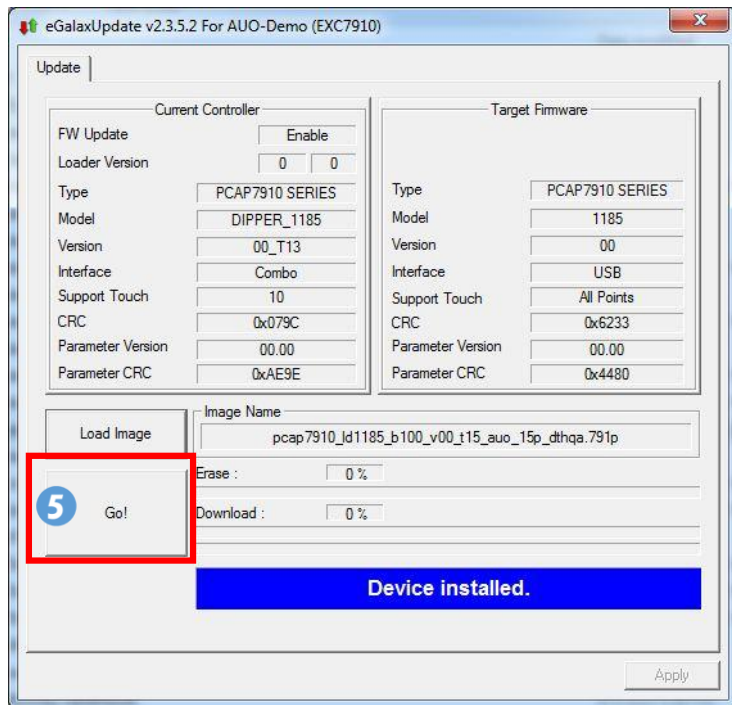


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- Click image “PCAP7910_LD1185_B100_V00_T15_auo_15p_Dthqa.791p” and then click “Open”

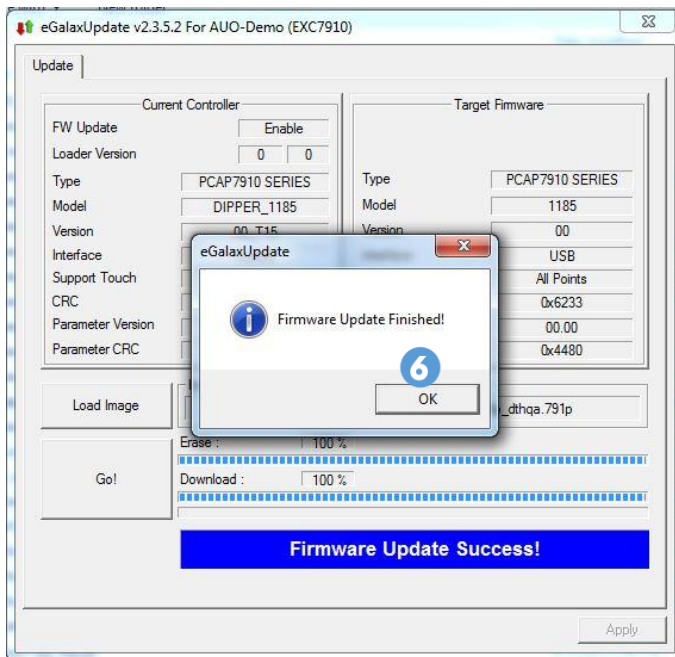


- Click “Go!”

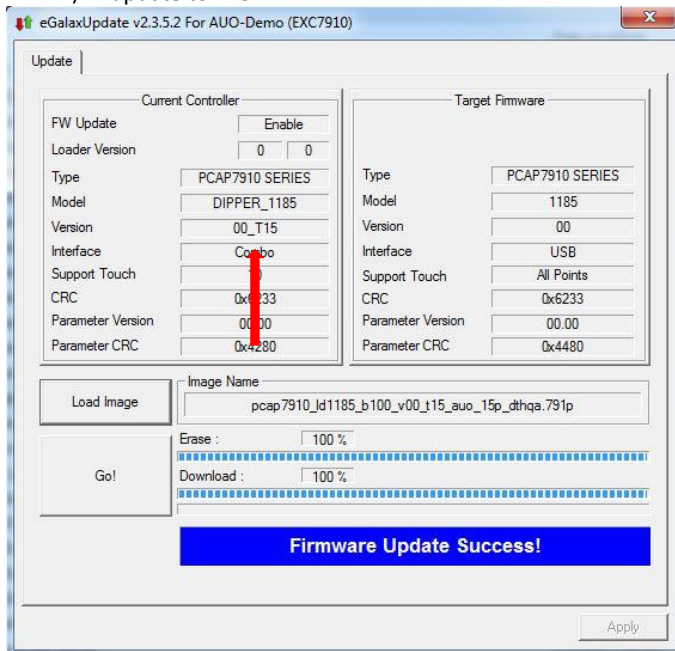


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6. Finish and click “OK”



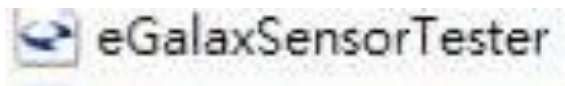
7. F/W update to T15



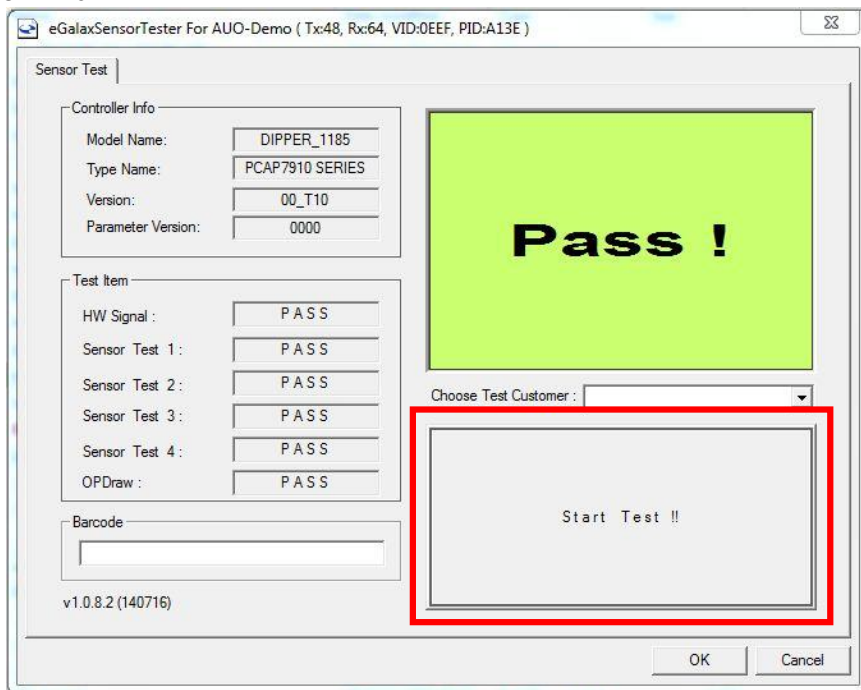
ELO TouchKit Control Panel version T15 Test

Please following these steps to calibrate the Touch system.

1. Run “eGalaxSensorTester”

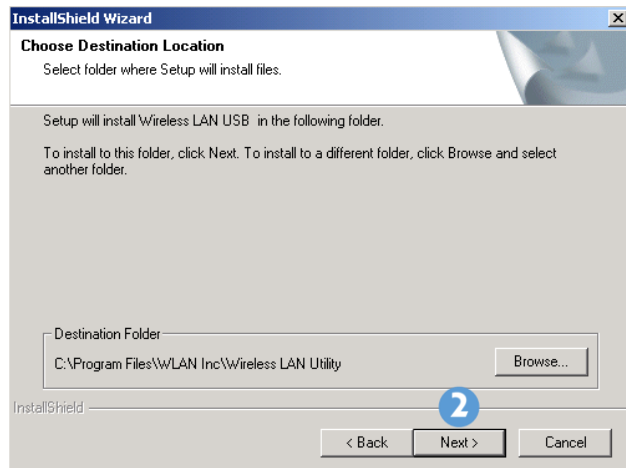
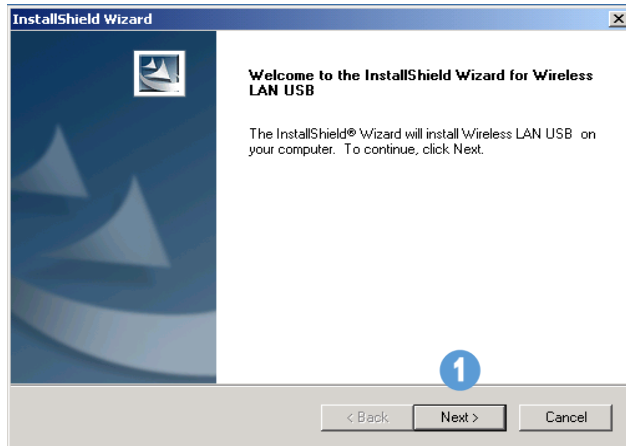


2. Click Start Test
3. Finish



Wireless LAN Driver for Windows system.

1. Download drivers from www.fecpos.com/en-global/ams/Download
2. Run **Steup.exe**



Chapter 4

Specifications

Aer PPC	PP-9645A	PP-9645B	PP-9645C
System	Processor	Intel® Celeron™ G1820TE 2.20 GHz, Intel® Core™ i3-4330TE 2.40 GHz, Intel® Core™ i5-4570TE 2.70 GHz Intel® Core™ i5-4590T 2.0GHz	
	Memory	Dual SODIMM DDR3 L Standard 2G ; Max 16	
	Power Supply	150W	
	Thermal	Smart Fan	
	Storage Device	1 x 2.5" SATA Drive 1 x M.2 SSD socket (coming soon)	
	Speakers	2w x 2	
Display	Display	15" (4 : 3)	
	Touch	Resistive (bezel)	Projected Capacitive
	Backlight	LED	
	Brightness	350 nits	
	Backlight MTBF	50,000 hours	
Peripherals	MSR	Track 1/2/3 (USB)	
	Finger Print	Optical (USB)	
	RFID	13.56 MHz (USB)	
	iButton	USB / Virtual COM	
	WireLess LAN	802.11b/g/n (USB) _ (coming soon)	
	VFD	20 x 2 (9mm / 12v / character mode)	
	LCM	20 x 2 (9mm / 12v / character mode) 240 x 64 (9mm / 12v / graphic mode) 20 x 2 (5mm / 5v / character mode) 192 x 32 (5mm / 5v / graphic mode)	
	2 nd Display	15" pole type	

Chapter 5

Troubleshooting

This guide is for people with strong knowledge in computing hardware

Touch Panel does not work

- A) Check the connection between touch panel and touch controller
- B) HID USB touch device is detected by O/S
- C) (Resistive) EETI driver (or TouchKit driver) is properly installed or try reinstallation
- D) (P-Cap) P-Cap touch is detected by O/S or try reinstallation
- F) (P-Cap touch calibration) reboot the system and P-Cap touch will calibrate automatically

OSD Buttons do not work

- A) Press each OSD button for more than two seconds to trigger its function
- B) Make sure one button is touched at a time

HDD / SSD is not detected

- A) Make sure SATA storage device is properly installed
- B) HDD power cable is properly connected to the mainboard
- c) Check CMOS setup and set SATA HDD to Auto Detect
- D) Check onboard SATA port

MSR does not function properly

- A) Make sure MSR (USB Hid keyboard) is properly connected
- B) MSR LED is blue (color)

LAN does not function properly

- A) LAN driver is installed properly
- B) RJ45 cable is connected properly
- c) check IRQ conflict

COM does not function properly

- A) Check the I/O ports in CMOS

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- B) Check IRQ conflict
- C) Check mainboard and I/O cable

Cash Drawer Port does not function properly

- A) Pin assignment of cash drawer matches that of RJ11 cash drawer port
- B) Check I/O port address