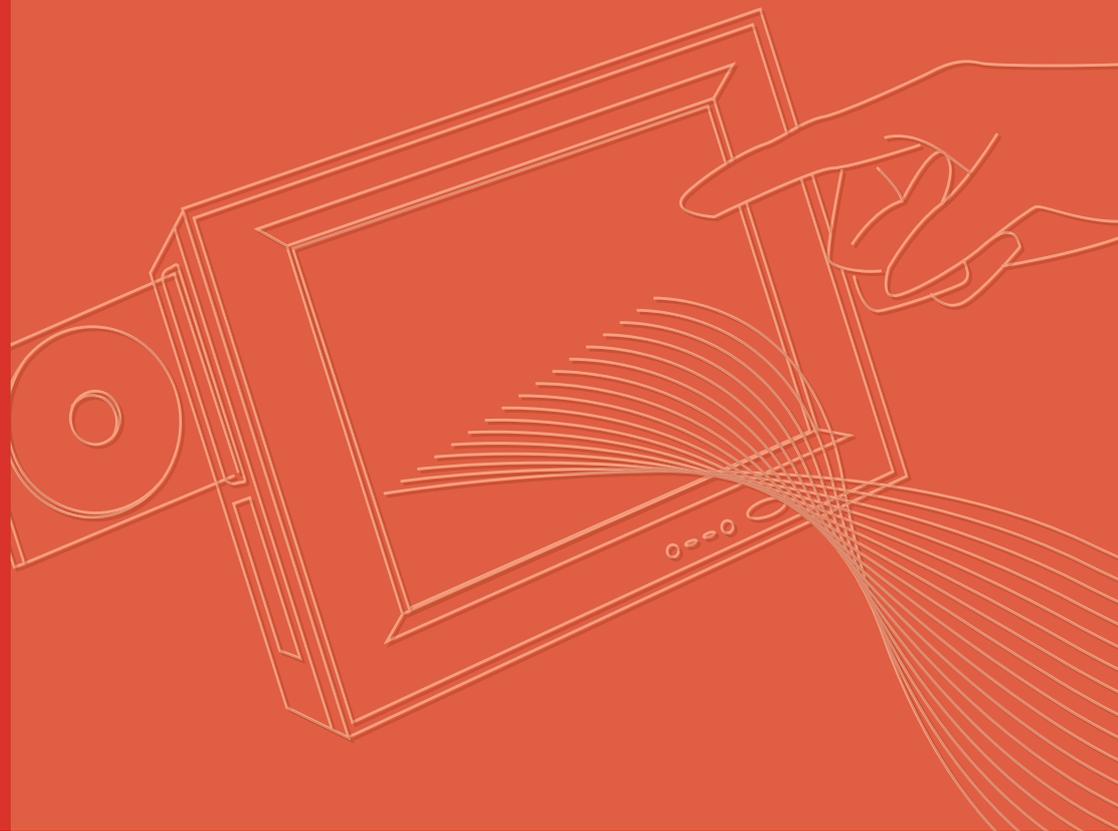


**User Manual**



## **PPC-L61T**

**AMD LX800 Processor based  
Fanless Panel PC with 6.5" TFT  
LCD**

*Trusted ePlatform Services*

**ADVANTECH**

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This manual is for the PPC-L61T series.

# Declaration of Conformity

## FCC Class B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses and can radiate radio frequency energy. If not installed and used in accordance with this user's manual, it may cause harmful interference to radio communications. Note that even when this equipment is installed and used in accordance with this user's manual, there is still no guarantee that interference will not occur. If this equipment is believed to be causing harmful interference to radio or television reception, this can be determined by turning the equipment on and off. If interference is occurring, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**Warning!** *Any changes or modifications made to the equipment which are not expressly approved by the relevant standards authority could you're your authority to operate the equipment.*



---

## Packing List

Before you begin installing your card, please make sure that the following materials have been shipped:

- PPC-L61T series Panel PC
- Accessories for PPC-L61T
- Warranty card
- DC plug-in housing (female) is connected on the AC/DC power adapter
- "Drivers, Utilities and User Manual" CD-ROM
- End User License Agreement (XPE and WinCE model)
- Mounting kits and packet of screws

If any of these items are missing or damaged, contact your distributor or sales representative immediately.

## Additional Information and Assistance

1. Visit the Advantech web site at [www.advantech.com/support](http://www.advantech.com/support) where you can find the latest information about the product.
2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:
  - Product name and serial number
  - Description of your peripheral attachments
  - Description of your software (operating system, version, application software, etc.)
  - A complete description of the problem
  - The exact wording of any error messages

### **Warning!**



1. Input voltage rated:12-30 Vdc, 2.5 A max.
2. Use a 3 V@ 195 mA lithium battery.
3. *Packing: please carry the unit with both hands and handle with care.*
4. *Maintenance: to properly maintain and clean the surfaces, use only approved products or clean with a dry applicator.*
5. *CompactFlash: Turn off power before inserting or removing CompactFlash storage card.*

### **Contact information:**

Our European representative:  
Advantech Europe GmbH  
Kolberger Str. 7  
D-40599 D,sseldorf, Germany  
Tel: 49-211-97477350  
Fax: 49-211-97477300

# Safety Instructions

1. Read these safety instructions carefully.
2. Keep this User Manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
4. For plug-in equipment, the power outlet socket must be located 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 may 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 overvoltage.
12. Never pour any liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If one 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.
15. **DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.**

**Caution!** *DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER, DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.*



The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70 dB (A).

DISCLAIMER: This set of instructions is given according to IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

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## Wichtige Sicherheitshinweise

1. Bitte lesen sie Sich diese Hinweise sorgfältig durch.
2. Heben Sie diese Anleitung für den späteren Gebrauch auf.
3. Vor jedem Reinigen ist das Gerät vom Stromnetz zu trennen. Verwenden Sie Keine Flüssig-oder Aerosolreiniger. Am besten dient ein angefeuchtetes Tuch zur Reinigung.
4. Die NetzanschlUBsteckdose soll nahe dem Gerät angebracht und leicht zugänglich sein.
5. Das Gerät ist vor Feuchtigkeit zu schützen.
6. Bei der Aufstellung des Gerätes ist auf sicheren Stand zu achten. Ein Kippen oder Fallen könnte Verletzungen hervorrufen.
7. Die Belüftungsöffnungen dienen zur Luftzirkulation die das Gerät vor überhit-zung schützt. Sorgen Sie dafür, daB diese Öffnungen nicht abgedeckt werden.
8. Beachten Sie beim. AnschluB an das Stromnetz die AnschluBwerte.
9. Verlegen Sie die NetzanschlUBleitung so, daB niemand darüber fallen kann. Es sollte auch nichts auf der Leitung abgestellt werden.
10. Alle Hinweise und Warnungen die sich am Geräten befinden sind zu beachten.
11. Wird das Gerät über einen längeren Zeitraum nicht benutzt, sollten Sie es vom Stromnetz trennen. Somit wird im Falle einer Überspannung eine Beschädigung vermieden.
12. Durch die Lüftungsöffnungen dürfen niemals Gegenstände oder Flüssigkeiten in das Gerät gelangen. Dies könnte einen Brand bzw. elektrischen Schlag auslösen.
13. Öffnen Sie niemals das Gerät. Das Gerät darf aus Gründen der elektrischen Sicherheit nur von autorisiertem Servicepersonal geöffnet werden.
14. Wenn folgende Situationen auftreten ist das Gerät vom Stromnetz zu trennen und von einer qualifizierten Servicestelle zu überprüfen:
  15. Netzkabel oder Netzstecker sind beschädigt.
  16. Flüssigkeit ist in das Gerät eingedrungen.
  17. Das Gerät war Feuchtigkeit ausgesetzt.
  18. Wenn das Gerät nicht der Bedienungsanleitung entsprechend funktioniert oder Sie mit Hilfe dieser Anleitung keine Verbesserung erzielen.
  19. Das Gerät ist gefallen und/oder das Gehäuse ist beschädigt.
  20. Wenn das Gerät deutliche Anzeichen eines Defektes aufweist.
21. **VORSICHT:** Explosionsgefahr bei unsachgemaben Austausch der Batterie.Ersatz nur durch denselben oder einem vom Hersteller empfohlene-männlichen Typ. Entsorgung gebrauchter Batterien navh Angaben des Herstellers.
22. **ACHTUNG:** Es besteht die Explosionsgefahr, falls die Batterie auf nicht fach-männische Weise gewechselt wird. Verfangen Sie die Batterie nur gleicher oder entsprechender Type, wie vom Hersteller empfohlen. Entsorgen Sie Batterien nach Anweisung des Herstellers.
23. Der arbeitsplatzbezogene Schalldruckpegel nach DIN 45 635 Teil 1000 beträgt 70dB(A) oder weiger.

Haftungsausschluss: Die Bedienungsanleitungen wurden entsprechend der IEC-704-1 erstellt. Advantech lehnt jegliche Verantwortung für die Richtigkeit der in diesem Zusammenhang getätigten Aussagen ab.

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# Chapter 1

## General Information

This chapter gives background information on the PPC-L61T Panel PC.

Sections include:

- Introduction
- General Specifications
- LCD Specifications
- Dimensions

---

## 1.1 Introduction

The PPC-L61T panel PC is an AMD low-power LX800 processor computer that is designed to serve a Human machine interface (HMI) and as a multimedia computer. It is a PC based system with 6.5" color TFT LCD display and aluminum front cover, the PPC-L61T is as compact and user friendly as a multi-function computer.

For system integrators, the simple, complete, compact system lets you easily build a panel PC into your application. Common industrial applications include factory automation systems, precision machinery, and production process control. It is also suitable for many non-industrial applications, including car part automation and interactive kiosk system. Our Panel PC is a reliable, cost effective solution to your application's processing requirements.

## 1.2 General Specifications

### General

- **Dimensions (W x H x D):** 202 x 148 x 49 mm
- **Weight:** 1.2 kg
- **Power supply:**
  - Input voltage: 12 ~ 30 V, 2.5 A
  - Power Adapter: 19 V @ 3.19 A
- **Disk Drive Housing:** Optional for external SATA HDD kit
- **Front panel:** IP65/NEMA 4 compliant

### Standard PC functions

- **CPU:** On board AMD LX800 500MHz processor
- **Chipset:** Integrated in AMD CS5536AD South Bridge
- **BIOS:** Award 256 KB Flash BIOS, ACPI 2.0 Compliant
- **System Chipset:** AMD CS5536AD
- **System Memory:** One 200-pin SODIMM socket, accepts up to 1 GB DDR333/400 SDRAM
- **Solid state disk:** Supports one 50-pin socket for Compact-Flash type I/II (True IDE mode)
- **Serial ports:** one RS-232/422/485 serial port one RS232 serial port. All ports are compatible with 16C550. UARTs, Pin 9 with +5 V/+12 V power supply selectable
- **Universal serial bus (USB) port:** Supports up to four USB2.0 (2 internal, 2 external)
- **Mini PCI bus expansion slot:** Accepts one type III mini PCI bus card
- **Watchdog timer:** 256 level timer intervals from 1 to 255 seconds Jumperless selection and software enabled/disabled
- **RTC Battery:** 3.0 V @ 195 mA lithium battery
- **Power management:** Supports power saving modes including Normal/Standby/Suspend modes. APM 1.2 compliant
- **Audio controller:** ALC 650 AC97 Ver. 2.0 compliant interfaces, Multi stream Direct sound and Direct Sound 3D acceleration
- **Stereo sound:** 18-bit full-duplex codec
- **Audio interface:** Optional One 1.5 W speaker

### PCI bus Ethernet interface

- **Chipset:** Realtek RTL8100CL PCI local bus Ethernet controller

- **Ethernet interface:** Full compliance with IEEE 802.3u 100Base-T and 10 Base-T specifications. Includes software drivers and boot ROM that supports both RPL and PXE.
- 100/10Base-T auto-sensing capability

### Touch screen (Optional)

Type	Analog Resistive
Resolution	Continuous
Light Transmission	80%
Controller	RS232 interface
Durability (Touches in a life time)	10 million
Software Driver	Support Windows XP/XP Embedded, Windows CE

### Optional modules

- **Memory:** 128/256/512/1024 MB DDR SODIMM
- **Operating system:** Microsoft® XP, XP Embedded, CE
- **Touch screen:** Analog resistive
- **Installation Accessories:**
  - Wall Mount kit: PPC-174 WL-MT
  - Panel Mount kit: Included in standard purchase of PPC-L61T
- **Extension SATA HDD Kit (without HDD):** 989KL61T00E.

### 19 V / 60 W AC Adapter: 1757000272

- **Power cord:** 1702002600 (USA type), 1702002605( Euro type), 1700000237 (JP type), 1700000596 (China type)
- **Wireless LAN kit (802.11 b.g ):** 989KL12709E

### Environment

- **Operating Temperature:** 0~ 50°C (32 ~ 122°F)
- **Relative Humidity:** 10 ~ 95% @ 40°C (non-condensing)
- **Shock:** 10 G peak acceleration (11 msec duration)
- **Certifications:** **EMC:** CE, FCC, CCC, BSMI , VCCI 6786  
**Safety:** UL, CE; CCC, CB. BSMI
- **Vibration:** 5~500 Hz 1G RMS random vibration (HDD type)  
5~500 Hz 3G RMS random vibration (CF card)

## 1.3 LCD Specifications

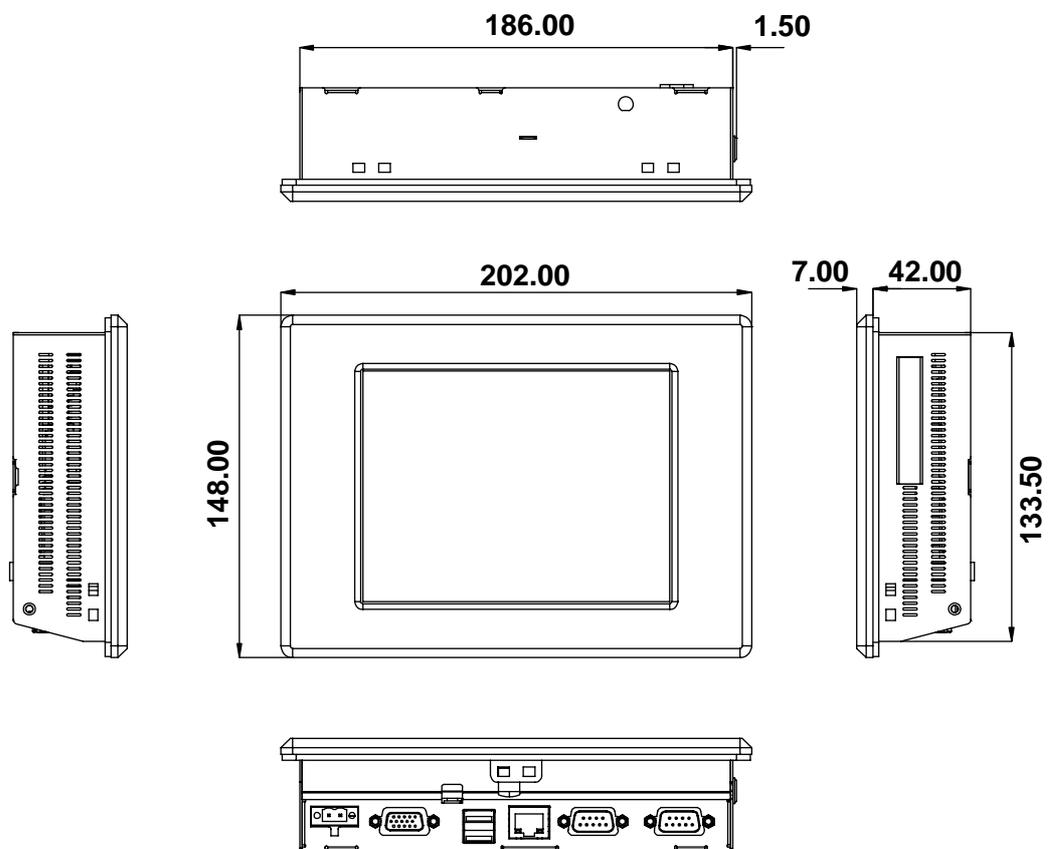
**Figure 1.1: LCD Specifications**

<b>Display type</b>	6.5" TFT LCD
<b>Max. resolution</b>	640 X 480
<b>Colors</b>	262K
<b>Dot size (mm)</b>	0.207 X 0.207
<b>Luminance</b>	400 cd/m <sup>2</sup>
<b>Viewing Angle (Horizon/Vertical)</b>	140°/120°
<b>Temperature</b>	-10 ~ 70°C
<b>LCD MTBF</b>	50,000 hours

**Note!** *The color LCD display installed in the Panel PC is high-quality and reliable. However, it may contain a few defective pixels which do not always illuminate. With current technology, it is impossible to completely eliminate defective pixels. Advantech is actively working to improve this technology.*



## 1.4 Dimensions



**Figure 1.1 PPC-L61T dimensions**

# Chapter 2

## System Setup

This chapter details system setup on the PPC-L61T Panel PC.

Sections include:

- A quick Tour on Panel PC
- Installation procedures
- Running the BIOS Setup Program
- Installing System Software
- Installing the Drivers

## 2.1 A Quick Tour of the Panel PC

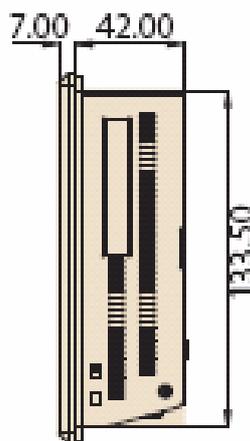
Before you start to set up the Panel PC, take a moment to become familiar with the locations and purposes of the controls, drives, connectors and ports, which are illustrated in the figures below.

When you place the Panel PC upright on the desktop, its front panel appears as shown in Figure 2.1.



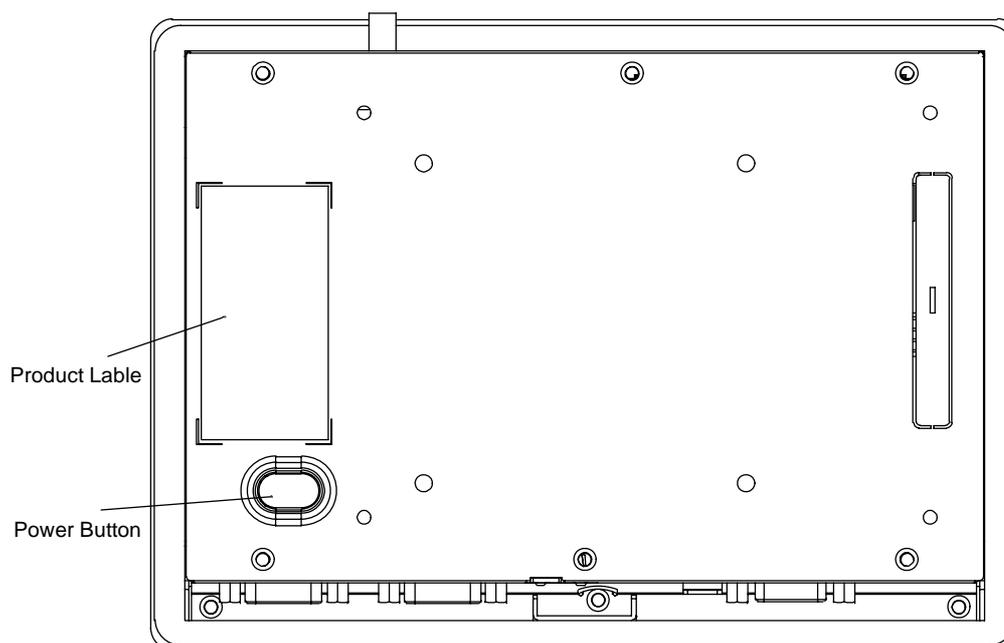
**Figure 2.1 Front View of the PPC-L61T Panel PC**

When you look at the left side of the Panel PC, you will see the Complat Flash socket at left side as shown in Figure 2.2.



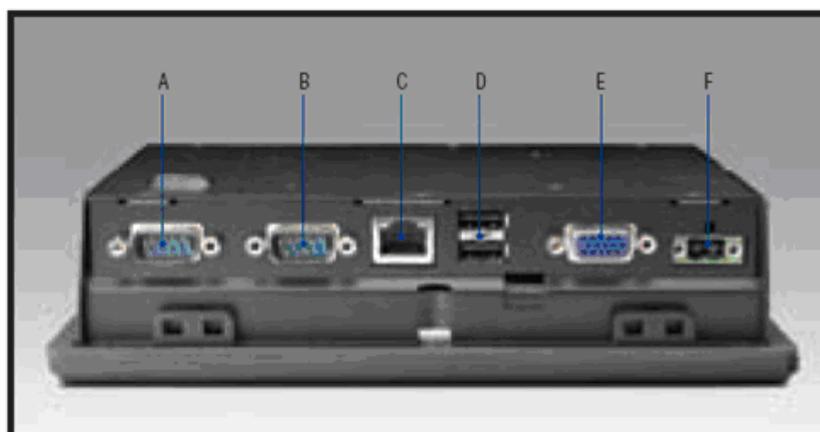
**Figure 2.2 Left Side of the PPC-L61T**

When you turn the Panel PC around and look at its rear cover, you will find VESA standard holes (75x75mm) and power Button. As shown in Figure 2.3.



**Figure 2.3 Rear View of the PPC-L61T**

The I/O section is at the bottom of the Panel PC, as shown in Figure 2.4.



- |                                |                |
|--------------------------------|----------------|
| A. Serial Port (RS232/422/485) | D. USB 2.0 X 2 |
| B. Serial Port ( RS232)        | E. VGA port    |
| C. Ethernet Jack               | F. DC inlet    |

**Figure 2.4 Panel PC I/O**

---

## 2.2 Installation Procedures

### 2.2.1 Connecting the Power Cord

The Panel PC can only be powered by a DC electrical outlet. Be sure to always handle the power cord by holding the plug ends only. Please follow the Figure 2-5 to connect the male plug of the power cord to the DC Inlet of the Panel PC.

### 2.2.2 Connecting the Keyboard or Mouse

Before you start the computer, please connect the necessary mouse or keyboard to the USB ports.

### 2.2.3 Switching On the Power

When you look at the bottom of the computer, you will see the power switch.



Figure 2.5 Switching on the power

## 2.3 Running the BIOS Setup Program

Your computer is likely to have been properly set up and configured by your dealer prior to delivery. You may still find it necessary to use the computer's BIOS (Basic Input-Output System) setup program to change system configuration information, such as the current date and time or your type of hard drive. The setup program is stored in read-only memory (ROM). It can be accessed either when you turn on or reset the computer, by pressing the "Del" key on your keyboard immediately after powering on the computer.

The settings you specify with the setup program are recorded in a special area of memory called CMOS RAM. This memory is backed up by a battery so that it will not be erased when you turn off or reset the system. Whenever you turn on the power, the system reads the settings stored in CMOS RAM and compares them to the equipment check conducted during the power on self-test (POST). If an error occurs, an error message will be displayed on screen, and you will be prompted to run the setup program.

## 2.4 Installing System Software

Recent releases of operating systems from major vendors include setup programs which load automatically and guide you operating system installation. The guidelines below will help you determine the steps necessary to install your operating system on the computer hard drive.

**Note!** *Some distributors and system integrators may have already pre-installed system software prior to shipment of your Panel PC.*



The BIOS of the computer supports system boot-up directly from the CDRom drive connected via USB interface. You may insert your system installation CD-ROM into the CD-ROM drive.

Power on your computer or reset the system by pressing the "Ctrl"+"Alt"+"Del" keys simultaneously. The computer will automatically load the operating system from the diskette or CD-ROM.

If you are presented with the opening screen of a setup or installation program, follow the instructions on screen. The setup program will guide you through preparation of your hard drive, and installation of the operating system.

If you are presented with an operating system command prompt, such as A:\>, then you must partition and format your hard drive, and manually copy the operating system files to it. Refer to your operating system user's manual for instructions on partitioning and formatting a hard drive.

## 2.5 Installing the Drivers

After installing your system software, you will be able to set up the AMD chipset, VGA, audio, LAN, and touch screen functions. All the drivers are stored in a CD-ROM disc entitled "Drivers and Utilities" (Pls check the correct wording on the CD) which can be found in your accessory box.

The utility directory includes multimedia programs. Some drivers and utilities in the CD-ROM disc have their own text files which help users install the drivers and understand their functions.

These files are a very useful supplement to the information in this manual. And more detail of driver installation please refers to Chapter 5 to 10 of this manual.

**Note!** *The drivers and utilities used for the PPC-L61T are subject to change without notice. If in doubt, check Advantech's website or contact our application engineers for the latest information regarding drivers and utilities.*





# Chapter 3

## Hardware and Peripheral Installation

This chapter details the installation of the PPC-L61T hardware.

Sections include:

- Overview of Hardware Installation and upgrading
- Installing the Storage Device and Memory
- Installing the Optional accessory

## 3.1 Overview of Hardware Installation and Upgrading

The Panel PC consists of a PC-based computer that is housed in a ruggedized aluminum front panel. Any maintenance or hardware upgrades can be completed after removing rear panel.

**Warning!** Do not remove the ruggedized covers until you have verified that no power is flowing within the computer. Power must be switched off and the power cord must be unplugged. Every time you service the Panel PC, you should be aware of this.



## 3.2 Installing the Storage Device and Memory

The Standard Panel PC computer can use a Compact Flash Card (CFC) or Optional Extension HDD kit as a storage device.

Put the CFC into the CF slot and insert the RAM into the 200-pin SODIMM socket on the main board.

## 3.3 Installing the Optional accessory

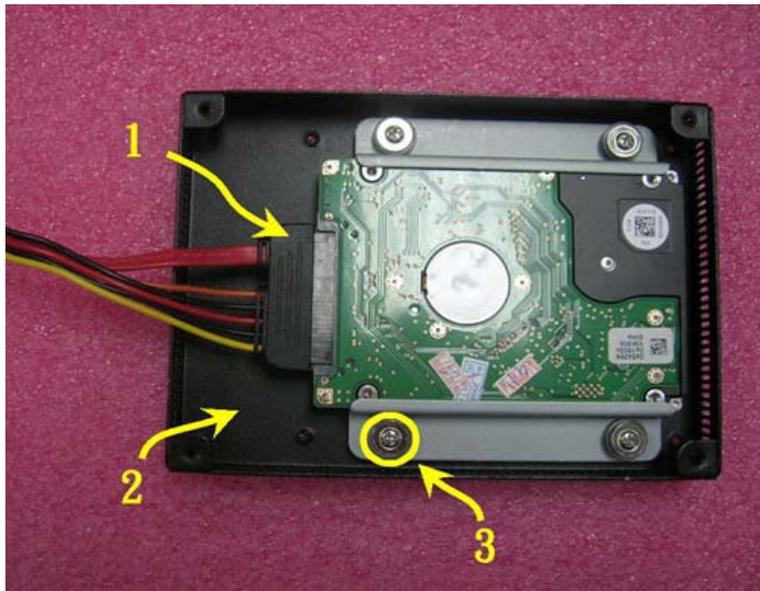
Optional accessories, like Extension HDD kit or other functional modules are available for purchase to complement PPC-L61T. The following are instructions for accessory installation.

### 3.3.1 Installing Extension HDD kit

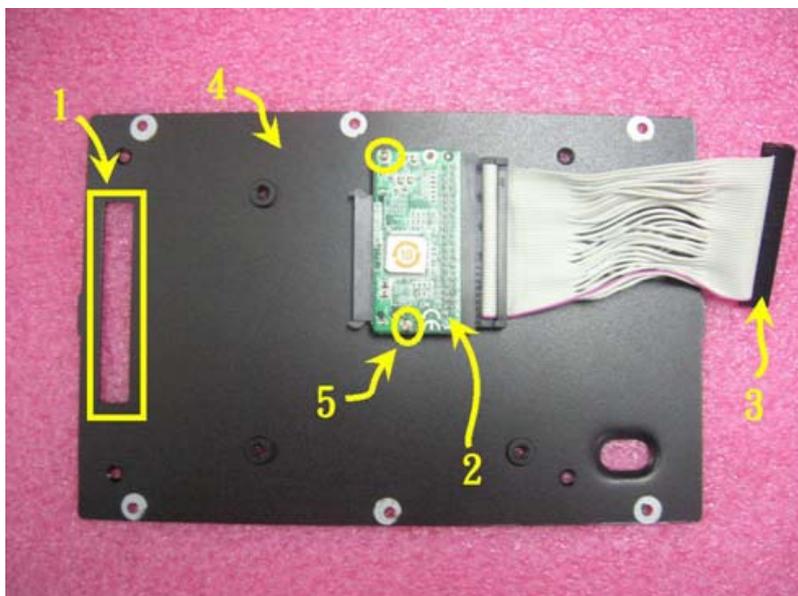
1. Place the HDD on the HDD mounting Bracket and tighten the screws.
2. Insert Shock absorber into HDD mounting Bracket.



3. Connect the SATA HDD cable to the SATA HDD.
4. Plate the HDD Module into HDD Cover and tighten the screws.



5. Detach and Remove the Rear cover.
6. Remove the SATA HDD hole through (-) Screwdriver.
7. Attach the SATA converter board to the Rear cover with two M2\*5 screws.
8. Connect the IDE HDD cable to the SATA converter.



9. Connect SATA cable to the SATA Converter board through the hole.
10. Fix the SATA cable with green adhesive tape.
11. Attach HDD cover on PPC-L61 back cover with Four M3\*5 screws.

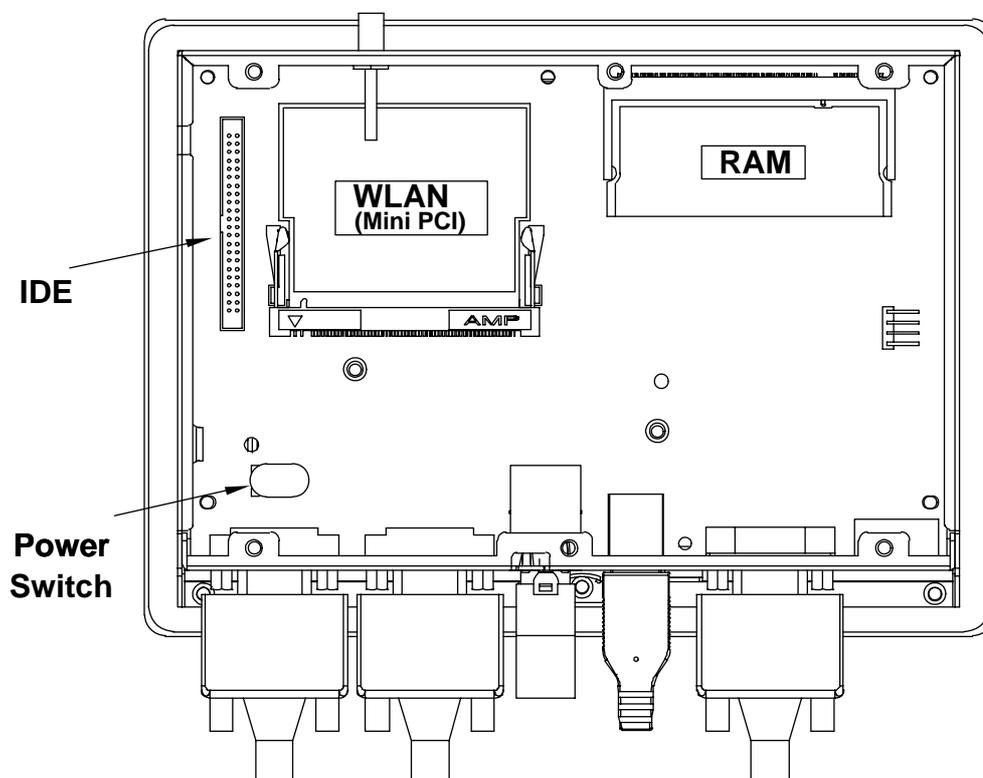


12. Attached VESA Bracket to the HDD.
13. Put the Rear cover on and tighten the screws.



### 3.3.2 Installing the MiniPCI Wireless LAN module

1. Insert the WLAN module onto the MiniPCI slot on Motherboard.
2. Tight the cable between the connector (main) on the WLAN module and the screw-in antenna hole on Middle Frame.
3. Screw the antenna on the antenna hole on Middle Frame shown as below picture.





# Chapter 4

## Jumper Settings and Connectors

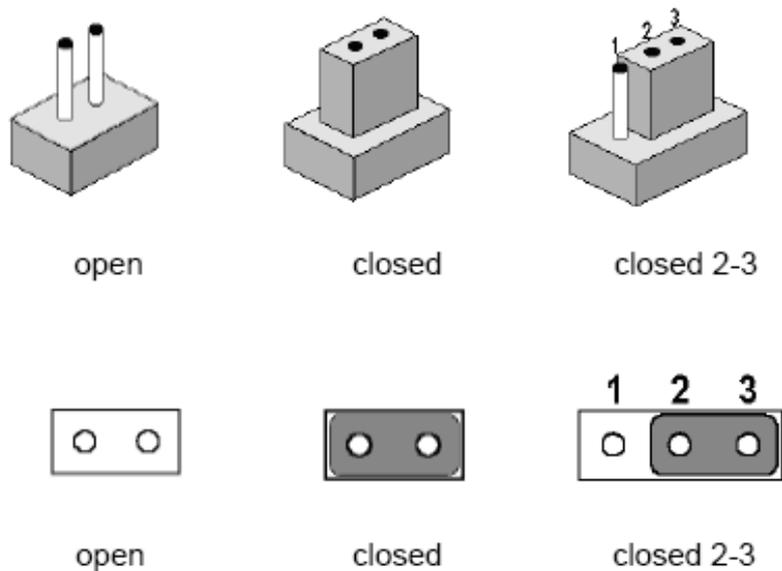
This chapter tells how to set up the Panel PC hardware, including instructions on setting jumpers and connecting peripherals, switches and indicators. Be sure to read all the safety precautions before you begin the installation procedures.

Sections include:

- Setting Jumpers and Connectors
- CPU Installation
- Jumper setting on Mother-Board
- COM-port Interface

## 4.1 Setting Jumpers

You can configure your Panel PC to match the needs of your application by setting jumpers. A jumper is the simplest kind of electrical switch. It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To “close” a jumper, you connect the pins with the clip. To “open” a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2, and 3. In this case, you would connect either pins 1 and 2 or pins 2 and 3.



A pair of needle-nose pliers may be helpful when working with jumpers. If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any changes.

An arrow is used on the motherboard to indicate the first pin of each jumper.

### 4.1.1 Jumpers and Switches on Motherboard

The motherboard of the PPC-L61T has a number of jumpers and Connector that allow you to configure your system to suit your applications. The table below lists the function of each jumper and Connector.

**Table 4.1: Jumpers and their functions on Motherboard**

Label	Function
JP1	CMOS clear for external RTC
J1	AT/ATX power
CN10	COM1/COM2 Pin 9 power output value setting
CN13	COM1/COM2 Pin 9 Ring & power output type setting
CN12	RTC battery

## 4.1.2 Locating Jumpers on Motherboard

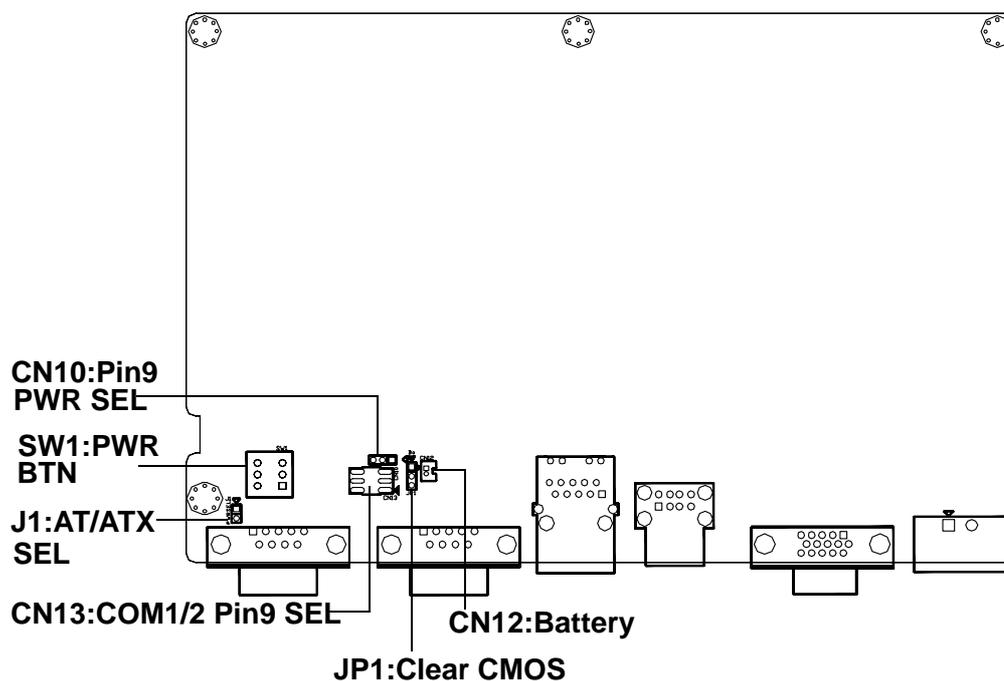


Figure 4.1 Locating Jumpers on Motherboard

## 4.1.3 Connectors on Motherboard

On-board connectors link the Panel PC to external devices such as hard disk drives. The table below lists the function of each connector.

Table 4.2: Connectors on Motherboard	
CN1	Mic IN
CN2	Internal Speaker connector
CN3	Line in
CN4	SMBus
CN5	Line out
CN6	IDE hard drive connector
CN7	Mini PCI socket
CN8	Touch screen connector
CN9	Inverter connector
CN11	COM 3 / GPIO
CN16	LAN
CN17	USB 1+USB 2
CN18	DC input
CN19	COM2 / RS232/422/485
CN20	COM1
CN21	VGA
CN22	LVDS interface
CN23	CFC
DIMM1	Dual In-line Memory Module Socket for SDRAM

## 4.1.4 Locating Connectors on Motherboard

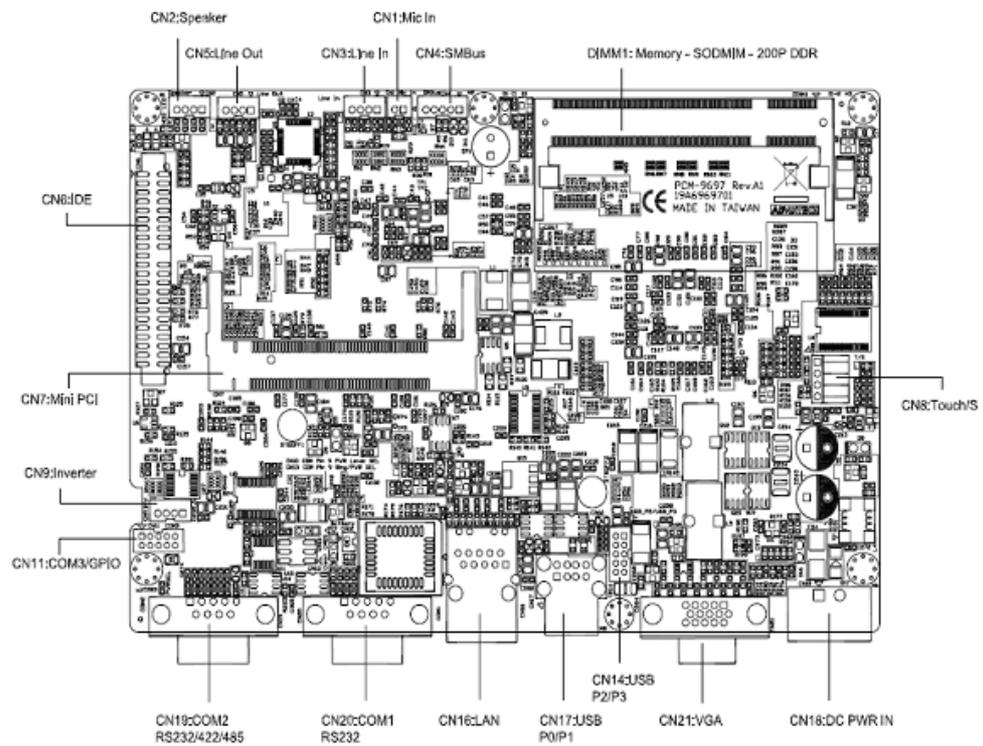


Figure 4.2 Locating Connectors on the PPC-L61T Mother-board (front side)

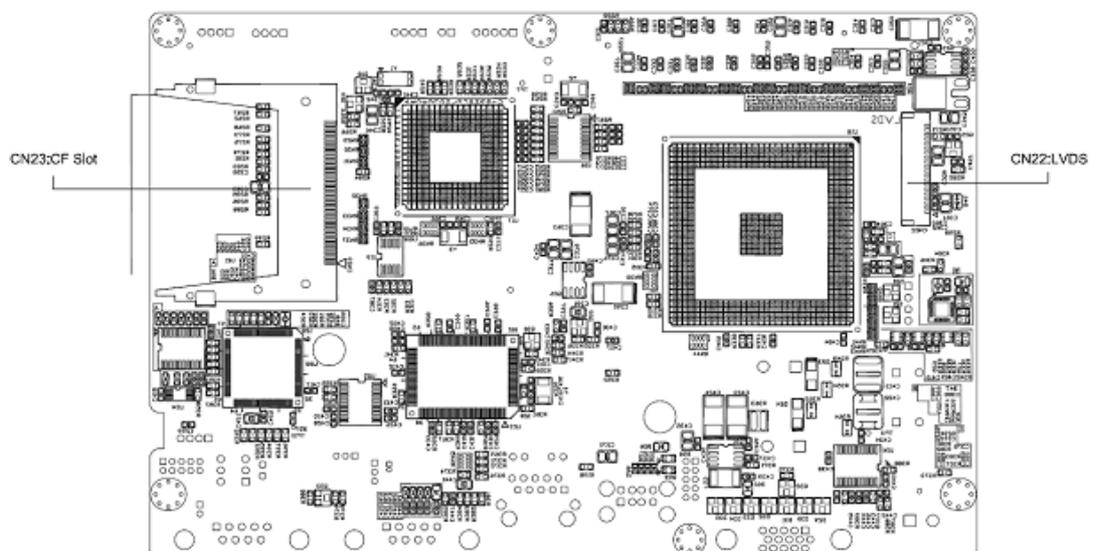


Figure 4.3 Locating Connectors on the PPC-L61T Mother-board (back side)

## 4.2 Jumper setting on Mother-Board

### 4.2.1 CMOS Clear for External RTC (JP1)

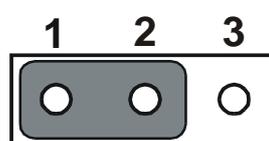
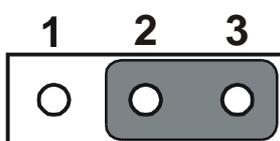
**Warning!** To avoid damaging the computer, always turn off the power supply before setting "Clear CMOS". Set the jumper back to "Normal operation" before turning on the power supply.



**Table 4.3: Clear CMOS / External RTC (JP1)**

Normal Operation (Default)

Clear CMOS



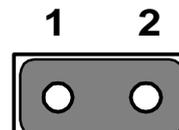
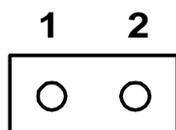
### 4.2.2 AT/ATX power Setting Power feature setting (J1)

The default setting for PPC-L61T is ATX Mode, client can easy to adjust Power Mode to AT by jumper setting. Described as below:

**Table 4.4: AT/ATX Power setting (J1)**

ATX Power Model (Default)

AT Power Mode



## 4.3 COM port interface

The computer provides 2 serial ports: COM1, COM 2: RS-232/422/485 (selectable via BIOS setting)

However, if you wish to disable the port or change these parameters later you can do this in the system BIOS setup. The table overleaf shows the default settings for the computer's serial ports.

COM1 and COM2 are one set. You can exchange the address range and interrupt IRQ of COM1 for the address range and interrupt IRQ of COM2. After exchanging:

COM1's address range is 3F8 ~ 3FF and its IRQ is IRQ4.

COM2's address range is 2F8 ~ 2FF and its IRQ is IRQ3.

### 4.3.1 COM port Pin 9 power output setting (CN13)

Pin 9 on COM1, COM2 port can activate external power output.

**Table 4.5: COM port Pin 9 power output setting (CN13)**

External power output disable (Default)	External power output enable
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**Note!** 1. Normally, Pins 1, 3, 5 are assigned to COM1; and Pins 2, 4, 6 are assigned to COM2.



2. The normal external power output value is DC 5 V.

### 4.3.2 COM port Pin 9 power output value setting (JP2)

**Table 4.6: COM port Pin 9 power output value setting (JP2)**

5 V (Default)	12 V (Optional)
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