

# Users Manual

*BOXPC Series*

*July 2005 (V1.1)*

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# *Chapter 1*

## Introduction

### **1.1 About the products**

First of all we'd like to thanks for adopt the BOXPC series product.

The design of BOXPC series is a compact, extra small foot print and fan-less, providing low cost solution for budget and space saving uses.

The system provide a compact flash slot has the capacity to upgrade up to 1GB which could be used in thin client application accompanying with Win CE or Linux in order to fit software security and maintenance. The smart design and maintains the overhead cost of running the system in the long term helps to increase the return of investment.

The tools free and modular structure is easy to assembly / disassembly the system. To shorten repaired time in maintenance

The system comes equipped with high performance Intel Tualatin, Celeron and Pentium® III, Celeron Processor and advanced high performance multi-mode I/O, designed for the system integrators, or VARs that want to provide all the performance, reliability, and quality at a reasonable price.

In addition, the main board provides Integrated Apollo Pro266T & graphics accelerator in a single chip VIA CLE266.

The main board included an advanced high performance south chip VIA VT8235, super I/O W83697HF and F81216D. Six on chip UART are compatible with the NS16C550 and provide selected power pin to meet multiple peripheral devices. The parallel port and IDE interface are compatible with IBM PC/AT architecture's.

As the LAN controller, uses a REALTEK 8100BL Fast Ethernet Multifunction PCI Controller. The 8100BL is a fully integrated 10/100BASE-TX LAN solution with high performance networking functions and low power features.

## 1.2 Specification

Main Board	
CPU	ULV Celeron 400MHz / 650 MHz ( L2-256k )
Core Logic	VIA CLE 266
System Memory	DDR266(333) - from 128MB Up to 1GB
Storage Device	
IDE port	1 ( 44pin with 2.54 pitch, for 2.5" HDD or DOM )
Compact Flash slot	Type II Compact Flash ( up to 1GB )
I/O Ports	
Serial	3x COM ( 2x RS232, 1x RJ45 for VFD, w/ DC +5V or +12V )
Parallel	1 ECP/EPP/SPP
USB	5 ,USB v2.0
PS2 Mouse	1
PS2 Keyboard	1
LAN	1 x RJ45, 10/100 Base-T
Cash Drawer	1 x RJ11
Audio Jack	1, Audio Out
Audio	AC97 2.0 Compliant
VGA	1 x DSUB
SCSI Port	LVDS Display + Touch COM
Others	
Power Supply	Ext. AC Adapter 12VDC, 6.5 A, 80W Max
Compliance	FCC / CE Class B
Weight	Approx. 2.4 Kgs
Dimension	190(W) x 180(L) x 68(H) mm
Operating Temp.	0°C to 40°C
Optional Accessory	
8.4/12.1" LCD Panel w/ touch	180 nits(8.4") / 200 nits (12.1"), 800 x 600,
	<b>Touch</b> - 5-wire Resistive Type
	<b>Speaker</b> - 2W x 2
	<b>Wall mount</b> - VESA compliant

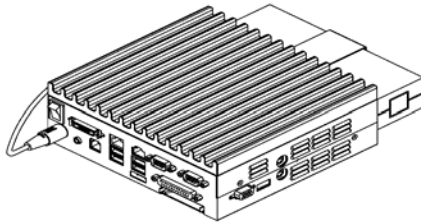
# Chapter 2

## Hardware Set up

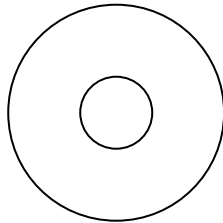
### 2.1 Unpacking the POS60

Check that the following 5 items are presented and in good conditions:

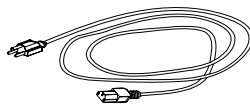
a. *Main Unit with Power Adapter*



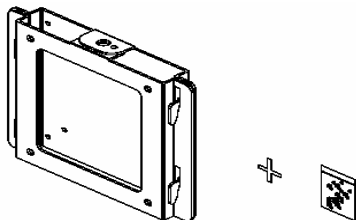
b. *CD: Quick Guide & Driver Bank*



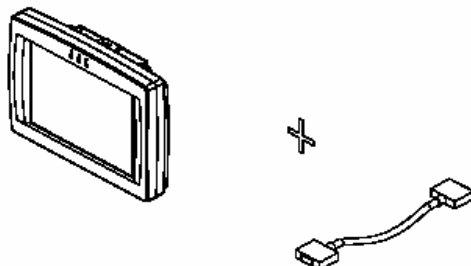
c. *Power Cord: Optional USA, Europe, UK or Australia type.*



d. **Wall Mounted Bracket Kits with Screws**



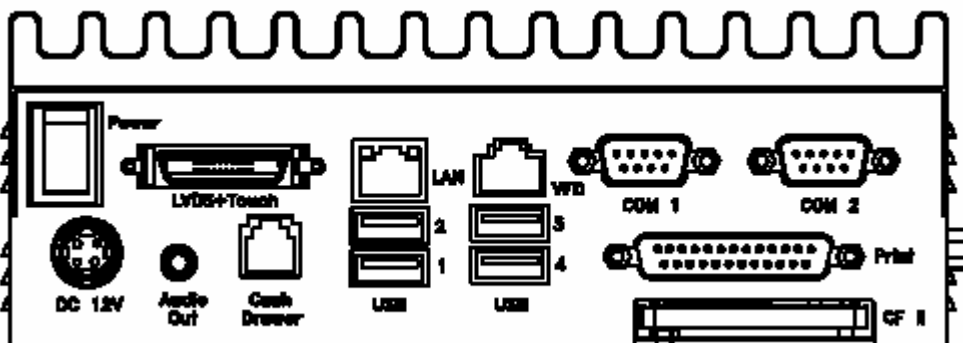
e. **Optional Mounted Monitor: TM-840M or TM-120M with SCSI cable**



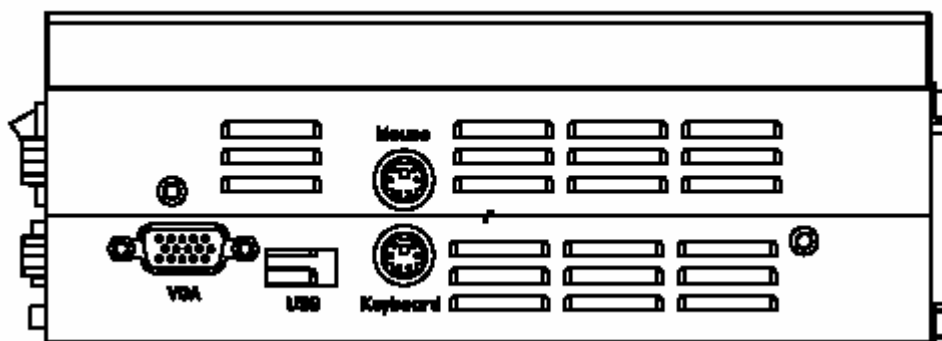
## 2.2 Install the Peripherals

Install all of peripherals to the I/O ports as following.

### a. Front View



### b. Side View



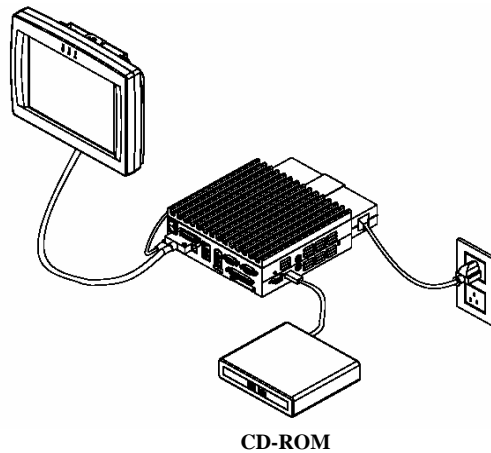
# Chapter 3

## Driver Installation

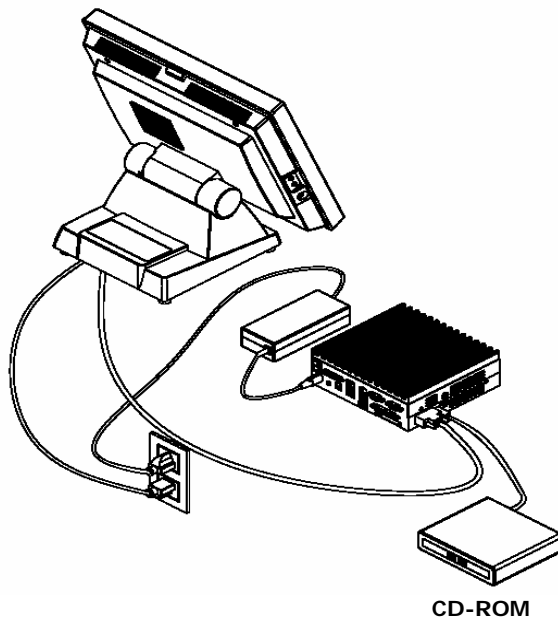
### 3.1 Install Preparation

- Either connects the Mounted Touch Monitor with SCSI port by SCSI cable, or regular monitor with VGA cable.
- Please prepare 1 set of external USB CDROM.
- Connect CDROM to the USB port of right side of system.
- Turn on the system and enter to CMOS Set Up.
- Check and change "the Boot Device" to USB CDROM.
- Enter to boot on procedure.
- Install OS and Driver step by step.

#### BOXPC connect with Mounted Touch Monitor



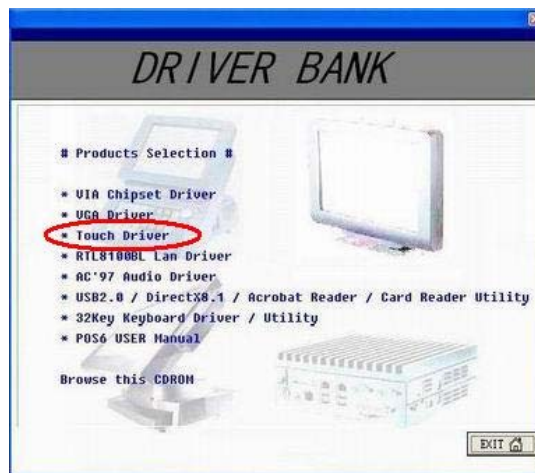
#### BOXPC connect with regular Monitor



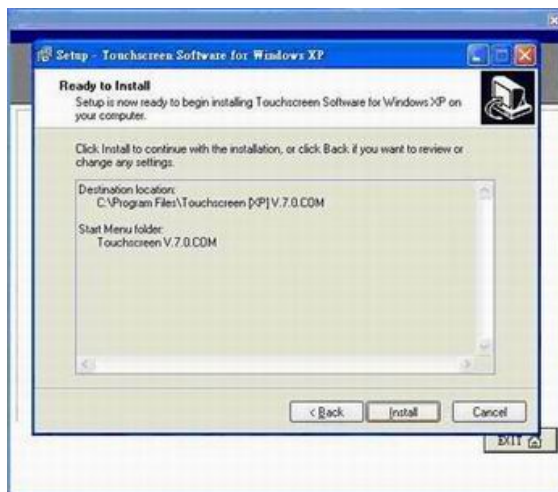
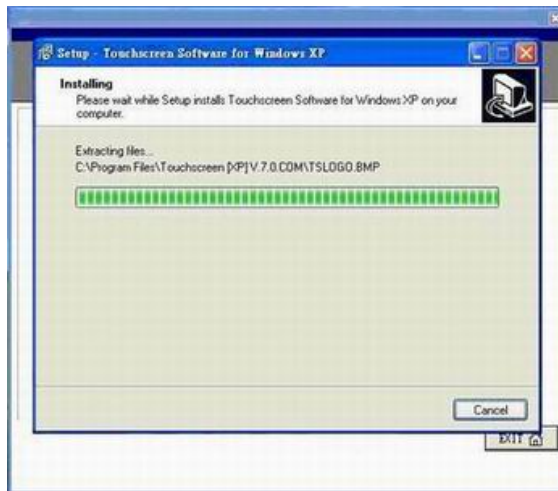


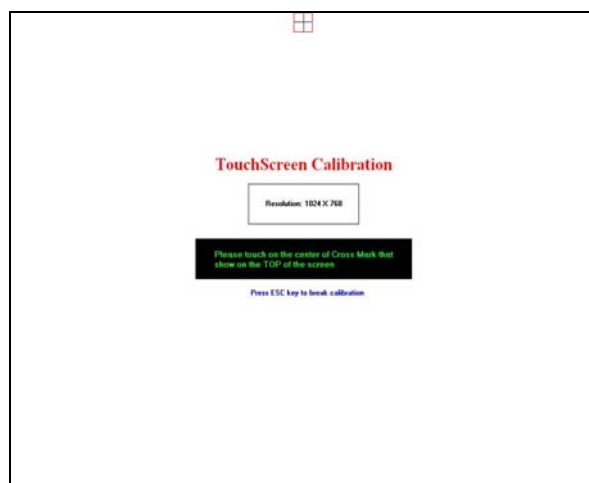
### 3.2 Touch Driver Installation

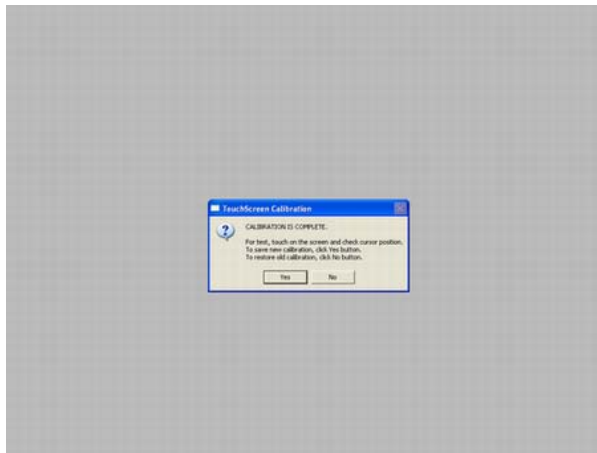
Here we'd like to list procedure of touch driver as followings, which is based on Win XP as example.











Finally set what parameter what your requirement as followings.



# Chapter 4

## I/O Definition

Please refer the detailed technical information about all of I/O ports as followings.

### 4.1 IDE Disk Drive Connector

You can attach two IDE (Integrated Device Electronics) hard disk drives on one channel. These connectors support Ultra-DMA133 IDE devices.

- **CN5: Primary IDE Connector (Pitch 2.54 mm)**

PIN	Description	PIN	Description
1	RESET#	2	GROUND
3	DATA 7	4	DATA 8
5	DATA 6	6	DATA 9
7	DATA 5	8	DATA 10
9	DATA 4	10	DATA 11
11	DATA 3	12	DATA 12
13	DATA 2	14	DATA 13
15	DATA 1	16	DATA 14
17	DATA 0	18	DATA 15
19	GROUND	20	N/C
21	IDE DREQ	22	GROUND
23	IOW#	24	GROUND
25	IOR#	26	GROUND
27	IDE DRDYA	28	GROUND
29	IDE DACK	30	GROUND
31	INTERRUPT	32	N/C
33	SA1	34	CABLE_80P
35	SA0	36	SA2
37	HDC CS0#	38	HDC CS1#
39	HDD ACTIVE#	40	GROUND

The system includes a slot for a Compact Flash Storage Card in IDE Mode (Using IDE2).

- **CN20: Power Connector**

PIN	Description	PIN	Description
1	GROUND	2	GROUND
3	+12V	4	+5V

- **CN6: Compact Flash Storage Card Socket**

PIN	Description	PIN	Description
1	GROUND	26	CARD DETECT1
2	D3	27	D11
3	D4	28	D12
4	D5	29	D13
5	D6	30	D14
6	D7	31	D15
7	CS1#	32	CS3#
8	N/C	33	N/C
9	GROUND	34	IOR#
10	N/C	35	IOW#
11	N/C	36	OBLIGATORY TO PULL HIGH
12	N/C	37	IRQ15
13	VCC	38	VCC
14	N/C	39	MASTER/SLAVE
15	N/C	40	N/C
16	N/C	41	RESET#
17	N/C	42	IORDY
18	A2	43	N/C
19	A1	44	N/C
20	A0	45	ACTIVE#
21	D0	46	PDIAG#
22	D1	47	D8
23	D2	48	D9
24	N/C	49	D10
25	CARD DETECT2	50	GROUND

## 4.2 Fan Connector

The system provides CPU cooling fan connector, chassis fan connector. These connectors can supply 12V/500mA to the cooling fan. In the connector there have a “rotation” pin. The rotation pin is to get the fan’s rotation signal to system. So the system BIOS could recognize the fan speed. Please note only specified fan offers the rotation signal.

- **FAN1: CN11.**

PIN	Description
1	GROUND
2	+12V
3	Rotation Signal

## 4.3 Serial Ports

The system offers four high speed NS16C550 compatible UARTs with Read/Receive 16 byte FIFO.

- **COM1, 2: COM1, 2 10-pin header.**

PIN	DESCRIPTION	PIN	DESCRIPTION
1	DATA CARRIER DETECT (DCD)	6	DATA SET READY (DSR)
2	RECEIVE DATA (RXD)	7	REQUEST TO SEND (RTS)
3	TRANSMIT DATA (TXD)	8	CLEAR TO SEND (CTS)
4	DATA TERMINAL READY (DTR)	9	RING INDICATOR (RI)
5	GROUND	10	N/C

- **COM3: CN14 for VFD.**

PIN	Description
1	RI
2	RTS
3	CTS
4	GROUND
5	DSR
6	DTR
7	RXD
8	TXD

- **COM4: CN15 for Touch screen.**

PIN	Description
1	DCD
2	RXD
3	TXD
4	DTR
5	DSR
6	RTS
7	CTS
8	RI

## 4.4 Power Connector

The pin assignments are as following:

- **CN19: Power Connector**

PIN	Description
1	GROUND
2	GROUND
3	GROUND
4	+12V
5	+12V

## 4.5 VGA Connector

The pin assignments are as following.

- **CN2: 10-pin Connector**

PIN	Description	PIN	Description
1	RED	2	DDCDAT
3	GREEN	4	DDCCLK
5	BLUE	6	GROUND
7	HSYNC	8	GROUND
9	VSNC	10	GROUND



## 4.6 LCD & INVERTOR Connector

The pin assignments are as following.

- **CN3: 15-pin Connector for LCD**

PIN	Description
1	GROUND
2	TXOUT0-R
3	TXOUT0+R
4	GROUND
5	TXOUT1-R
6	TXOUT1+R
7	GROUND
8	TXOUT2-R
9	TXOUT2+R
10	GROUND
11	TXCLK0-R
12	TXCLK0+R
13	GROUND
14	GROUND
15	GROUND

## 4.7 IrDA Interface Port

The system built-in an IrDA port which support Serial Infrared (SIR) or Amplitude Shift Keyed IR (ASKIR) interface. When use the IrDA port have to set SIR or ASKIR model in the BIOS's Peripheral Setup's COM2. Then the normal RS-232 COM2 will be disabled.

- **CN13: IrDA connector**

PIN	Description
1	+5V
2	IRRX1
3	IRRX
4	GROUND
5	IRTX

## 4.8 Audio Connector

The pin assignments are as following.

- **AUX1: LINE\_OUT connector**
- **CN10: LINE\_OUT connector**

PIN	Description
1	LINE_OUT_R
2,3	LINE_OUT_GROUND
4	LINE_OUT_L

## 4.9 LED and Power

- **CN4: LAN LED and Power**

PIN	Description
1,2,3	LCD_3.3V/5V
4,5,6	+5V
7,8,9	+12V
10	FPBKLB
11	HDD LED
12	LAN LED
13	POWER LED

## 4.10 Keyboard Connector

- **PS1: Keyboard Connector**

PIN	DESCRIPTION
1	+5V
2	KB CLK
3	KB CLK1
4	KB DATA
5	KB DATA1
6	GROUND

## 4.11 Button

- **CN1: ATX Power button**

PIN	Description
1	Power button
2	GROUND

## 4.12 Parallel Port

The system includes an on-board parallel port (DSUB).

- **CN18**

PIN	DESCRIPTION	PIN	DESCRIPTION
1	STROBE#	2	DATA 0
3	DATA 1	4	DATA 2
5	DATA 3	6	DATA 4
7	DATA 5	8	DATA 6
9	DATA 7	10	ACKNOWLEDGE
11	BUSY	12	PAPER EMPTY
13	PRINTER SELECT	14	AUTO FORM FEED #
15	ERROR#	16	INITIALIZE
17	PRINTER SELECT LN#	18	GROUND
19	GROUND	20	GROUND
21	GROUND	22	GROUND
23	GROUND	24	GROUND
25	GROUND		

#### 4.13 USB Port Connectors

The system provides 6 built-in USB2.0 ports for new I/O bus expansion.

- **USB1,2: CN21 Connector**
- **USB3,4: CN9 Connector**
- **USB5,6: CN14 Connector**

USB1/2/3/4/5/6			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	VCC	5	VCC
2	DATA0-	6	DATA0-
3	DATA0+	7	DATA0+
4	GROUND	8	GROUND

#### 4.14 Cash Drawer Connectors

- **Cash Drawer: CN12 Connector**

Cash Drawer			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	GROUND	2	DOUT_0
3	DIN_0	4	+12 V
5	N.C	6	GROUND

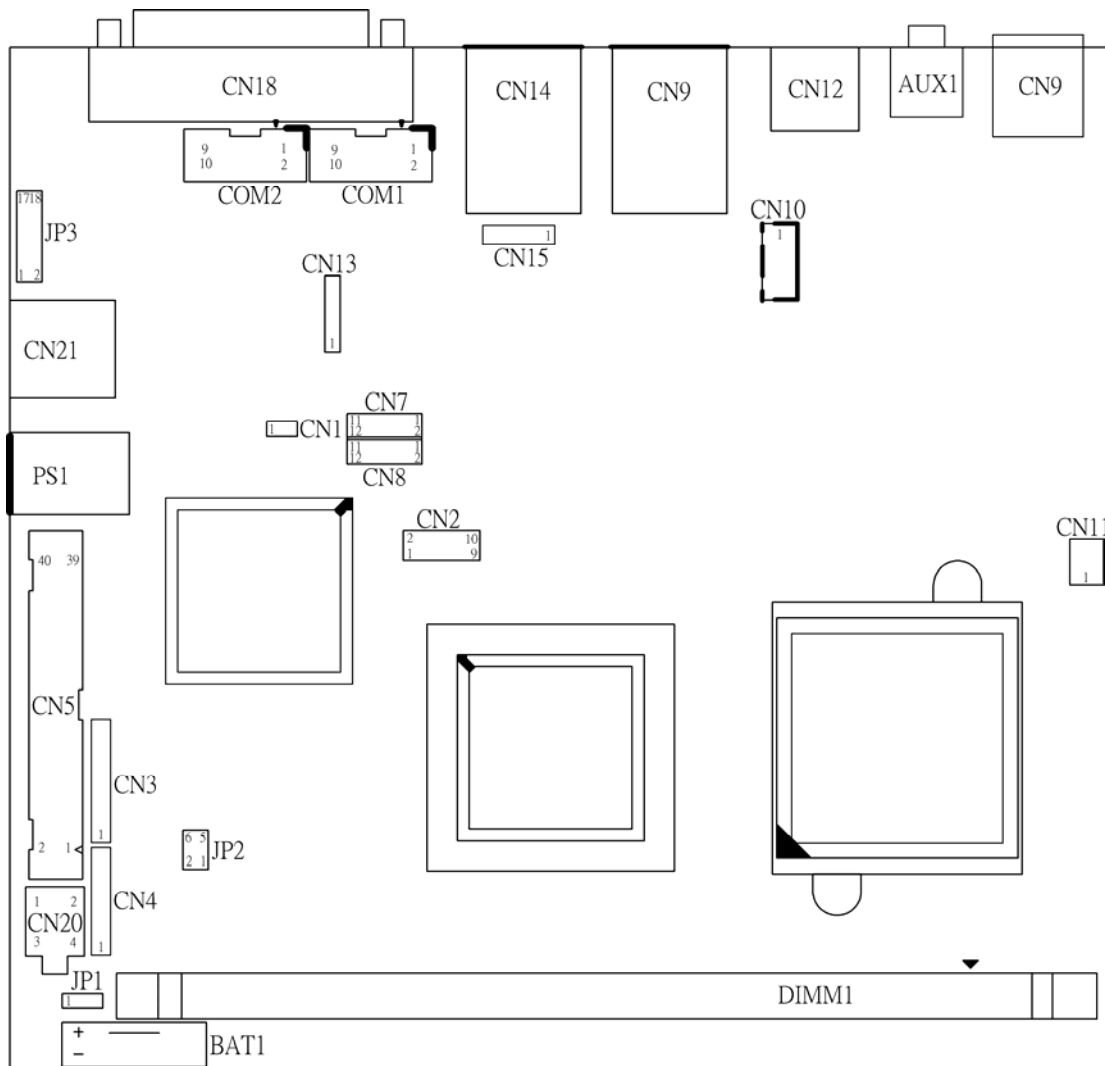
**Note:**

- I/O Address: 280H for Cash Drawer which is controlled by Data bit as DIN0=>Bit0, DOUT0=>Bit4**
- If like to kick out the drawer, you should command the output Data Bit4 to be 1 on Address 280H of I/O port.**

# Chapter 5

## Jumper Setting

Following main board with connector location, which is indicated hardware setup of system.



### 5.1 Clear CMOS Setup

If you want to clear the CMOS Setup (for example forgot the password you should clear the setup and then set the password again.), you should close the JP1 about 3 seconds, then open again. Set back to normal operation mode. **By the way, the default setting was remarked.**

- **JP1: Clear CMOS Setup**

JP1	Description
2-3	Keep CMOS Setup (Normal Operation)
1-2	Clear CMOS Setup

## 5.2 LCD Power Setting

- **J JP2:** This jumper is for the setting of LCD panel voltage.

JP2	Description
2-4	+3.3V
4-6	+5V

- **JP2:** This jumper is for the setting of LCD panel shift clock.

JP2	Description
1-3	Inverted
3-5	Normal

## 5.3 COM Port RI and Voltage Selection

- **JP3:** is for setting COM1,2,3 RI and Voltage.

JP3	Description
1-2	COM1 RI Pin Use +12V
3-4	COM1 RI Pin Use +5V
5-6	<b>COM1 RI Pin Use RI</b>
7-8	COM2 RI Pin Use +12V
9-10	COM2 RI Pin Use +5V
11-12	<b>COM2 RI Pin Use RI</b>
13-14	COM3 RI Pin Use +12V
15-16	COM3 RI Pin Use +5V
17-18	<b>COM3 RI Pin Use RI</b>

## 5.4 COM3 Port Selection

- **JP4:** is for setting COM3 selection.

JP4	Description
1-3	<b>COM3 RTS Pin Use RTS</b>
3-5	COM3 RTS Pin Use GND
2-4	<b>COM3 CTS Pin Use CTS</b>
4-6	COM3 CTS Pin Use +12V