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# PCM-3362 PC/104-plus SBC w/Intel® Atom N450, VGA, LVDS, LAN, USB2.0, SATA, and on-board flash Startup Manual

## Packing List

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

- 1 x PCM-3362 SBC
- 1 x SATA data cable (p/n: 1700071000)
- 1 x SATA power cable (p/n: 1703150102)
- 1 x Keyboard/Mouse cable (p/n: 1703060053)
- 1 x Y cable for KB/MS extension (p/n: 1700060202)
- 1 x Ethernet RJ-45 conn. cable (p/n: 1700017863)
- 1 x VGA cable (p/n: 1700000898)
- 1 x USB cable (p/n: 1703100260)  
(bracket type with two USB ports)
- 1 x RS-422/485 COM cable (p/n: 1703040157)
- 1 x RS-232 COM cable (p/n: 1701200220)
- 1 x ATX power cable (p/n: 1700002332)
- 1 x AT power cable (p/n: 1700003491)
- 1 x Startup Manual (this manual)
- 1 x CD-ROM (Manual, Driver, Utility)

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

Model No.	List Description
PCM-3362N-S6A1E	Intel Atom N450 PC/104-Plus SBC, VGA, LVDS, LAN, USB, SATA and on-board flash

### Optional Accessory

- 1 x heatspreader (p/n:1960047106T001)

**Note:** Acrobat Reader is required to view PDF files. Acrobat Reader can be downloaded at: [www.adobe.com/Prodindex/acrobat/read-step.html](http://www.adobe.com/Prodindex/acrobat/read-step.html) (Acrobat is a trademark of Adobe).

For more information on this and other Advantech products, please visit our website at:

<http://www.advantech.com>

<http://www.advantech.com/eplatform>

For technical support and service, please visit our support website at:

<http://service.advantech.com/support>

This manual is for the PCM-3362 Series Rev. A1.

Part No. 2006336200  
Printed in China

1st Edition  
December 2009

## Specifications

### Standard SBC functions

- **CPU:** Intel Atom N450 processor, up to 1.67 GHz
  - **System memory:** supports Double Data Rate (DDR) DDR2 667 SDRAM up to 2 GB
- Note:** PCM-3362 does not support DDR2 533 SDRAM
- **2nd cache memory:** 512 KB on the processor
  - **System chipset:** Intel® ICH8M
  - **BIOS:** AMI 16 Mbit Flash BIOS
  - **Watchdog timer:** 255 levels timer interval
  - **Expansion interface:** PC/104-Plus (ISA and PCI bus)
  - **Battery:** Lithium 3 V/210 mAH
  - **Power management:** ACPI supported
  - **Serial ATA:** One Serial ATA2 interface, speed up to 300MB/s
  - **Flash:** On board 2 GB flash (IDE interface)
  - **Serial ports:** Two serial RS-232 ports, one RS-422/485 ports
  - **Keyboard/mouse connector:** Supports one standard PC/AT keyboard and a PS/2 mouse
  - **USB:** Four USB 2.0 ports compliant universal serial bus ports
  - **High definition audio:** PCM-3362 can provide audio function with the optional audio extension module PCA-AUDIO-HDA1E and specific audio cable

### VGA/TTL Interface

- **Controller:** Integrated graphic core of Embedded en3.5+ technology
- **VRAM:** 224 MB shared system memory
- **Output interfaces:**
  - **VGA:** Supports up to SXGA 1400 x 1060 @ 60 Hz
  - **LVDS:** Single channel 18-bit LVDS up to WXGA 1366 x 768
  - **Dual display:** CRT + LVDS, supports extended mode and clone mode

### Ethernet Interface

- Supports Single 10/100/1000 Mbps Ethernet networking
- **Controller:** Intel® 82567V

### OS Support

- This board supports Win 7, Win XP, Win CE and Win XPe
- For further information about OS support in your PCM-3362, please visit the Advantech website: [www.advantech.com](http://www.advantech.com), or contact your technical support center.

### Mechanical and Environmental

- **Dimensions:** 96 x 90 mm (3.8" x 3.5")
- **Power supply type:** AT/ATX

## Specifications

- **Power requirement:** +5 V  $\pm$  5%, +12 V  $\pm$  5% (Optional), 5 V only, 12 V optional for PC104 add on card and LCD inverter)
- **Power consumption:** (Geode LX800, 512 MB DDR333)
  - **Power on Load:** +5 V@ 1.79 A, +12 V@ 0.02 A
  - **Max load:** +5 V@ 2.37 A, +12 V@ 7 mA
  - **Idle mode:** +5 V@ 2 A, +12 V@ 5 mA
- **Power consumption Conditions:**
  - **Test software:** Maxpower + 3DMark 2005
  - **Power on - Boot:** Measure the maximum current value of between system power on and boot-up to O.S.
  - **Max. load:** Measure the maximum current value which system under maximum load (CPU: Top speed , RAM & Graphic: Full loading)
  - **Idle mode:** Measure the current value when system in windows mode and without running any program
- **Operating temperature:** 0 ~ 60° C (32 ~ 140° F) ( operation humidity: 40°C @ 85% RH Non-Condensing)
- **Weight:** 0.85 kg (reference weight of total package)

## Jumpers and Connectors

The board has a number of jumpers that allow you to configure your system to suit your application.

The table below lists the functions of each of the jumpers and connectors.

### Jumpers

Label	Function
JP1	CLEAR CMOS
JP2	LVDS Panel Power Select
JP3	COM3 RS422/RS485 Select
JP4	PCI I/O Voltage Select

### Connectors

Label	Function
CN1	HD Audio Connector
CN4	SO-DIMM Connector
CN6	LVDS Connector
CN7	Panel Inverter Connector
CN8	VGA Connector
CN9	USB Port0/1 Connector
CN10	USB Port2/3 Connector
CN12	Front Panel Connector
CN13	Buzzer Connector
CN15	SATA Connector
CN16	COM1-COM2 Connector

## Jumpers and Connectors

CN17	RS422/485 Connector
CN18	LAN Connector
CN19	LAN LED Connector
CN20	PS2 Keyboard/Mouse Connector
CN21	GPIO Connector
CN23	ATX Power In Connector
CN24	Power In Connector
CN25	I2C BUS Connector
CN26	-12V & -5V power connector
P1	PC104-plus Connector
BH1	RTC Battery Connector

### Clear CMOS (JP1)

Setting	Function
1 ~ 2	Normal (default)
2 ~ 3	Clear CMOS



**Warning!** To avoid damaging the computer, always turn off the power supply before cleaning CMOS.



### LVDS Panel Power Select (JP2)

Setting	Function
1 ~ 2	5 V
2 ~ 3	3.3 V (default)



### COM3 RS422/RS485 Select (JP3)

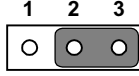
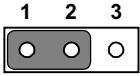
Setting	Function
1 ~ 2	RS-485 (default)
2 ~ 3	RS-422



## Jumpers and Connectors

### PCI I/O Voltage Select (JP4)

Setting	Function
1 ~ 2	5 V (default)
2 ~ 3	3.3 V



## Software Installation

The CD disc contains a driver installer program that will guide you through the installation of various device drivers needed to take full advantage of your CPU card.

**Caution!** The computer is provided with a battery-powered Real-time Clock circuit. There is a danger of explosion if the battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to manufacturer's instructions.



## Safety Information

This device complies with the requirements in Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

## Locating Connectors and Jumpers

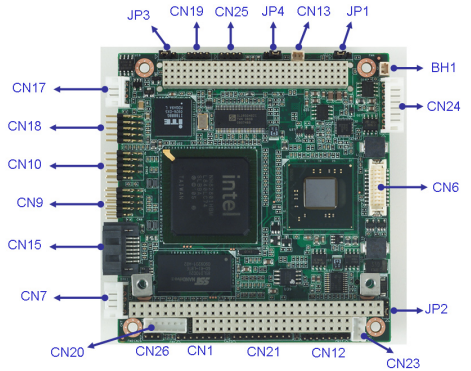


Figure 1: PCM-3362 Location Connectors & Jumpers (component side)

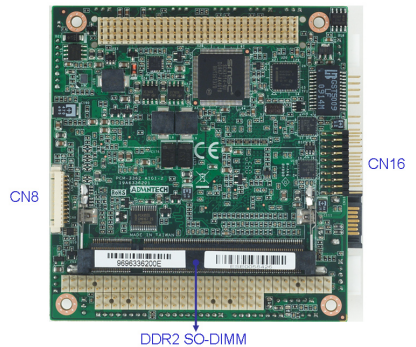


Figure 2: PCM-3362 Location Connectors & Jumpers (solder side)

# Mechanical Drawings

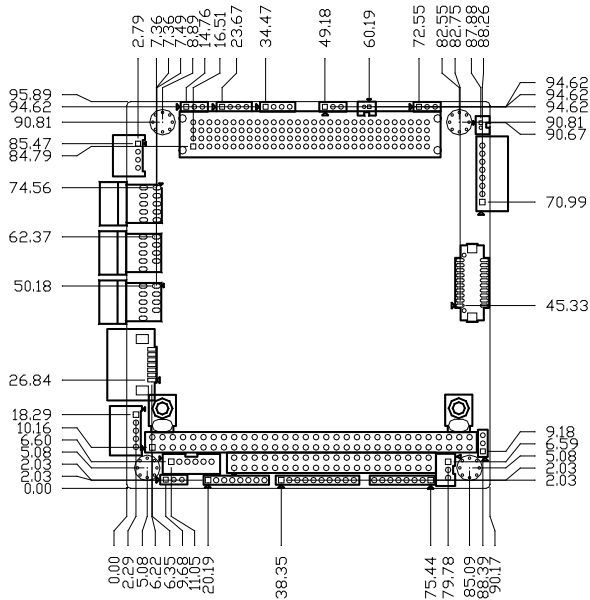


Figure 3: PCM-3362 Mechanical Drawing (component side)

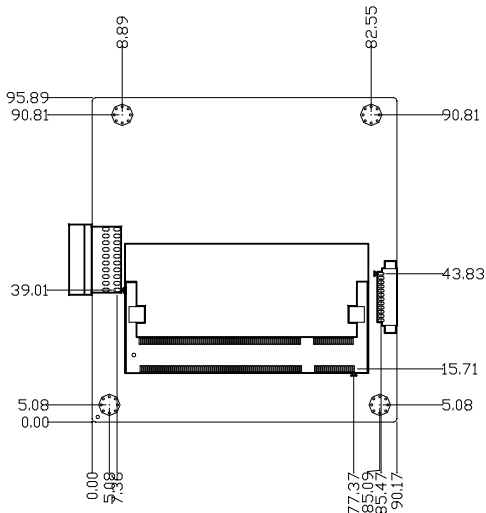


Figure 4: PCM-3362 Mechanical Drawing (solder side)



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