User Manual

MPC 6171A: 17" Industrial Medical Grade Panel PC with Core 2 Duo 2.20GHz processor

MPC6171B: 17" Industrial Medical Grade Panel PC with Core 2 Duo 2.20GHz processor (No Touch Screen)

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FCC CLASS B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 18 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 manual, itmay cause harmful interference to radio communications.

Note that even when this equipment is installed and used in accordance with this user 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 the receiver

> Connect the equipment to a power 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 void your authority to operate the equipment.

Caution:

Danger of explosion if battery is incorrectly replaced, replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according the manufacturer's instructions.

SAFETY INSTRUCTIONS

Greeting & Setup

Thank you for purchasing the MPC6171A/ MPC6171B unit. We wish that this unit will be durable and reliable in providing your medical application needs. Please follow the instructions below to ensure the unit continues to have high performance.

Unpacking

After opening the carton, there will be a Monitor display unit with an accessory box. Examine the contents to see if there are damages to the unit and if all accessories are present.

Setting up

Please read this manual carefully and remember to keep this manual for future reference.

Safety Instructions & Cleaning

The unit has undergone various tests in order to comply with safety standards. Inappropriate use of the open frame unit may be dangerous. Please remember to follow the instructions below to insure your safety during the installation and operating process.

Transporting & Placement of unit

1. When moving the unit on a cart; be very cautious. Quick stops, excessive forces and uneven surfaces may cause the cart to overturn thus risking the unit to fall to the ground.

2. If the Monitor display unit does fall to the ground, immediately turn the power off and disconnect cords. Then contact a service technician for repairs. Continual use of the unit may result cause a fire or electric shock. Also, do not repair the unit on your own.

3. Having two or more people transporting the display unit is recommended. In addition, when installing the unit by suspending it also requires two or more people.

4. Before suspending the unit, make sure the material used for suspension is sturdy and stable. If not properly suspended, the display unit may fall and cause serious injury to people standing nearby as well as to the unit itself.

5. If you wish to mount the display unit, remember to use only the mounting hardware recommended by the manufacturer.

Electrical and Power Source Related

1. This Monitor display unit must operate on a power source as shown on the specification label. If you are not sure what type of power supply used in the area, consult your dealer or local power supplier.

2. The power cords must not be damaged. Applied pressure, added heat, and tugging may damage the power cord.

3. The power cord must be routed properly when setup takes place. We advise that this aspect measure is to prevent people from stepping on the cords or while the unit is suspended to prevent flying objects from getting tangled with the unit.

4. Do not overload the AC outlets or extension cords.
Electrical shocks or fires may occur from overloading.

5. Do not touch the power source during a thunderstorm.

6. If your hands are wet, do not touch the plug.

7. Use your thumb and index finger, grip firmly on the power cord to disconnect from the electrical socket. By pulling the power cord, may result in damaging it.

8. If the unit is not going to be in use for an extended period of time, remember to disconnect the unit.

9. The Monitor display unit uses voltage between 90-264VAC. Connect the unit to a power source with the same numerical value as shown. Please use only the power cord provided by the dealer to ensure safety and EMC compliance.

Various Factors of Environment

1. Do not insert objects into the openings.

2. Do not have liquids seep into the internal areas of the Monitor display unit.

3. Having liquids seep in or inserting objects into the unit may result in electric shocks from taking and/or short circuiting the internal parts.

4. Do not place the Monitor display unit in the presence of high moisture areas.

5. Do not install the Monitor display unit in a wet environment.

6. Do not place near unit near heat generating sources.

7. Do not place the unit in a location where it will come in contact with fumes or steam.
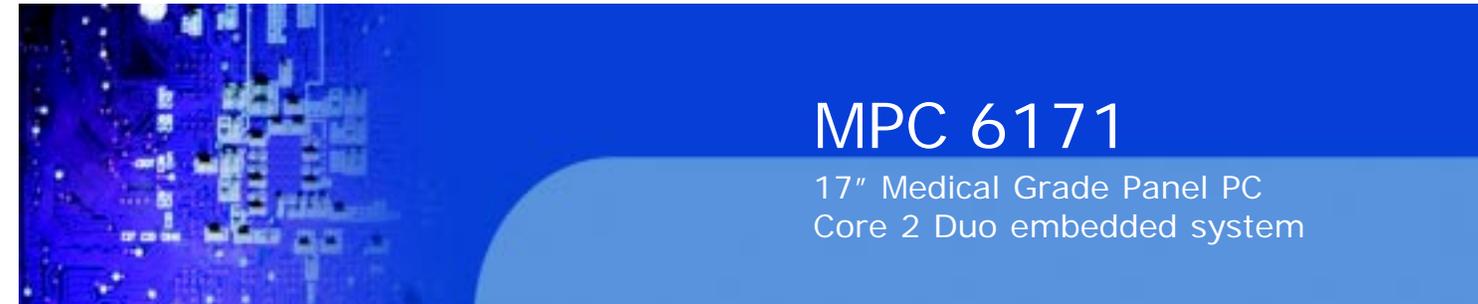
8. Remember to keep the Monitor display unit away from the presence of dust.

9. If water has flow in or seep in, immediately disconnect the open frame unit. Then contact a service technician for repairs.

Ventilation Spacing

1. Do not cover or block the openings on the top and back sides of the display unit. Inadequate ventilation may cause overheating thus reducing the lifespan of the unit.

2. Unless proper ventilation is present, do not place unit in an enclosed area; such as a built-in shelf. Keep a minimum distance of 10 cm between the display unit and wall.

Cleaning the unit

1. Remember to turn off the power source and to unplug the cord from the outlet before cleaning the unit.

2. Carefully dismount the unit or bring the unit down from suspension to clean.

3. Please use a dry soft cloth to clean the unit.

4. Take a dry cloth and wipe the unit dry. Remember to avoid having liquids seep into the internal components and areas of the Monitor display unit.

Servicing, Repairing, Maintenance & Safety Checks

1. If the unit is not functioning properly, observe the performance level of the display closely to determine what type of servicing is needed.

2. Do not attempt to repair the Monitor display unit on your own. Disassembling the cover exposes users' to high voltages and other dangerous conditions. Notify and request a qualified service technician for servicing the unit.

3. If any of the following situations occur turn the power source off and unplug the unit. Then contact a qualified service technician

   (a) A liquid was spilled on the unit or objects have fallen into the unit.

   (b) The unit is soaked with liquids.

   (c) The unit is dropped or damaged.

ACNODES

661 Brea Canyon Rd., Suite 3
Walnut, CA 91789
tel: 909.598.7388, fax: 909.598.0218

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(d) If smoke or strange odor is flowing out of the operating unit.

(e) If the power cord or plug is damaged.

(f) When the functions of the unit are dysfunctional.

4. When replacement parts are needed for the Monitor display unit, make sure service technicians use replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. If unauthorized parts are used it may result in starting a fire, electrical shock and/or other dangers.

Caution:

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). THIS MAY DAMAGE THE EQUIPMENT.

This equipment shall not be used in life support systems.

The user is not to touch SIP/SOPs and the patient at the same time.

The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70dB (A).
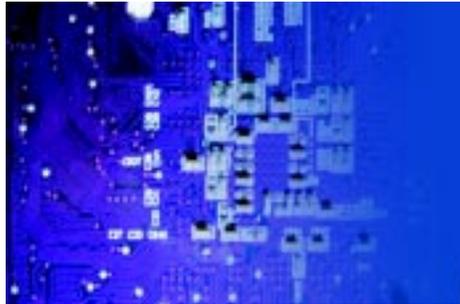
MPC 6171

17″ Medical Grade Panel PC
Core 2 Duo embedded system

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CHAPTER 1 INTRODUCTION

1.1 PRODUCT DESCRIPTION

The MPC 6171A/ MPC 6171B Medical Panel PC are based on Intel Core 2Duo processor which deliver a performance improvement of more than 100 percent compared to systems running traditional single-core processors. With two cores, or computing engines, MPC 6171A/ MPC 6171B can simultaneously execute two computing tasks. It accommodates one 2.5" SATA hard disk drive and up to 4GB DDR2 SODIMM.

The high brightness LCD, Low Noise solution, integrated multimedia functions and extensive expansion options make them the perfect platform upon which to build comprehensive lifestyle computing applications.

The MPC 6171A/ MPC 6171B includes all the features of a powerful computer into a slim and attractive chassis. The MPC 6171A/ MPC 6171B has a 17" high brightness TFT display with 1280 x 1024 resolutions.

The MPC 6171A/ MPC 6171B are compact, Giga LAN and selectable WLAN network compatible PC with full safety and medical approval and features to control a dedicated system with a wide variety of applications. Combining the MPC 6171A/ MPC 6171B into your system can achieve both cost-saving and efficient improvements.

Common applications include Surgical, Radiology, PACS (Picture Archiving Communication Systems), LIS (Lab Information Systems) and Electronic Medical Record. The MPC6171A/ MPC6171B are definitely your perfect choices.

1.2 PACKAGE LIST

Before you begin installing your Medical Station, please make sure that the following items have been shipped:

o The MPC 6171A/ MPC 6171B Medical Panel PC

o One CD containing user manual, QIG, chipset drivers

o Power Adapter x 1 (Mf:Sinpro, type/model: MPU100-105)

o Power cord - Hospital grade used(US type), or other type in UK, EU…etc.

o Touch pen x 1 (By configuration)

o Screw x 8 (VESA 75/100 use)
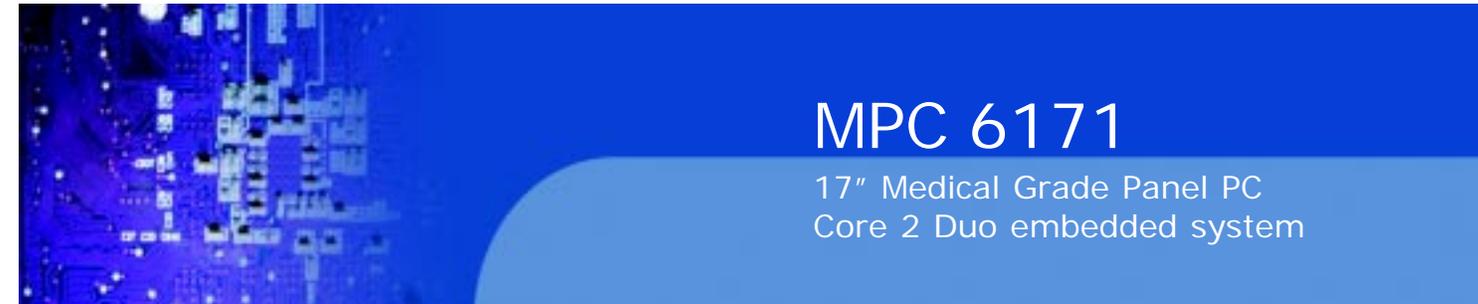
1.3   FEATURES

Intel Core 2 Duo Mobile CPU / Celeron M 550 Solution

17" 380 nits high brightness

Highest performance and low power system solution

Plastic construction with medical outlook color

Resistive touch screen (optional)

802.11 b/g wireless LAN Module (optional)

Bluetooth v2.1 + EDR module   (optional)

Integrated Compact Flash card reader (By configuration, optional)

Integrated webcam solution (By configuration, optional)

VESA 75/100 compliance Desktop Stand (optional)

VESA 75/100 compliance Wall Mount (optional)
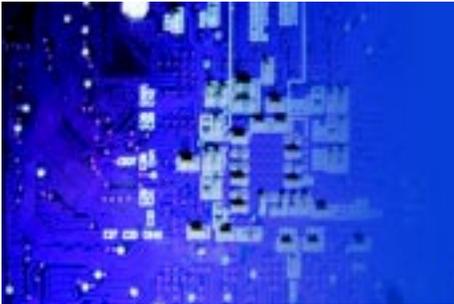
1.4   SPECIFICATION

HARDWARE SPECIFICATIONS

Display 17" 380 nits SXGA color TFT LCD

CPU Support

MPC6171: Intel® Core 2 Duo T7500 2.2GHz

Intel® Celeron M550 2.0GHz

Disk Drive Space: 2.5" Hard Disk Drive (SATA-150)

Expansion: One Mini PCI slot; One PCI expansion, One CF card slot expansion or one Smart card slot expansion slot (By configuration, optional)

Button: Brightness: "+" / "-"; Sound: "+" / "-"; Power SW

I/O:

Standard Version-

2 RS-232 ports + 1 RS-232/422/485 port

4 USB 2.0 ports

1 DC-in w/ lock function

1 PS/2 keyboard and 1 PS/2 mouse

2 Gigabit LAN RJ-45 Connectors

Sound:

1 x Line-in

1 x line-out

1 x Mic-in

2 x 2W Speakers on back side

1 x PCI slot
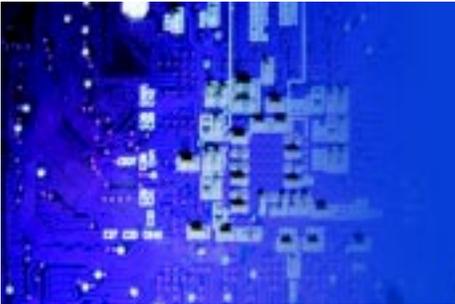
LCD SPECIFICATIONS

Model Name: G170EG01 (V0)

Display Type: 17" color TFT LCD

Max. Resolution: 1280 x 1024

Contrast Ratio: 1000 : 1 (Typ)

Pixel Pitch (mm): 0.264 (per one triad) x 0.264

Luminance (cd/m2): 380 (TYP)

Viewing Angle: 170°(H)/ 160°(V)

Operating Temperature: 0°C~ 40°C (32°F~104°F)

Brightness Control   Yes

POWER ADAPTER SPECIFICATIONS

Power Close-frame

MFR: Sinpro

Type: MPU100-105

Input Voltage: 100 ~ 240 VAC, 1.25 max. @ 47 ~ 63 Hz

Output Voltage: 12V @ 8.33 A

MTBF: 100,000 hrs operation at 25°C

MECHANICAL SPECIFICATION

Architecture Close-frame

Front Bezel   Plastic bezel with resistive touch screen

Color Medical-white

Mounting / Holder   VESA 75/100mm

Construction 3mm ABS + PC TYPE Plastic housing

Dimension (WxHxD): 16.5" x 14.2" x 3.2" (420mmx 360mm x 83mm)
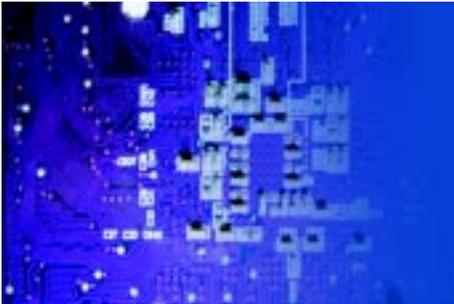
MPC 6171

17″ Medical Grade Panel PC
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Net Weight: 15.62 lb (7.0 kg)

Packing Filler: PE

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature: 10°C to 40°C (50°F ~104°F)

Storage Temperature: -20°C to 60°C (-4°F ~140°F)

Storage Humidity: 5% to 95%@ 40°C, non-condensing

Vibration: 0.5G / 5 ~ 500Hz (Random) / operation

Shock :

Operating: 15g/0.53 oz, 11 ms, half sine wave

Non-operating: 50g/1.76 oz, 11 ms, half sine wave

Drop: 3 feet (1 Corner, 3 Edge, 6 Surface)

EMI / Safety: cUL 60601-1, FCC/VCCI class B, EN 60601-1(MDD)/EN 60601-1-2(EMC)

Noise: MPC6171: Under 30 db

Altitudes: Operational: 6,000 feet

             Shipping: 40,000 feet

Input Power Rating: For Adaptor: AC100~240 V, 47 ~ 63 Hz, 1.25A max.

             For Unit: 8.33A (WMP-171); 7.0A (WMP-172)

Power Consumption: MPC6171:79.50W

TOUCH SCREEN (OPTIONAL)

Type: 5-wire, Analog Resistive

Interface: USB interface

Resolution: 2048 x 2048

Light Transmission: 80% ± 3%

Life Time: 35 million activations

1.5   CLEANING/ DISINFECTING

Steps:

1. Wipe the MPC6171A/ MPC6171B with a dry clean cloth.

2. Prepare agent per manufacturer's instructions or hospital protocol.

Cautions:

   Do not immerse or rinse the MPC6171A/ MPC6171B and its peripherals. If you accidentally spill liquid on the device, disconnect the unit from the power source. Contact your Biomed regarding the continued safety of the unit before placing it back in operation.

   Do not spray cleaning agent on the chassis.

   Do not use disinfectants that contain phenol.

   Do not autoclave or clean the MPC6171A/ MPC6171B or its peripherals with strong aromatic, chlorinated, ketone, ether, or Esther solvents, sharp tools or abrasives. Never immerse electrical connectors in water or other liquids.

CHAPTER 2 GETTING STARTED

2.1 SYSTEM SET UP

System Set Up

The following is a summary of the steps in setting up the system for use.

(1). You can fix the system to a mounting fixture using the screw holes on the sides of the system.

(2). Make any required external connections such as the display, keyboard, and LAN.

(3). Plug the appropriate end of the power cord into the power connector on the rear of the system and the plug to an electrical outlet.

(4). Press the power switch on the front panel of the system once to turn on the system power.

(5). If necessary, run the BIOS SETUP programs to configure the system.


Caution:

In order to boot up system from USB-CD/DVD drive, please connect USB-CD/DVD drive, turn on computer power, keep on pressing "F11" key, go into BIOS quick boot menu, select "USB-CD ROM", WAIT FOR 20

SECONDS, then press enter, system OS will boot up from USB-CD/DVD drive directly.

2.2 DIMENSION
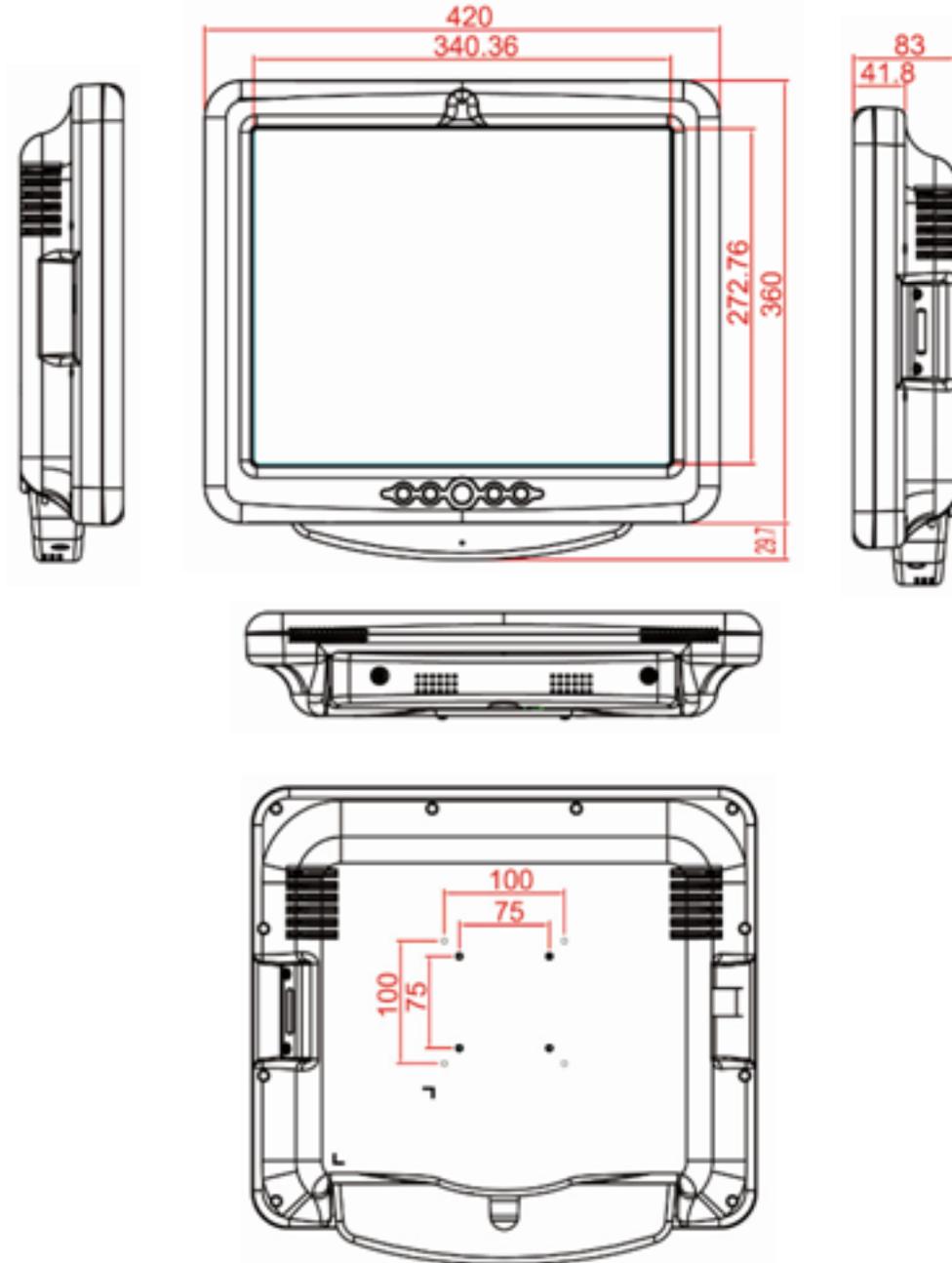
2.3   SYSTEM VIEW

Front View   Webcam (optional)

Control button at front panel

From left to right:
1. Brightness down
2. Brightness up
3. Power
4. Volume down
5. Volume up

MPC6171A /MPC6172 models
do not have webcam hold.

Rear View

VESA 75/100

I/O parts
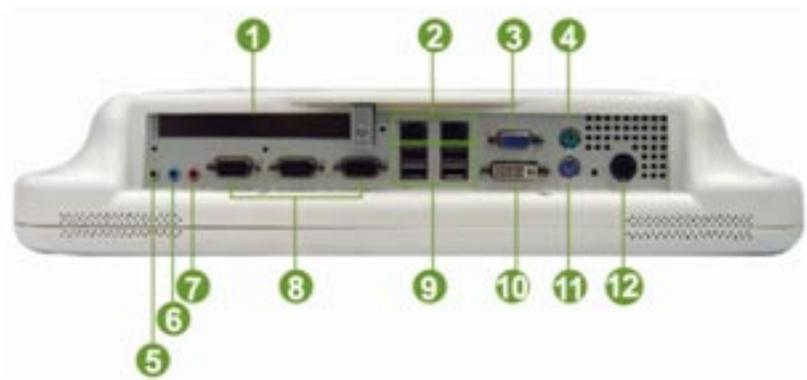
1 PCI Slot	9 USB
2 Giga LAN	10 DVI
3 VGA	11 PS2 K/B
4 PS2 Mouse	12 Power DC-in
5 Line-out	13 Rubber cover
6 Line-in	14 I/O cover
7 Mic	
8 RS232	

Side View (CF card reader model)

CF Card Reader

Side View (Smart card reader model)

Smart Card reader
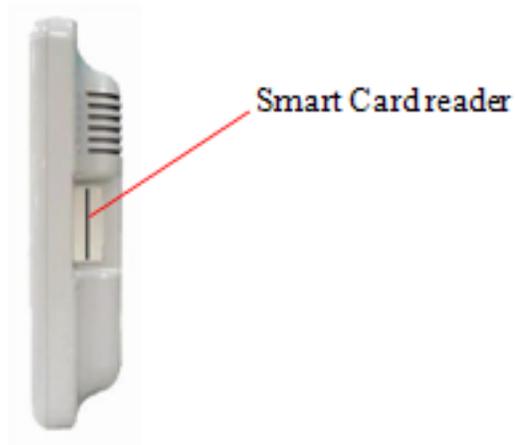
2.4   DISCONNECT DEVICE
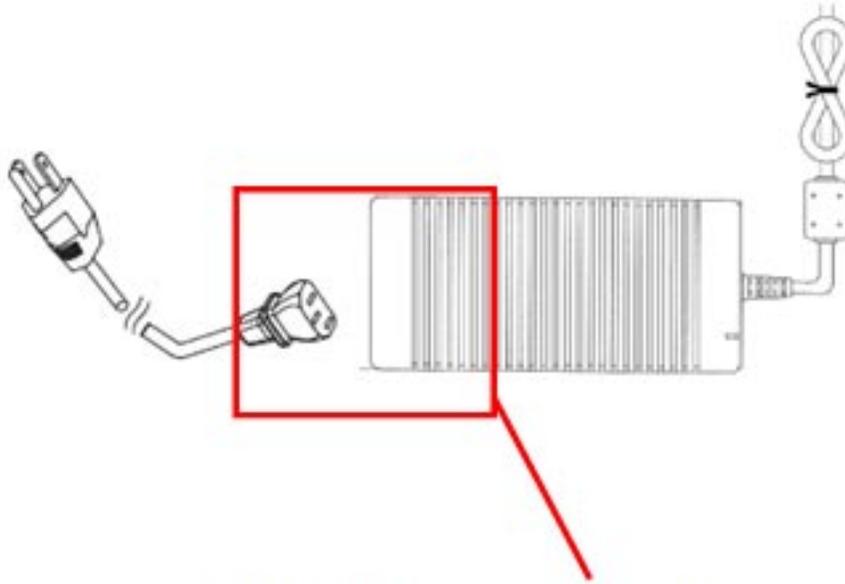
Unplug the power cord from the power
adapter jack to disconnect the device.

CHAPTER 3 BIOS SETUP

3.1 BIOS Introduction

The Award BIOS (Basic Input/Output System) installed in your computer system's ROM supports Intel processors. The BIOS provides critical low-level support for a standard device such as disk drives, serial ports and parallel ports. It also adds virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

MPC6171A/ MPC 6171B

The Award BIOS provides a Setup utility program for specifying the system configurations and settings. The BIOS ROM of the system stores the Setup utility. When you turn on the computer, the Award BIOS is immediately activated. Pressing the <Del> key immediately allows you to enter the Setup utility. If you are a little bit late pressing the <Del> key, POST (Power On Self Test) will continue with its test routines, thus preventing you from invoking the Setup. If you still wish to enter Setup, restart the system by pressing the "Reset" button or simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys. You can also restart by turning the system Off and back On again. The following message will appear on the screen:

Press <DEL> to Enter Setup

In general, you press the arrow keys to highlight items, <Enter> to select, the <PgUp> and <PgDn> keys to change entries, <F1> for help and <Esc> to quit.

When you enter the Setup utility, the Main Menu screen will appear on the screen. The Main Menu allows you to select from various setup functions and exit choices.

```
              Phoenix - Award  BIOS  CMOS  Setup  Utility

   Standard CMOS Features        Load Fail-Safe  Defaults
   Advanced  BIOS  Features      Load Optimized  Defaults
   Advanced  Chipset Features    Set Supervisor  Password
   Integrated  Peripherals       Set User Password
   Power  Management  Setup      Save & Exit  Setup
   PnP/PCI Configurations        Exit Without  Saving
   PC Health  Status

   Ese : Quit                          □ : Select  Item
   F10 : Save & Exit Setup

              Time, Date,  Hard Disk  Type...
```

The section below the setup items of the Main Menu displays the
control keys for this menu. At the bottom of the Main Menu just below the control keys
section, there is another section, which displays information on the currently highlighted
item in the list.

Note: If the system cannot boot after making and saving system changes with Setup,
the Award BIOS supports an override to the CMOS settings that resets your system to
its default.

Warning: It is strongly recommended that you avoid making any changes to the chipset
defaults. These defaults have been carefully chosen by both Award and your system
manufacturer to provide the absolute maximum performance and reliability. Changing
the defaults could cause the system to become unstable and crash in some cases.

STANDARD CMOS FEATURES

"Standard CMOS Features" choice allows you to record some basic hardware configurations in your computer system and set the system clock and error handling. If the motherboard is already installed in a working system, you will not need to select this option. You will need to run the Standard CMOS option, however, if you change your system hardware configurations, the onboard battery fails, or the configuration stored in the CMOS memory was lost or damaged.

```
                Phoenix - Award BIOS CMOS Setup Utility
                      Standard CMOS Features
┌─────────────────────────────────────────────────┬──────────────────────┐
│ Date (mm:dd:yy)        Tue, Jan 1, 2008          │    Item Help         │
│ Time (hh:mm:ss)        00 : 00 : 00              │ Menu Level  >        │
│                                                  │                      │
│ IDE Channel 0 Master   None                      │ Change the day, month,│
│ IDE Channel 0 Slave    None                      │ Year and century     │
│ IDE Channel 2 Master   None                      │                      │
│ IDE Channel 2 Slave    None                      │                      │
│ IDE Channel 3 Master   None                      │                      │
│                                                  │                      │
│ Video                  EGA/VGA                   │                      │
│ Halt On                All Errors                │                      │
│                                                  │                      │
│ Base Memory                   640K               │                      │
│ Extended Memory            514048K               │                      │
│ Total Memory               515072K               │                      │
└─────────────────────────────────────────────────┴──────────────────────┘
```

At the bottom of the menu are the control keys for use on this menu. If you need any help in each item field, you can press the <F1> key. It will display the relevant information to help you. The memory display at the lower right-hand side of the menu is read-only. It will adjust automatically according to the memory changed. The following describes each item of this menu.

Date
The date format is:
Day :   Sun to Sat
Month :   1 to 12
Date : 1 to 31
Year : 1999 to 2099
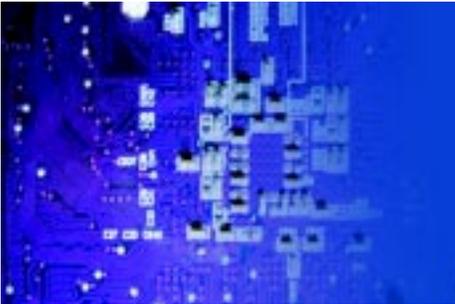
To set the date, highlight the "Date" field and use the PageUp/ PageDown or +/- keys to set the current time.

Time
The time format is: Hour   :   00 to 23
Minute :   00 to 59
Second :   00 to 59
To set the time, highlight the "Time" field and use the <PgUp>/
<PgDn> or +/- keys to set the current time.

IDE Channel Master/Slave
The onboard Serial ATA connectors provide Primary and Secondary channels for connecting up to four Serial ATA hard disks. Each channel can support up to two hard disks; the first is the "Master" and the second is the "Slave".

Press <Enter> to configure the hard disk. The selections include Auto, Manual, and None. Select 'Manual' to define the drive information manually. You will be asked to enter the following items.

Capacity :   Capacity/size of the hard disk drive
Cylinder :   Number of cylinders
Head : Number of read/write heads Precomp :   Write precompensation Landing Zone :   Landing zone
Sector :   Number of sectors

The Access Mode selections are as follows:
CHS   (HD < 528MB)
LBA   (HD > 528MB and supports Logical Block Addressing)
Large (for MS-DOS only)
Auto
Remarks: The main board supports one serial ATA ports and are represented in this setting as IDE Channel 2.

Video
This field selects the type of video display card installed in your system. You can choose the following video display cards:
EGA/VGA   For EGA, VGA, SEGA, SVGA or PGA monitor adapters. (default)
CGA 40   Power up in 40 column mode.
CGA 80   Power up in 80 column mode.
MONO   For Hercules or MDA adapters.

Halt On

This field determines whether or not the system will halt if an error is detected during power up.

All errors   Whenever the BIOS detects a non-fatal error, the system will stop and you will be prompted.

No errors   The system boot will not be halted for any error that may be detected.

All, But Keyboard   The system boot will not be halted for a keyboard error; it will stop for all other errors

ADVANCED BIOS FEATURES

This section allows you to configure and improve your system and allows you to set up some system features according to your preference.

```
           Phoenix - Award  BIOS  CMOS  Setup  Utility
                     Advanced  BIOS  Features

 CPU Feature                    Press  Enter           ITEM  HELP
 Hard Disk  Boot  Priority      Press  Enter       Menu  Level   >-
 Virus  Warning                 Disabled
 CPU L1  and L2  Cache          Enabled
 CPU L3                         Enabled
 Quick  Power  On Self  Test    Enabled
 First  Boot  Device            USB-CDROM
 Second  Boot  Device           Hard  Disk
 Third  Boot  Device            LAN
 Boot  Other  Device            Enabled
 Boot  Up  NumLock  Status      On Gate
 A20  Option                    Fast
 Typematic  Rate  Setting       Disabled
 Typematic  Rate  (Chars/Sec)   6
 Typematic  Delay  (Msec)       250
 Security  Option               Setup
 APIC  Mode                     Enabled
 MPS  Version  Control  for OS  1.4
 OS  Select  For  DRAM>-64 MB   Non-OS2
 Report  No FDD  For  WIN 95    Yes
 Full  screen  Logo  Show       Enabled
 Small  Logo  (EPA)  Show       Disabled
```

CPU Feature
Press Enter to configure the settings relevant to CPU Feature.

Hard Disk Boot Priority
With the field, there is the option to choose, aside from the hard disks connected, "Bootable add-in Cards" which refers to other external devices.

Virus Warning
If this option is enabled, an alarm message will be displayed when trying to write on the boot sector or on the partition table on the disk, which is typical of the virus.

CPU L1 and L2 Cache
Cache memory is additional memory that is much faster than conventional DRAM (system memory). CPUs from 486-type on up contain internal cache memory, and most, but not all, modern PCs have additional (external) cache memory. When the CPU requests data, the system transfers the requested data from the main DRAM into cache memory, for even faster access by the CPU. These items allow you to enable (speed up memory access) or disable the cache function. By default, these items are Enabled.

CPU L3 Cache
Enabled or Disabled

Quick Power On Self Test
When enabled, this field speeds up the Power On Self Test (POST) after the system is turned on. If it is set to Enabled, BIOS will skip some items.

First/Second/Third Boot Device
These fields determine the drive that the system searches first for an operating system. The options available include LS120, Hard Disk, CDROM, ZIP100, USB-Floppy, USB-ZIP, USB-CDROM, LAN and Disable.

Boot Other Device
These fields allow the system to search for an OS from other devices other than the ones selected in the First/Second/Third Boot Device.

Boot Up NumLock Status
This allows you to activate the NumLock function after you power up the system.

Gate A20 Option
This field allows you to select how Gate A20 is worked. Gate A20 is a device used to address memory above 1 MB.

Typematic Rate Setting
When disabled, continually holding down a key on your keyboard will generate only one instance. When enabled, you can set the two typematic controls listed next. By default, this field is set to Disabled.

Typematic Rate (Chars/Sec)
When the typematic rate is enabled, the system registers repeated keystrokes speeds. Settings are from 6 to 30 characters per second.

Typematic Delay (Msec)
When the typematic rate is enabled, this item allows you to set the time interval for displaying the first and second characters. By default, this item is set to 250msec.

Security Option
This field allows you to limit access to the System and Setup. The default value is Setup. When you select System, the system prompts for the User Password every time you boot up. When you select Setup, the system always boots up and prompts for the Supervisor Password only when the Setup utility is called up.

APIC Mode
APIC stands for Advanced Programmable Interrupt Controller. The default setting is Enabled.

MPS Version Control for OS
This option is specifies the MPS (Multiprocessor Specification) version for your operating system. MPS version 1.4 added extended configuration tables to improve support for multiple PCI bus configurations and improve future expandability. The default setting is 1.4.

OS Select for DRAM > 64MB
This option allows the system to access greater than 64MB of DRAM memory when used with OS/2 that depends on certain BIOS calls to access memory. The default setting is Non-OS/2.

Report No FDD For WIN 95
If you are using Windows 95/98 without a floppy disk drive, select
Enabled to release IRQ6. This is required to pass Windows
95/98's SCT test. You should also disable the Onboard FDC Controller in the Integrated Peripherals screen when there's no floppy drive in the system. If you set this feature to Disabled, the BIOS will not report the missing floppy drive to Win95/98.

Full screen Logo Show
The screen logo appears full of the monitor screen when the system is boot up. The default setting is Enabled.

Small Logo (EPA) Show
The EPA logo appears at the right side of the monitor screen when the system is boot up. The default setting is Disabled.

ADVANCED CHIPSET FEATURES

This Setup menu controls the configuration of the chipset.

```
                    Phoenix - Award  BIOS  CMOS  Setup  Utility
                           Advanced  Chipset  Features

   System  BIOS  Cacheable          Enabled              ITEM  HELP
   Memory  Hole  at  15M-16M         Disabled       Menu  Level   >-
   PCI  Express  Root  Port  Func    Press  Enter


   ** VGA Setting  **
   PEG/On  Chip  VGA  Control        Auto
   * PEG  Force  x1                  Disabled
   On-Chip  Frame  Buffer  Size      8MB
   DVMT Mode                         DVMT
   DVMT/FIxED  memory  Size          128MB
   Boot  Display                     Auto
   Panel  Scaling                    Auto

   Panel  Number                     1024x768  18 bit SC
```

System BIOS Cacheable
The setting of Enabled allows caching of the system BIOS ROM at F000h-FFFFFh, resulting   in
better system   performance. However, if any program writes to this memory area, a system error
may result.

Memory Hole At 15M-16M
In order to improve performance, certain space in memory can be reserved for ISA cards. This memory
must be mapped into the memory space below 16 MB. The choices are Enabled and Disabled.

PCI Express Root Port Func
By default.

VGA Setting
The fields under the VGA Setting and their default settings are: PEG/On Chip VGA Control: Onchip VGA
On-Chip Frame Buffer Size: 8MB DVMT Mode: DVMT
DVMT/Fixed Memory Size: 128MB Boot Display: Auto
Panel Scaling: Auto
Panel Number: 4

INTEGRATED PERIPHERALS

This section sets configurations for your hard disk and other integrated peripherals.

```
Phoenix - AwardBIOS CMOS Setup Utility
Integrated Peripherals

SuperIO Device                Press Enter          ITEr HELD
Onboard LAN1 Boot ROM         Enabled          Menu Level  ▶
Onboard LAN2 Boot ROM         Enabled
Onboard Serial Port 3         280
Serial Port 3 Use IRQ         IRQ5
Onboard Serial Port 3         288
Serial Port 3 Use IRQ         IRQ7
Onboard Serial Port 3         2A0
Serial Port 3 Use IRQ         IRQ10
Onboard Serial Port 3         2A8
Serial Port 3 Use IRQ         IRQ11
USB Device Setting            Press Enter
```

OnChip IDE Device

IDE HDD Block Mode
This field allows your hard disk controller to use the fast block mode to transfer data to and from your hard disk drive.

IDE DMA transfer access
This field allows your hard disk controller to use the fast block mode to transfer data to and from your hard disk drive.

On-Chip Serial ATA Setting
The fields under the SATA setting includes On-Chip Serial ATA (Auto), PATA IDE Mode (Secondary) and SATA Port (PO, P2 is Primary).

OnChip Primary/Secondary PCI IDE
The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select Enabled to activate each channel separately.

ONCHIP SUPER IO DEVICE

Power ON Function

This field is related to how the system is powered on - such as with the use of conventional power button, keyboard or hot keys. The default is BUTTON ONLY.

Onboard Serial Port

These fields allow you to select the onboard serial ports and their addresses. The default values for these ports are:

Serial Port 1 3F8/IRQ4
Serial Port 2 2F8/IRQ3

UART Mode Select

This field determines the UART 2 mode in your computer. The default value is Normal. Other options include IrDA and ASKIR.

PWRON After PWR-Fail

This field sets the system power status whether on or off when power returns to the system from a power failure situation.

USB Device Setting

USB 1.0 Controller

The options for this field are Enabled and Disabled. By default, this field is set to Enabled.

USB 2.0 Controller

The options for this field are Enabled and Disabled. By default, this field is set to Enabled. In order to use USB 2.0, necessary OS drivers must be installed first. Please update your system to Windows 2000 SP4 or Windows XP SP2.

USB Operation Mode

The options for this field are Full/Low speed and High speed. By default, this field is set to High speed.

USB Keyboard Function

The options for this field are Enabled and Disabled. By default, this field is set to Enabled.

USB Mouse Function

The options for this field are Enabled and Disabled. By default, this field is set to Enabled.

USB Storage Function

The options for this field are Enabled and Disabled. By default, this field is set to Enabled.

POWER MANAGEMENT SETUP

```
Phoenix - AwardBIOS CMOS Setup  Utility
              Power Management  Setup

ACPI Function              Enabled              ITEM HELP
ACPI Suspend               S3(STR)
RUN VGABIOS  if S3 Resume   Auto              Menu Level  >-
Power Management           User Define
Video Off Method           DPMS
Video Off In Suspend       Yes
Suspend Type               Stop Grant
Modem Use IRQ              3
Suspend Mode               Disabled
HDD Power Down             Disabled
Soft-Off by PWR-BTTN       Instant-Off
Wake-Up by PCI Card        Disabled
Power On by Ring           Disabled
USB KB Wake-Up From S3     Disabled
Resume by Alarm            Disabled
Date (of Month) Alarm      0
Time (hh:mm:ss) Alarm      0 : 0 : 0

** Reload Global Timer Events **
Primary IDE 0              Disabled
Primary IDE 1              Disabled
Secondary IDE 0            Disabled
Secondary IDE 1            Disabled
FDD, COM, LPT Port         Disabled
PCI PIRQ[A-D]  #           Disabled
```

ACPI Function
Enable this function to support ACPI (Advance Configuration and
Power Interface).

ACPI Suspend
The default setting of the ACPI Suspend mode is S3(STR).

RUN VGABIOS if S3 Resume
The default setting of this field is Auto.

Power Management
This field allows you to select the type of power saving management modes. There are three
selections for Power Management.

User Define   Each of the ranges is from 1 min. to 1hr. Except for HDD Power Down which ranges
                       from 1 min. to 15 min.
Min. Power Saving   Minimum power management
Max. Power Saving   Maximum power management.

Video Off Method
This field defines the Video Off features. There are three options.
Blank Screen   Writes blanks to the video buffer.
V/H SYNC + Blank   Blank the screen and turn off vertical and horizontal scanning.
DPMS   Default setting, allows BIOS to control the video display.

Video Off In Suspend
When enabled, the video is off in suspend mode. The default setting is Yes.

Suspend Type
The default setting for the Suspend Type field is Stop Grant.

Modem Use IRQ
This field sets the IRQ used by the Modem. By default, the setting is 3.

Suspend Mode
When enabled, and after the set time of system inactivity, all devices except the CPU will be shut off. By
default, the setting is Disabled.

HDD Power Down
When enabled, and after the set time of system inactivity, the hard disk drive will be powered down
while all other devices remain active.

Soft-Off by PWR-BTTN
This field defines the power-off mode when using an ATX power supply. The Instant Off mode allows
powering off immediately upon pressing the power button. In the Delay 4 Sec mode, the system powers
off when the power button is pressed for more than four seconds or enters the suspend mode when
pressed for less than 4 seconds.

Wake up by PCI Card
By default, this field is Enabled.

Power On by Ring
This field enables or disables the power on of the system through the modem connected to the serial port or LAN.

USB KB Wake-Up From S3
By default, this field is Disabled.

Resume by Alarm
This field enables or disables the resumption of the system operation. When enabled, the user is allowed to set the Date and Time.

Reload Global Timer Events
The HDD, FDD, COM, LPT Ports, and PCI PIRQ are I/O events that can prevent the system from entering a power saving mode or can awaken the system from such a mode. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service.

PNP/ PCI CONFIGURATIONS

This option configures the PCI bus system. All PCI bus systems on the system use INT#, thus all in-stalled PCI cards must be set to this value.

```
Phoenix - AwardBIOS CMOS Setup Utitly
           PnP/PCI  Configurations

Int Display First            PCI Slot              ITEM  HELP

Reset Configuration Data     Disabled
                                                Menu  Level

Resources Controlled By      Auto (ESCD)
IRQ Resources                Press Enter        Select  Yes if you are
                                                using a Plug and Play
                                                capable operating
PCI/VGA Palette Snoop        Disabled           system  Select No if
                                                you need the BIOS to
**PCI Express relative items**                  configure non-boot
Maximum Payload Size         128                devices
```

Init Display First
The default setting is Onboard.

Reset Configuration Data
This field allows you to determine   whether to reset the configuration data or not. The default value is Disabled.

Resources Controlled by
This PnP BIOS can configure all of the boot and compatible devices with the use of a PnP operat-ing system such as Windows 95.

PCI/VGA Palette Snoop
Some non-standard VGA display cards may not show colors properly. This field allows you to set whether or not MPEG ISA/VESA VGA cards can work with PCI/VGA. When this field is en-abled, a PCI/VGA can work with an MPEG ISA/VESA VGA card. When this field is disabled, a PCI/VGA cannot work with an MPEG ISA/VESA card.

Maximum Payload Size
The default setting of the PCI Express Maximum Payload Size is 128.

PC HEALTH STATUS

This section shows the parameters in determining the PC Health Status. These parameters include temperatures, fan speeds and voltages.

```
Phoenix - AwardBIOS  CMOS Setup  Utility
              PC Health  Status

CPU Warning  Temperature      Disabled              ITEM  HELP

Current  System  Temp        45°C/113°F          Menu  Level   >-
Current  CPU1  Temp          45°C/113°F

FAN1  Speed                   0 RPM
 FAN2  Speed               5400  RPM
 FAN3  Speed                  0 RPM
 FAN4  Speed                  0 RPM
Vcore                         1.17v
 VIN0                         3.00v
 VIN1                        12.52v
 VIN2                         3.53v
 VIN3                         5.67v
 VIN4                         0.05v
 VCC (v)                      5.56v
 VBAT (v)                     3.26v
 5vSB(v)                      5.56v
CPU  Smart  Fan  Temperature  85°C/185°F
```

CPU Warning Temperature
This field allows the user to set the temperature so that when the temperature is reached, the system sounds a warning. This function can help prevent damage to the system that is caused by overheating.

CPU Smart Fan Temperature
This field allows the user to set the temperature so that when the temperature is reached, the smart fan will speed up to cool the CPU temperature.
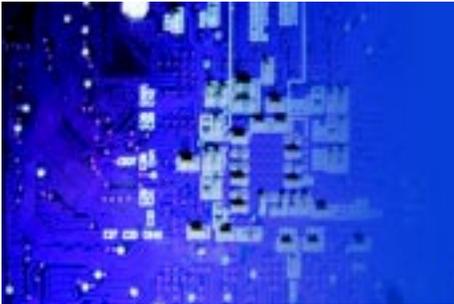
Load Fail-Safe Defaults

This option allows you to load the troubleshooting default values permanently stored in the BIOS ROM. These default settings are non-optimal and disable all high-performance features.

Load Optimized Defaults

This option allows you to load the default values to your system configuration. These default settings are optimal and enable all high performance features.

Set Supervisor Password

These two options set the system password. Supervisor Password sets a password that will be used to protect the system and Setup utility. User Password sets a password that will be used exclusively on the system. To specify a password, highlight the type you want and press <Enter>. The Enter Password: message prompts on the screen. Type the password, up to eight characters in length, and press <Enter>. The system confirms your password by asking you to type it again. After setting a password, the screen automatically returns to the main screen.

To disable a password, just press the <Enter> key when you are prompted to enter the password. A message will confirm the password to be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

Save & Exit Setup

This option allows you to determine whether or not to accept the modifications. If you type "Y", you will quit the setup utility and save all changes into the CMOS memory. If you type "N", you will return to Setup utility.

Exit Without Saving

Select this option to exit the Setup utility without saving the changes you have made in this session. Typing "Y" will quit the Setup utility without saving the modifications. Typing "N" will return you to Setup utility.

APPENDIX

A. JUMPER SETTINGS AND CONNECTIONS

This appendix gives the definitions and shows the positions of jumpers, headers and connectors. All of the configuration jumpers on MPC6171A/ MPC6171B are in the proper position.

Note: Some of jumpers or connectors will be removed base on system configuration.

A-1 Jumper location and list

In general, jumpers on the single board computer are used to select options for certain features. To select any option, cover the jumper cap over (SHORT) or remove (NC) it from the jumper pins according to the following instructions.
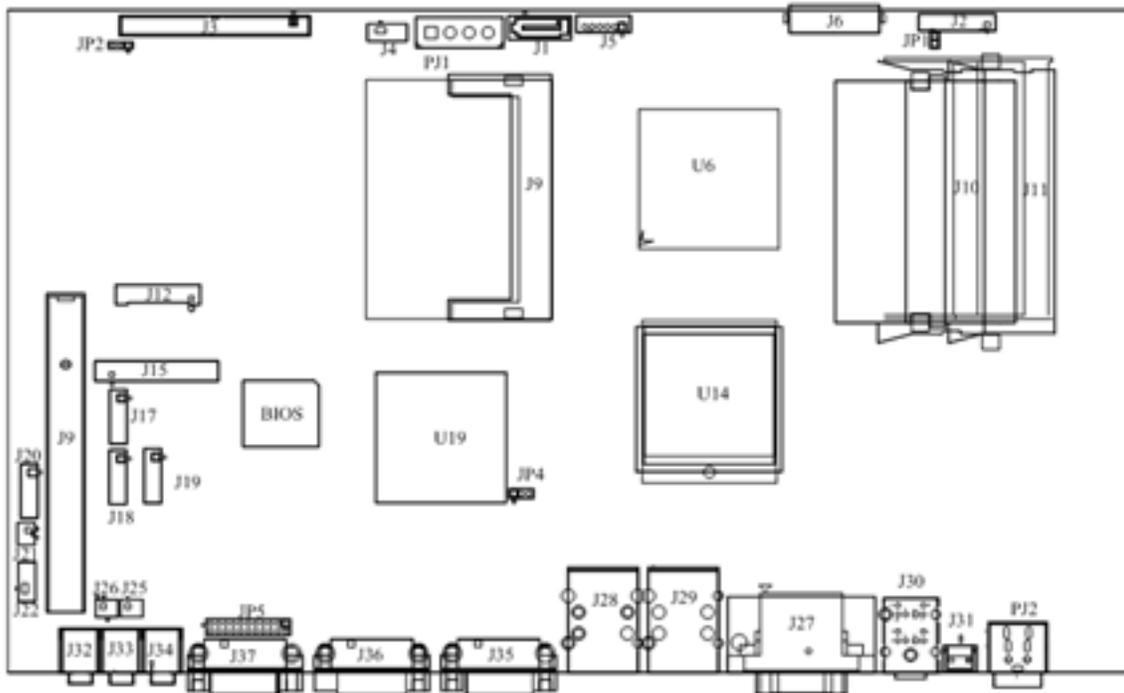
Jumper List

Connector	Function
JP1	Touch Screen Configuration
JP2	CF CSEL#
JP4	CMOS Clear
JP5	COM1 Function Selection

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JP1- Touch Screen Configuration

Description	ON(Short)	OFF(Open)
Wire	4,8 (default)	5

JP2 – CF CSEL#

Description	Jumper Setting	Remark
Slave	1-2	
Master	2-3 (default)	

JP4 – CMOS Clear

Description	Jumper Setting	Remark
Normal	1-2(default)	
CMOS Clear	2-3	

JP5 –COM1 Function Selection

Description	Jumper Setting	Description
RS-232	5-6, 9-11, 10-12, 15-17, 16-18(default)	RS-232
RS-422	3-4, 7-9, 13-15, 14-16, 21-22	RS-422
RS-485	1-2, 7-9, 8-10, 19-20	RS-485

A-2 Connectors location and list

The connectors on the PCBA of MPC6171A/ MPC6171B are used to connect external devices such as hard disk drives, printers, keyboard, serial ports, etc. Specifically, the PCBA of MPC6171A/ MPC6171B has the following connectors:
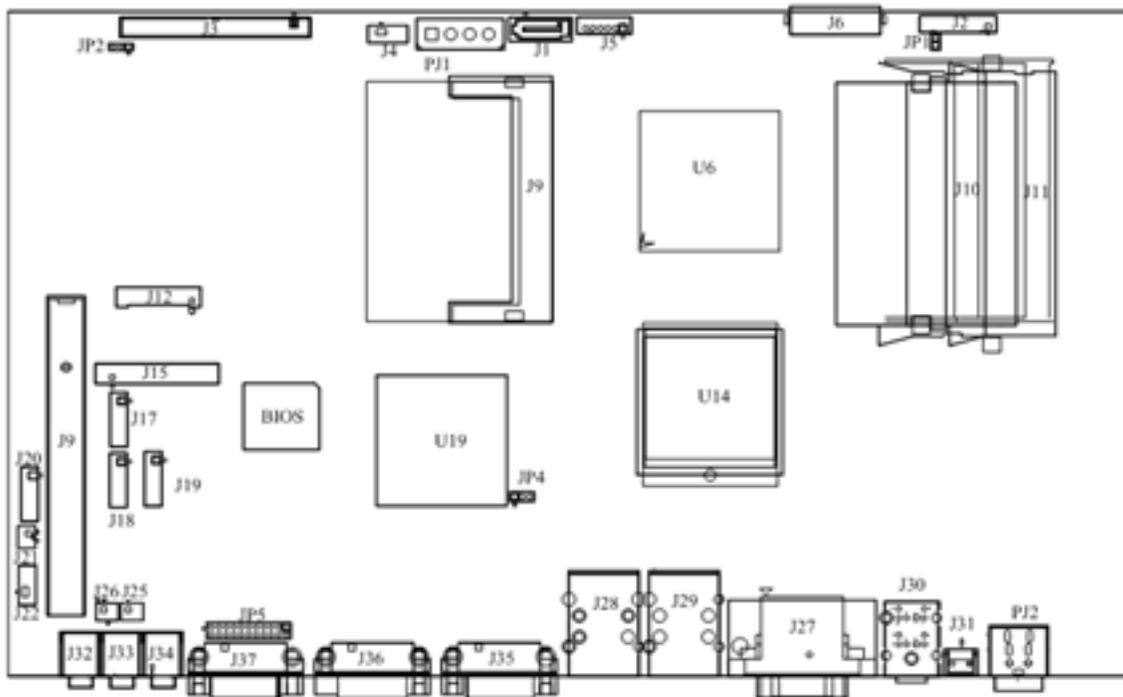
PJ2-Power Jack connector
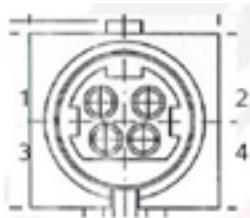
Pin #	Signal Description
1	DC In (+12V~+28V)
2	DC In (+12V~+28V)
3	Ground
4	Ground

PJ1-HDD power connector

Pin #	Signal Description
1	+12V
2	Ground
3	Ground
4	+5V

P31- Reset Button
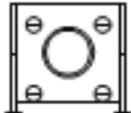
J30 — KB+MS Connector
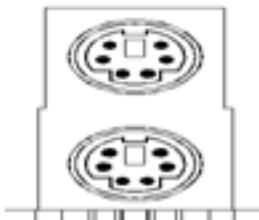
Mouse

Keyboard

J27 – Display Interface

(R) 2.29±0.13

VGA-
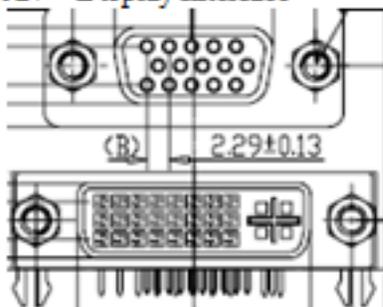
DVI-

Pin #	Signal Description	Pin #	Signal Description
1	TMDS Data2-	2	TMDS Data+
3	TMDS Data2 Shield	4	NC
5	NC	6	DVI DDC Clock
7	DVI DDC Data	8	
9	TMDS Data1-	10	TMDS Data1+
11	TMDS Data1 Shield	12	NC
13	NC	14	+5V
15	GND	16	Hot Plug Detect
17	TMDS Data0-	18	TMDS Data0+
19	TMDS Data0 Shield	20	CRT DDC Clock
21	CRT DDC Data	22	TMDS Clock Shield
23	TMDS Clock+	24	TMDS Clock-
V1	RED	V2	GREEN
V3	BLUE	V12	DDCDAT
V13	HSYNC	V14	VSHYNC

J28 J29 – Ethernet + USB Port

Ethernet

USB

USB
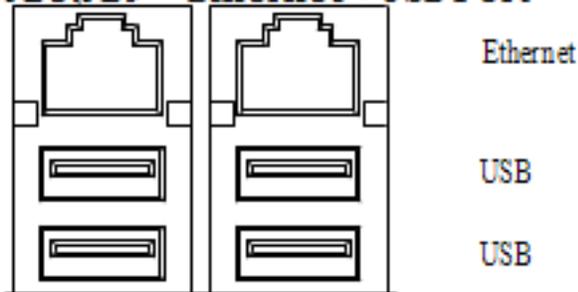
Ethernet-

Pin #	Description
1	Data0+
2	Data0-
3	Data1+
4	Data2+
5	Data2-
6	Data1-
7	Data3+
8	Data3-
LED1	LINK/ACTIVE LED
LED2	SPEED LED

USB-

Pin #	Description
1	+5V Power
2	Data -
3	Data +
4	Ground

Pin #	Signal Description
1	DC In (+12V~+28V)
2	DC In (+12V~+28V)
3	Ground
4	Ground

J35, J36 – COM3, COM2
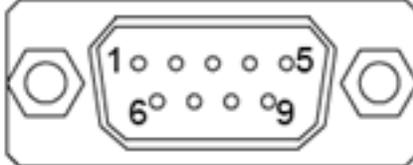
J37- COM port 1(RS-232/RS-422/RS-485)
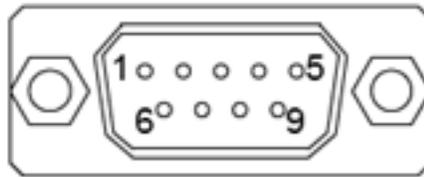
Pin#	Signal Description		
	RS-232	RS-422	RS-485
1	Carrier Detect	Transmit Data -	Transmit Data -
2	Receive Data	Transmit Data +	Transmit Data +
3	Transmit Data	Receive Data +	N/A
4	Data Terminal Ready	Receive Data -	N/A
5	Ground	Ground	Ground
6	Data Set Ready	N/A	N/A
7	Request to Send	N/A	N/A
8	Clear to Send	N/A	N/A
9	Ring Indicator	N/A	N/A

J33-Audio Line in Connector
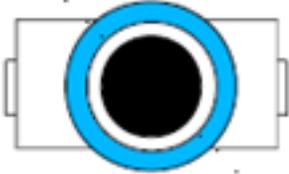
J34-Audio Microphone in Connector
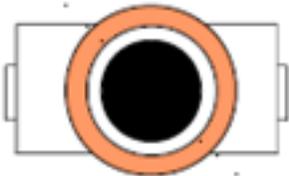
J32-Audio Line out Connector
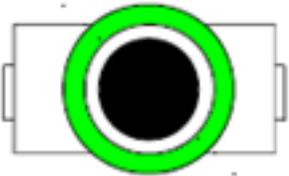
### J15 – Parallel Port (internal)

25   1
26   2
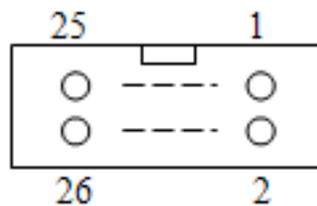
Pin #	Signal Description	Pin #	Signal Description
1	Strobe	2	Autofeed
3	Data Bit 0	4	Error
5	Data Bit 1	6	Initialize
7	Data Bit 2	8	Select In
9	Data Bit 3	10	Ground
11	Data Bit 4		Ground
13	Data Bit 5		Ground
15	Data Bit 6		Ground
17	Data Bit 7		Ground
19	Acknowledge		Ground
21	Busy		Ground
23	Paper End		Ground
25	Select		NC

J12 – GPIO Interface(internal)
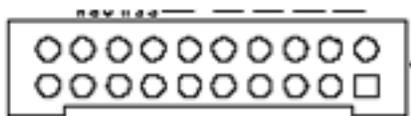
J25, J26 – Passive Speaker Connector
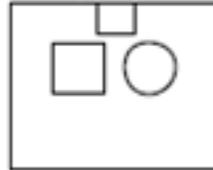
Pin #	Signal Description	Pin #	Signal Description
1	GPO 1	2	GPI 1
3	GPO 2	4	GPI 2
5	GPO 3	6	GPI 3
7	GPO 4	8	GPI 4
9	GPO 5	10	GPI 5
11	GPO 6	12	GPI 6
13	GPO 7	14	GPI 7
15	GPO 8	16	GPI 8
17	+5V	18	+5V
19	Ground	20	Ground

J26(Right Channel)	
Pin #	Signal Description
1	AMP. Out +
2	AMP. Out -

J25(Left Channel)	
Pin #	Signal Description
1	AMP. Out +
2	AMP. Out -

J3 – Standard (IDE) Connector (internal)

J9 – Standard Mini-PCI Interface

J14 – Standard PCI Slot Interface

J22 – Power/HDD Indicator

4

Pin #	Signal Description
1	HDD Active Indicator
2	+5V
3	+5V
4	Power indicator(default)

B. VESA MOUNTING

The MPC6171A/ MPC6171B also provides standard VESA mounting to help system integrators conveniently integrate the panel PC into their system.

Never use any other mounting brackets except those provided by Wincomm to prevent the unreliable fixing of MPC6171A/ MPC6171. VESA mount installation should be carried out by a professional technician. Please contact the service technician or your retailer if you need this service.

Installation instructions follow:

1. The wall-mounting attachment is comprised of two parts: one back bracket, and one mounting bracket.

2. First attach the back bracket to the rear cover of the MPC6171A/ MPC6171, securing it in place with four of the Phillips-head screws provided.

3. Attach the mounting bracket to the wall or another flat surface. The back bracket slides vertically from the top into the mounting bracket. It can be secured to the mounting bracket by screwing four of the Phillips-head screws provided through the corresponding holes at the tops of the mounting bracket.

Warning:

Be sure to secure the screws of the mounting bracket tightly. Injuries could result if the MPC6171A/ MPC6171 isn't properly secured to the mounting bracket.
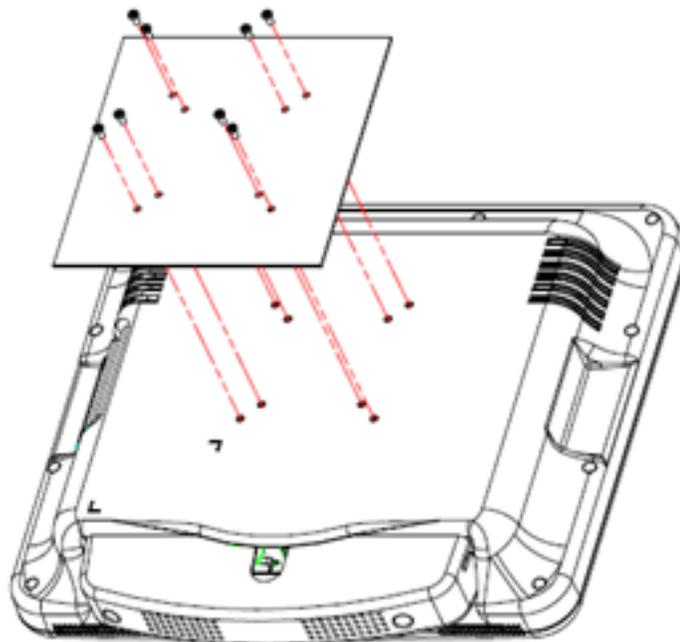
Screws: M4 x 10mm
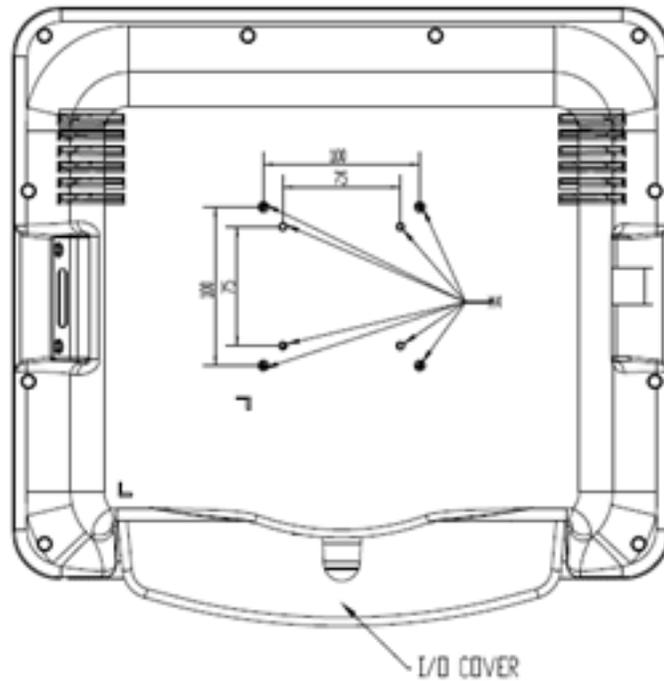
Figure B.1: VESA mounting dimension diagram (75 x 75 mm, 100 x 100 mm)