6IWB/6IWC

Intel 810

AII-IN-ONE MAINBOARD

MMMBN105-10EBRA
Version 1.0

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This Mainboard has passed the stringent requirements of the **NSTL Year 2000** certification test and is now eligible to carry the NSTL "**Year 2000 Certification**" seal.

Contents

Overview

Thank you for purchasing the **6IWB/6IWC**. The **6IWB/6IWC** is a high-quality Socket 370 mainboard with integrated VGA and audio capabilities based on the Intel 810 100MHz chipset. Built to a Micro ATX form factor on a 4-layer PCB, the **6IWB/6IWC** also integrates an Intel 752 AGP Graphics chipset with 4MB (6IWB ONLY) dedicated display cache SDRAM video memory for 2D/3D graphics acceleration and onboard AC97 Audio for a complete onboard multimedia solution.

Other features include 1xAMR(Audio/Modem Riser), 3x32-bit PCI slots, 2x168-pin DIMMs supporting from 8MB-512MB PC100 SDRAM and optional 20-pin Digital Flat Panel support. The onboard I/O includes 1 FDD connection, 1 Serial Port, 1 Parallel Port (EPP, ECP, EPP+ECP), 2 USB Ports, 1 PS-2 mouse and 1 PS-2 keyboard, as well as game and microphone ports, speaker out and line in connections, 2 CD-Jacks, 1 VGA port, 1 COM port, and an IrDa port with optional transceiver/receiver cable.

In addition, the **6IWB/6IWC** offers On Board PCI IDE PIO mode 3/4 EIDE and Ultra DMA-33/66 (up to 4 IDE devices) function. The Award BIOS comes with Green, and Plug and Play Features, Flash EPROM, a 4M-bit Firmware Hub, ACPI and OS direct power management, and support for 120MB ATAPI FDD and ZIP Disk driver, as well as BIOS Monitoring of Fan Speed, Voltage and System environment Temperature.

Specification

➢ **Processor:**
   Intel Socket 370 with Internal clock 233~600up MHz
➢ **Chipset:**
   Intel 810 DC100 AGPset with build in 2D/3D VGA (6IWB)
   Intel 810 AGPset with build in 2D/3D VGA (6IWC)
➢ **Expansion Slots:**
   1xAMR(Audio/Modem Riser) Card slot
   3x32-bit PCI slots
➢ **System Memory:**

Two 168-pin DIMMs support to 512 MB PC100 SDRAM

➢ **Audio On Board:**
AC97 audio codec with ADI1881 AP

➢ **Video On Board**
Integrated 3D graphics with 100MHz data bus
4MB display cache SDRAM (6IWB ONLY)

➢ **Digital Flat Panel(DFP) Control (Optional)**
20-Pin FLAT Panel Digital video output (6IWB ONLY)

➢ **Onboard I/O:**
1 FDD Connector
1 Serial Port
1 Parallel Port (EPP, ECP, EPP+ECP)
2 USB Ports
1 PS/2 Mouse
1 PS/2 Keyboard
1 Game Port
1 Microphone Port
1 Speaker Out
1 Line In
2 CD-Jacks
1 VGA Port
1 COM Port
IrDa Support

➢ **On Board PCI IDE:**
Dual Ultra DMA/33/66 Bus Mastering ATA IDE Ports Support Greater Than 8.4
GB HDD, ATAPI IDE CD-ROM &LS-120

➢ **AWARD BIOS with Power Management:**
AWARD AGP BIOS with Green, Plug and Play Features
ACPI and OS direct power management
Wake-on event: RTC/Modem/LAN/KB/Mouse

➢ **BIOS**
Intel 4M-bit Firmware Hub (FWH)

➢ **Hardware Monitor:**
 Fan Speed,Voltage, and System Environment Temperature monitor

➢ **Keyboard Power On:**
Supports Keyboard Power On Feature with ATX Power

➢ **Board Size:**

4-layer PCB
30.48cm x 20.2cm
Micro ATX Form Factor

Precautions

Please make sure you ground yourself prior to handling the mainboard or other system components as electrostatic discharge can easily damage components. Take extra care when handling the mainboard in air-conditioned or dry environments, including these four precautions to protect the mainboard from electrostatic discharge:

➢ Do not remove the conductive grid packaging until you are prepared to install the mainboard or other system components.
➢ Ground yourself before removing any system component from its protective conductive grid packaging. To ground yourself grasp the expansion slot covers or other unpainted portions of the computer chassis.
➢ Frequently ground yourself while working, or use a grounding strap.
➢ Handle the mainboard by the edges and avoid touching its components.

Package Checklist

Please check that your package contains all the items listed below. If you find any missing or damaged item, please contact your vendor.
➢ The mainboard
➢ User's manual
➢ One Driver / Utility CD
➢ One HDD/FDD/COM cable

Hardware Setup

6IWD Mainboard Layout
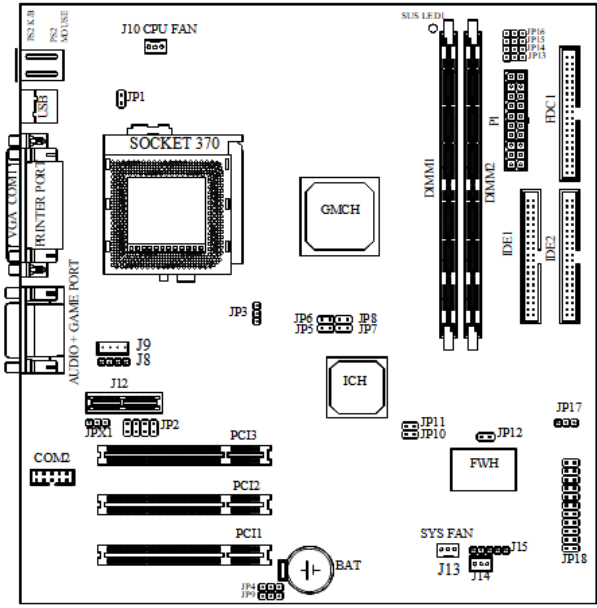
Connectors Function & Setting Jumper

(1) Rear Panel Connector (J1,J2,J3,J4,J5,J6)

PS/2 Mouse (Green)

USB1 (Black)

Parallel Port (Burgundy)

Video Out (Yellow)

PS/2 Keyboard (Purple)

USB2 (Black)

COM1
(Teal or Turquoise)

VGA (Blue)

Line Out (Lime)

Microphone (Pink)

Line In (Light blue)

(2) ATX Power Supply Connector: P1

The ATX power supply uses 20 pins connector shown below. Make sure that the power supply is off before connecting or disconnecting the power cable.
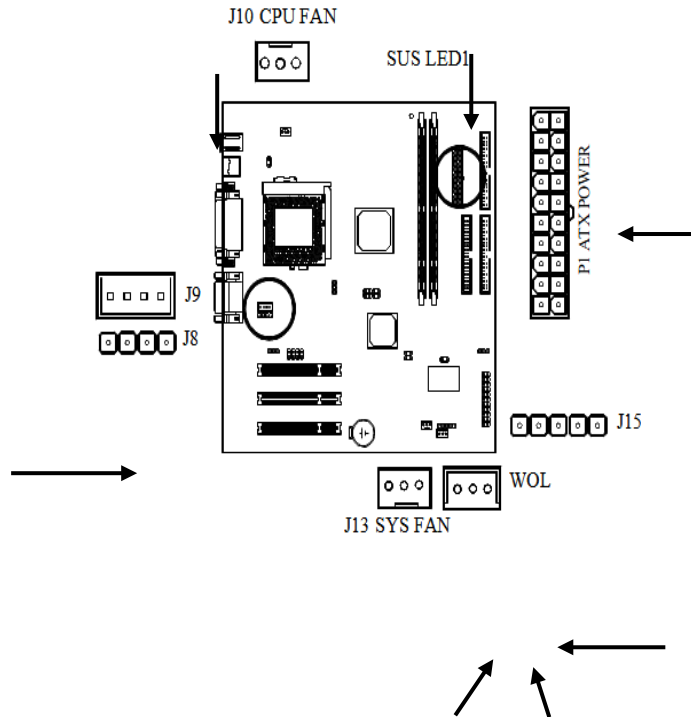
(3) Audio Connector: (J8, J9)
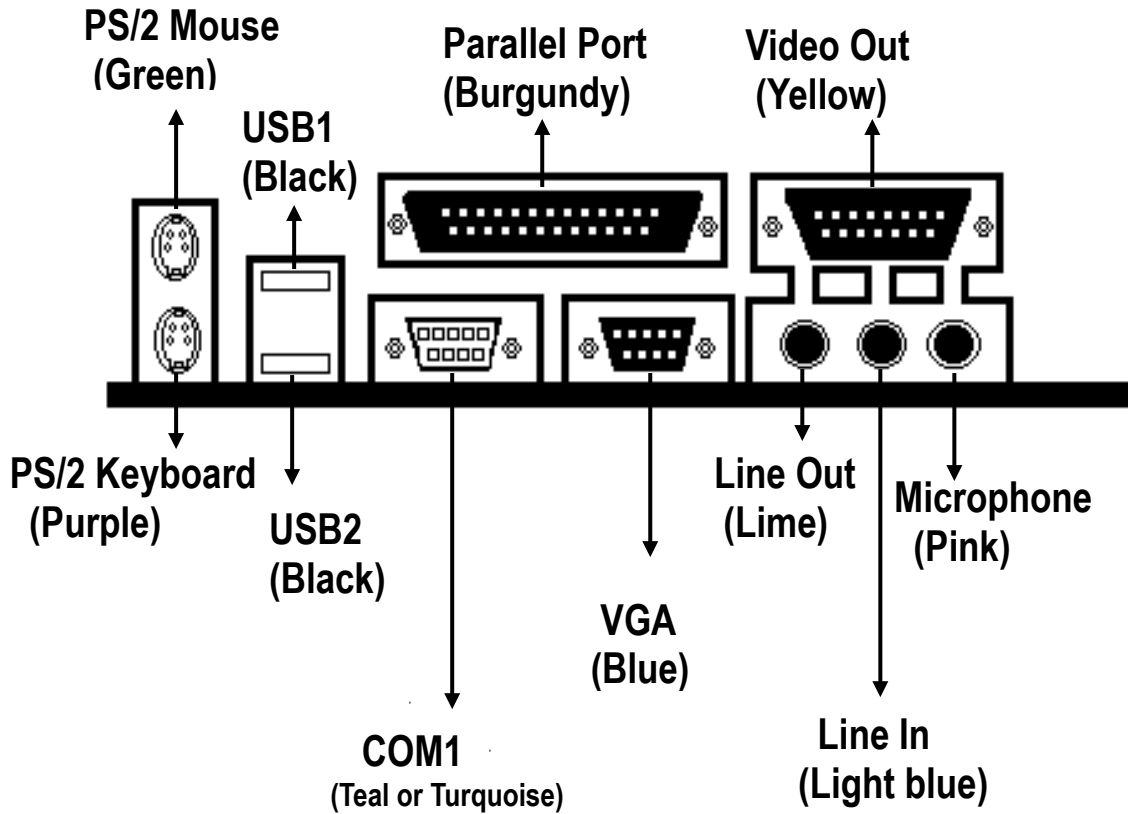
CD-ROM driver audio input connector.

(4) Chassis Fan Power Connector: (J10,J13)

CPU Fan and System Fan both are 3-pin header for the chassis fan. The fan must be a 12V fan.

(5) Wake On Lan Connector: (J14)

This connector connects to Lan cards with a Wake On Lan output. When the System is in Soft-off mode, Lan activity will power on the system.

(6) IrDA Connector: (J15)

The IrDA connector can be configured to support wireless infrared module, with this module and application software user can transfer data to another system.

Setting the System Jumper

Jumpers are used to select the operation modes for your system. Choose your jumper

according to the following figures and tables.

(7) CPU Frequency setting (JP1)

100MHz	Open
66MHz	Close

Note: Default —close
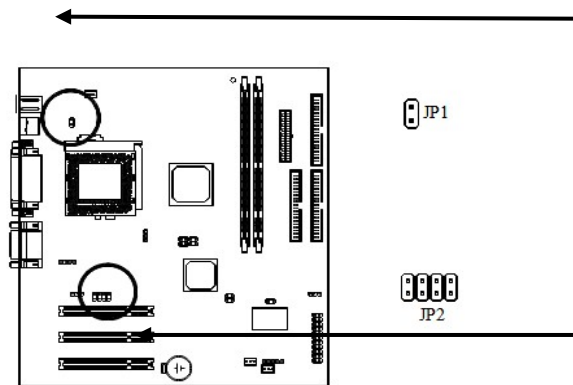
(8) TV OUT Connector (JP2)(6IWB only)

(9) Suspend LED

The on-board LED be implemented that informs the user that the system is in a full-on. The suspend LED indicator, when lit, let the user know that it is not safe to add/remove the SDRAM to the system. It may help prevent SDRAM damage or data loss.

(10) NTSC#/PAL setting (JP3)

PAL	1-2

NTSC	2-3

Note: Default —2-3

.
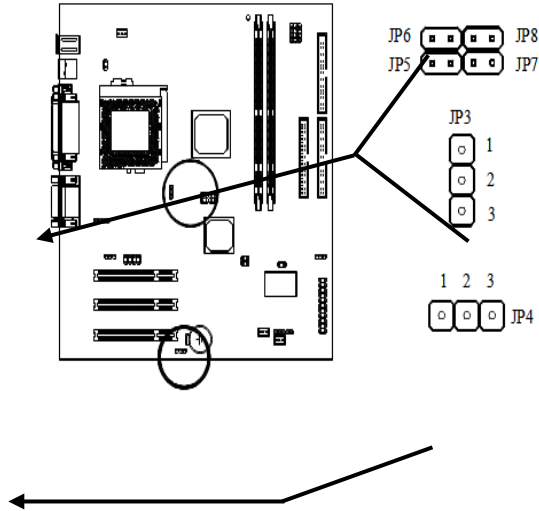
(11) ICH0/ICH Compatibility setting (JP4)

ICH0	1-2
ICH	2-3

Note : Default— 2-3

(12) Reserved setting (JP5, JP6, JP7)

Enable	Open
NC	Close

Note: Default— Open

(13) I/O Queue Depth. setting (JP8)

Queue is 4	Open
Queue is 1	Close

Note: Default— Open

(14) Clear CMOS setting (JP9)

Normal	1-2
Clear CMOS	2-3

Note: Default —1-2
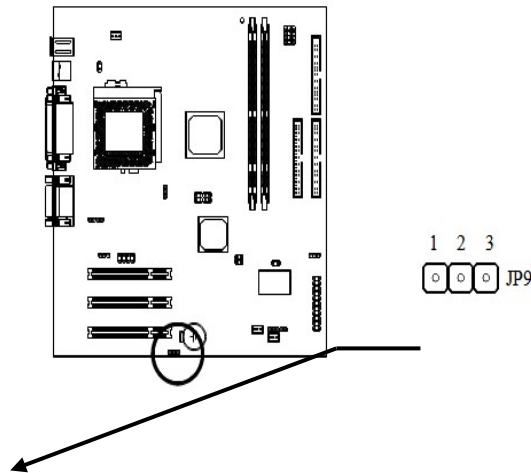
You need to clear the CMOS if you forget your system password. The procedure of clear CMOS is as following:

1. Turn off the system power.
2. Remove ATX power cable from connector P1.
3. Locate JP9 and short pins 2-3 for a few seconds.
4. Return JP9 to normal setting short pins 1-2.
5. Connet ATX power cable back to connector P1.
6. Turn on the system power.
7. Press DEL during bootup to enter the BIOS Setup Utility and specify a new password, if needed.

☞ *If your system hangs or fails to boot because of over-clocking. Please clear CMOS and the system will go back to default setting. Except using JP9, you can also press <Insert> key to clear CMOS while system*

booting.

(15) CPU Mode setting (JP10)

Force CPU is safe mode (Safe-Mode is 1111)	Close
Use CPU Frequency	Open

Note: Default—Open
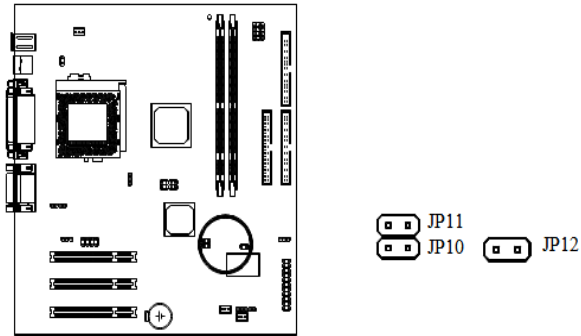
(16) Reboot Watchdog Timeout Speaker setting (JP11)

Enable	Open
Disable	Close

Note: Default—Open
The mainboard is set so that when the BIOS detects a hang (timeout) during bootup, the mainboard will automatically reboot in order to try rebooting again. If rebooting is repeating ineffectively, set this jumper to "No Reboot" so that auto-reboot will be disabled.

(17) Firm-Ware Hub setting (JP12)

Enable	Close
Disable	Open

Note: Default —Close

(18) CPU Host Freq. setting (JP13, JP14, JP15, JP16)

CPU	SDRAM	JP13	JP14	JP15	JP16
66MHz	100MB	2-3	2-3	2-3	2-3
100MHz	100MB	2-3	2-3	2-3	1-2
133MHz	133MB	2-3	2-3	1-2	2-3
133MHz	133MB	2-3	2-3	1-2	1-2
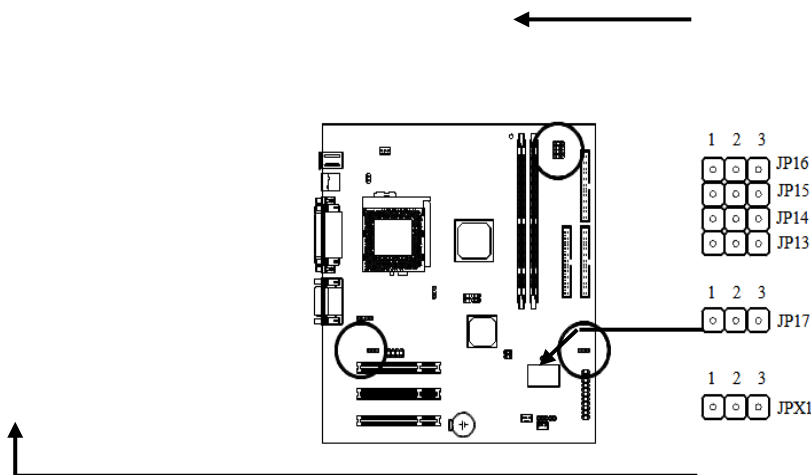
(19) Speaker Mode setting (JP17)

AC97SPKR	1-2
ICH_SPKR	2-3

Note: Default – Pin 2-3

(20) Audio Codec setting (JPX1)

The onboard audio CODEC may be enabled or disabled using all of these jumpers. Disable the onboard audio CODEC if you are using an ISA or PCI audio card on any of the expansion slots or a primary AMR on the AMR slot.

ON BOARD CODEC	1-2
AMR CODEC	2-3

Note: Default—2-3

(21) Front Panel Connector Pin Define (J18):

The control panel on the front bezel of the case indicates several computer activities and includes switches to change the activities' status. J18 is a 21 in header that provides interfaces for the following functions.
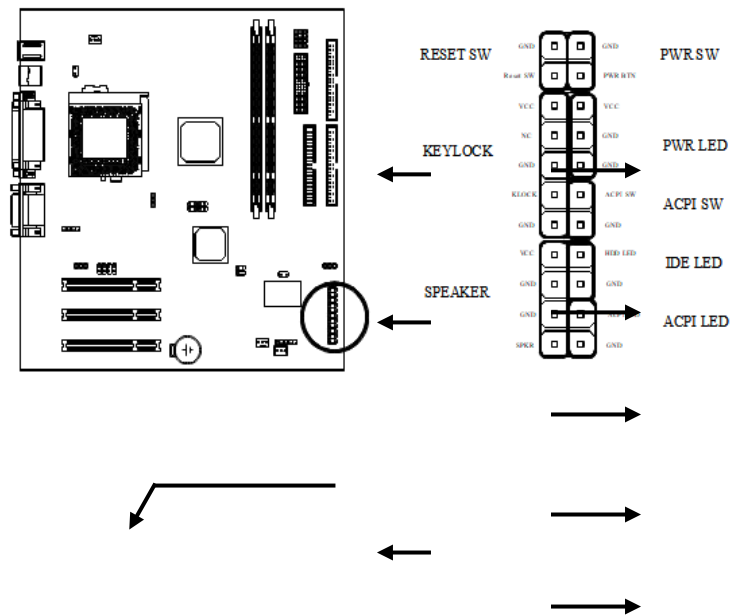
Reset Switch (RST):

The reset switch enables the user to reset the system without turning the main power switch off and then on. Orientation is not required when making a connection to this header.

Keylock and Power LED:

The power LED displays the status of the main power switch. When the keylock switch is closed, it will disable the keyboard function.

Speaker

The connector provides an interface to a speaker for audio output. An 8-ohm speaker is recommended.

Power Button (PWR SW):

    This connects to the "Power Button" on the mainboard. When switched once, it causes the mainboard to power on. When switched again, it causes the mainboard to power down.

ACPI/LED:

    This connector connects the operating system activity led on the controller panel. This led will keep flasing when the system is in suspend mode.

IDE Hard Disk Drive LED Connector:

    This connector connects the hard drive activity LED on the control panel. This LED flashes when the HDD is being accessed.

Installation of System RAM Modules

The mainboard provides three onboard DIMM sockets that support different settings for the system memory. The following figures and tables provide some examples of possible memory combinations.

System Memory Configuration

DIMM	1	2
Bank	0	1
RAM Type	SDRAM	SDRAM
Single RAM Module size (MB)	8/16/32/64/128/256	8/16/32/64/128/256

168Pin DIMM (3.3V)—PC100 SDRAM

Bank0 (DIMM1)	Bank1 (DIMM2)	Total Memory
8MB	-----	8MB
16MB	-----	16MB
32MB	-----	32MB
64MB	-----	64MB
128MB	-----	128MB
256MB	-----	256MB
8MB	8MB	16MB
16MB	8MB	24MB
32MB	8MB	40MB
64MB	8MB	72MB
128MB	8MB	136MB
256MB	8MB	264MB
16MB	16MB	32MB
32MB	16MB	48MB
64MB	16MB	80MB
128MB	16MB	144MB
256MB	16MB	272MB

32MB	32MB	64MB
64MB	32MB	96MB
128MB	32MB	160MB
256MB	32MB	288MB
64MB	64MB	128MB
128MB	64MB	192MB
256MB	64MB	192MB
128MB	128MB	256MB
256MB	128MB	384MB
256MB	256MB	512MB

Award BIOS Setup

Power on the system and the screen will display:

Hit <Del> to enter Setup

Hit the <Del> key and screen will display the main Setup screen.

The Main Menu allows you to choose from several setup functions and two exit choices. Use the arrow keys to select the items and press <Enter> to accept and enter a sub-menu.

Main Menu

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

Esc : Quit	↑ ↓ →← : Select Item
F10 : Save & Exit Setup	
Time, Date, Hard Disk Type...	

Standard CMOS Features

The **"STANDARD CMOS SETUP"** allows you to configure the system settings such as the current date and time, type of hard disk installed, floppy type, and display type. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

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STANDARD CMOS FEATURES

		Item Help
Date(mm:dd:yy)	: Jun 29 1999	Menu Level
Time(hh:mm:ss)	: 16:19:20	
IDE Primary Master	: Press Enter None	
IDE Primary Slave	: Press Enter None	Change the day, month, year and century
IDE Secondary Master	: Press Enter None	
IDI Secondary Slave	: Press Enter None	
Drive A	: 1.44M, 3.5 in	
Drive B	: None	
Floppy 3 Mode Support	: Disabled	
Video	: EGA/VGA	
Halt On	: All, But Keyboard	
Base Memory	: 640K	
Extended Memory	: 64512K	
Total Memory	: 65536K	

↑ ↓ → ← : Move   Enter: Select   +/-/PU/PD: Value   F10: Save   ESC: Exit

F1: General Help   F5: Previous Values   F6: Fail-safe defaults

F7: Optimized Defaults

Advanced BIOS Features

This section allows you to configure your system for basic operation. You have the opportunity to select the system default speed, boot-up sequence, keyboard operation, shadowing and security.

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ADVANCED BIOS FEATURES

Virus Warning	: Enabled	Item Help
CPU Internal Cache	: Enabled	
External Cache	: Enabled	Menu Level
CPU L2 Cache ECC Checking	: Enabled	
Quick Power On Self Test	: Disabled	Allows you to choose the VIRUS warning feature
First Boot device	: Floppy	for IDE Hard Disk boot sector protection. If this
Second Boot device	: HDD-0	function is enabled and someone attempt to write
Third Boot device	: LS/ZIP	data into this area, BIOS will show a warning
Boot other device	: Enabled	message on screen and alarm beep
Swap Floppy Drive	: Disabled	
Boot Up Floppy Seek	: 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	
OS Select For DRAM > 64MB	: Non-OS2	
Report No FDD For WIN 95	: No	

↑ ↓ → ← : Move   Enter: Select   +/-/PU/PD: Value   F10: Save   ESC: Exit

F1: General Help   F5: Previous Values   F6: Fail-safe defaults

F7: Optimized Defaults

Virus Warning

When this item is enabled, the Award BIOS will monitor the boot sector and partition table of the hard disk drive for any attempt of modification. If an attempt is made, the BIOS will

halt the system and the error message below will appear. Afterwards, if necessary, you will be able to run an anti-virus program to locate and remove the problem before any damage is done.

```
┌──────────────────────────────────────┐
│            ! WARNING !               │
│                                      │
│  Disk boot sector is going to be modified │
│                                      │
│  Type "Y" to accept writing or "N" to │
│                 abort                │
│                                      │
│         Award Software, Inc.         │
└──────────────────────────────────────┘
```

Enabled	Activates automatically when the system boots up and displays a warning message if anything attempts to access the boot sector or the hard disk partition table.
Disabled	No warning message will appear if anything attempts to access the boot sector or the hard disk partition table.

NOTE: Many disk diagnostic programs, which attempt to access the boot sector table, can cause the display of the above warning message. If you are running such a program, we recommend that you disable the Virus Protection beforehand.

CPU Internal Cache/External Cache

These two categories speed up the memory access. However, it depends on the CPU/chipset design. The default value is Enabled.

Enabled	Enables the cache
Disabled	Disables the cache

CPU L2 Cache ECC Checking

This item allows you to enable/disable CPU L2 Cache ECC checking.
The choice: Enabled, Disabled.

Quick Power On Self Test

This category speeds up the Power On Self-Test (POST) after you power up the computer. If it is set to Enabled, BIOS will shorten or skip some items checking during POST.

Enabled	Enables quick POST
Disabld	Normal POST

First/Second/Third/Other Boot Device

The BIOS attempts to load the operating system from the devices in the sequence selected in these items.

The choice: Floppy, LS/ZIP, HDD, SCSI, CDROM, NET, Disabled.

Swap Floppy Drive

If the system has two floppy drives, you can swap the logical drive name assignments.

The choice: Enabled/Disabled.

Boot Up Floppy Seek

Seeks disk drives during boot up. Disabling speeds boot up.

The choice: Enabled/Disabled.

Boot Up NumLock Status

Selects power on state for NumLock.

The choice: Enabled/Disabled.

Gate A20 Option

Select if chipset or keyboard controller should control Gate A20.

Normal	A pin in the keyboard controller controls Gate A20
Fast	Lets chipset control Gate A20

Typematic Rate Setting

Key strokes repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be selected.

The choice: Enabled/Disabled.

Typematic Rate (Chars/Sec)

When the typematic rate is enabled, this field allows you select the rate at which the keys are accelerated.

6	6 characters per second
8	8 characters per second
10	10 characters per second
12	12 characters per second
15	15 characters per second
20	20 characters per second
24	24 characters per second
30	30 characters per second

Typematic Delay (Msec)

When the typematic rate is enabled, this field allows you to select the delay between when the key was first depressed and when the acceleration begins.

250	250 msec
500	500 msec
750	750 msec
1000	1000 msec

Security Option

This category allows you to limit access to the system and Setup, or just to Setup.

System	The system does not boot and access to Setup is denied if the correct password is not entered at the prompt.
Setup	The system does boot, but access to Setup is denied if the correct password is not entered at the prompt.

Note: To disable the security option, select PASSWORD SETTING on the Main Menu; you will be asked to enter a password. Type nothing; just press <Enter> to disable the security. Once the security is disabled, the system will boot and you can enter Setup freely.

OS Select for DRAM > 64

This item allows you to access the memory that is over 64MB in OS/2.
The choice: Non-OS2, OS2.

Report No FDD For Win 95

Whether report no FDD for Win 95 or not.
The choice: Yes, No.

Advanced Chipset Features

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ADVANCED CHIPSET FEATURES

		Item Help
SDRAM CAS Latency Time	: 2	
SDRAM Cycle Time Tras/Trc	: 6/8	Menu Level
SDRAM Ras-to-CAS Delaly	: 2	
SDRAM Ras Precharge Time	: 2	
System BIOS Cacheable	: Disabled	
Video BIOS Cacheable	: Disabled	
Memory Hole at 15M-16M	: Disabled	
Delayed Transaction	: Enabled	
On-Chip Video Window Size	: 64MB	

↑ ↓ → ← : Move   Enter: Select   +/-/PU/PD: Value   F10: Save   ESC: Exit

F1: General Help   F5: Previous Values   F6: Fail-safe defaults

F7: Optimized Defaults

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as DRAM and the external cache. It also coordinates communications between the conventional ISA bus and the PCI bus. It must be stated that these items should never need to be altered. The default settings have been chosen because they provide the best operating conditions for your system. The only time you might consider making any changes would be if you discovered that data was being lost while using your system.

DRAM Settings

The first chipset settings deal with CPU access to dynamic random access memory (DRAM). The default timings have been carefully chosen and should only be altered if data is being lost. Such a scenario might well occur if your system had mixed

speed DRAM chips installed, so that greater delays may be required to preserve the integrity of the data held in the slower memory chips.

SDRAM CAS Latency Time

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.

The choice: 2, 3.

SDRAM Cycle Time Tras/Trc

Select the number of SCLKs for an access cycle.

The choice: 5/7, 6/8.

SDRAM RAS-to-CAS Delay

This field lets you insert a timing delay between the CAS and RAS strobe signals, used when DRAM is written to, read from, or refreshed. Fast gives faster performance; This field Applies only when synchronous DRAM is installed in the system.

The choice: 2, 3.

SDRAM RAS Precharge Time

If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain data. Fast gives faster performance; and Slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system.

The choice: 2, 3.

System BIOS Cacheable

Selecting *Enabled* allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

The choice: Enabled, Disabled.

Video BIOS Cacheable

Selecting *Enabled* allows caching of the system BIOS ROM at C0000h-F7FFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

The choice: Enabled, Disabled.

Memory Hole at 15M-16M

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. The user information of peripherals that need to use this area of system memory usually discusses their memory requirements.

The choice: Enabled, Disabled.

Delayed Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select *Enabled* to support compliance with PCI specification version 2.1.

The choice: Enabled, Disabled.

On-Chip Video Window Size

Select the on-chip video window size for VGA drive use.

The choice: 32MB, 64MB, Disabled.

Integrated Peripherals

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INTEGRATED PERIPHERALS

	Item Help
OnChip Primary PCI IDE : Enabled	
OnChip Secondary PCI IDE : Enabled	Menu Level
IDE Primary Master PIO : Auto	If your IDE hard drive suppots block mode select
IDE Primary Slave PI0 : Auto	Enabled for automatic detection of the optimal
IDE Secondary Master PI0 : Auto	number of block read/write per sector the drive
IDE Secondary Slave PI0 : Auto	can support
IDE Primary Master UDMA : Auto	
IDE Primary Slave UDMA : Auto	
IDE Secondary Master UDMA: Auto	
IDE Secondary Slave UDMA : Auto	
USB Controller : Enabled	
USB Keyboard Support : Disabled	
Init Display First : PCI Slot	
AC97 Audio : Auto	
AC97 Modem : Auto	
IDE HDD Block Mode : Enabled	
Power on Function : Button Only	
XKB Power on Password : Enter	
XHot Key Power on : Ctrl + F1	
Onboard FDC Controller : Enabled	
Onboard Serial Port 1 : 3F8/IRQ4	
Onboard Serial Port 2 : 2F8/IRQ3	
UART Mode Select : Normal	

XRXD , TXD Active	: Hi, Lo
XIR Transmittion delay	: Enabled
XUR2 Duplex Mode	: Half
Xuse IR Pins	: IR-Rx2Tx2
Onboard parallel Port	: 378/IRQ7
Parallel Port Mode	: SPP
XEPP Mode Select	: EPP1.7
XECP Mode use DMA	: 3
PWRON After PWR-Fail	: Off
Game Port Address	: 201
Midi Port Address	: 330
Midi Port IRQ	: 10

↑ ↓ → ← : Move   Enter: Select   +/-/PU/PD: Value   F10: Save   ESC: Exit

F1: General Help   F5: Previous Values   F6: Fail-safe defaults

F7: Optimized Defaults

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.

The choice: Enabled, Disabled.

IDE Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input / Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In *Auto* mode, the system automatically determines the best mode for each device.

The choice: Auto, Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

IDE Primary/Secondary Master/Slave UDMA

Ultra DMA)/33/66 lementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33/66 select Auto to enable BIOS support.

The choice: Auto, Disabled.

USB Controller

Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have USB peripherals.

The choice: Enabled, Disabled.

UBS Keyboard Support

Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.

The choice: Enabled, Disabled.

Init Display First

This item allows you to decide to active whether PCI Slot or on-chip VGA first.

The choice: PCI Slot, Onboard.

AC97 Audio/Modem

This item allows you to decide to enable/disable the 810 chipset family to support AC97 Audio/Modern.
The choice: Enabled, Disabled.

IDE HDD Block Mode

Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support.

The choice: Enabled, Disabled.

Onboard FDC Controller

Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install and-in FDC or the system has no floppy drive, select Disabled in this field.

The choice: Enabled, Disabled.

Onboard Serial Port 1/ Port 2

Select an address and corresponding interrupt for the first and second serial ports.

The choice: 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled, Auto.

Onboard Parallel Port

This item allows you to determine access onboard parallel port controller with which I/O address.

The choice: 378/IRQ7, 278/IRQ5, 3BC/IRQ7, Disabled.

Onboard Parallel Mode

Select an operating mode for the onboard parallel (printer) port. Select *SPP* unless you are certain your hardware and software both support one of the other available modes.

The choice: SPP, EPP, ECP, ECP+E PP.

Power Management Setup

The Power Management Setup allows you to configure you system to most effectively save energy while operating in a manner consistent with your own style of computer use.

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POWER MANAGEMENT SETUP

		Item Help
ACPI function	: Enabled	
ACPI Suspend Typ	: S3(STR)	Menu Level
Power Management	: User Define	
Video Off Method	: DPMS	
Video off In Suspend	: Yes	
Suspend Type	: PWRON Suspend	
MODEM Use IRQ	: 3	
Suspend Mode	: 4 Min	
HDD Power Down	: 2 Min	
Soft-off by PWR-BTTN	: Instant-off	
Wake-Up by PCI card	: Disabled	
Power On by Ring	: Enabled	
CPU THRM-Throttling	: 50.0%	
Resume by Alarm	: Disabled	
XDate (of month)	: 0	
XTime (hh:mm:ss)	: 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	

↑ ↓ → ← : Move   Enter: Select   +/-/PU/PD: Value   F10: Save   ESC: Exit

F1: General Help   F5: Previous Values   F6: Fail-safe defaults

F7: Optimized Defaults

ACPI Function

This item allows you to enable/disable the Advanced Configuration and Power Management (ACPI).

The choice: Enabled, Disabled.

Power Management

This category allows you to select the type (or degree) of power saving and is directly related to the following modes:

1. HDD Power Down

2. Doze Mode

3. Suspend Mode

There are four selections for Power Management, three of which have fixed mode settings.

Disable(default)	No power management. Disables all four modes
Min. Power Saving	Minimum power management. Doze Mode = 1 hr. Standby Mode = 1 hr., Suspend Mode = 1 hr., and HDD Power Down = 15 min.
Max. Power Saving	Maximum power management -- **ONLY AVAILABLE FOR SL CPU'S**. Doze Mode = 1 min., Standby Mode = 1 min., Suspend Mode = 1 min., and HDD Power Down = 1 min.
User Defined	Allows you to set each mode individually. When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

Video Off Method

This determines the manner in which the monitor is blanked.

V/H SYNC+Blank	This selection will cause the system to turn off the vertical and horizontal synchronization ports and writes blanks to the

	video buffer.
Blank Screen	This option only writes blanks to the video buffer.
DPMS	Select this option if your monitor supports the Display Power Management Signaling (DPMS) standard of the Video Electronics Standards to select video power management values.

Video Off In Suspend

This determines the manner in which the monitor is blanked.

The choice: Yes, No.

Suspend Type

Select the Suspend Type.

The choice: PWRON Suspend, Stop Grant.

MODEM Use IRQ

Name the interrupt request (IRQ) line assigned to the modem (if any) on your system. Activity of the selected IRQ always awakens the system.

The choice: 3, 4, 5, 7, 9, 10, 11, NA.

.

Suspend Mode

When enabled and after the set time of system inactivity, all devices except the CPU will be shut off.

The choice: Enabled, 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.

The choice: Enabled, Disabled.

Soft-Off by PWRBTN

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has "hung".

The choice: Delay 4 Sec, Instant-Off.

CPU THRM-Throttling
Select the CPU THRM-Throttling rate.

The choice: 25.0%, 37.5%, 50.0%, 62.5%, 75.0%, 87.5%.

PM Events
PM events are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such a mode. In effect, the system remains alert for anything which occurs to a device which is configured as Enabled, even when the system is in a power down mode.

Primary IDE 0

Primary IDE 1

Secondary IDE 0

Secondary IDE 1

FDD, COM, LPT Port

PCI PIRQ [A-D]#

PNP/PCI Configurations

This section describes configuring the PCI bus system. PCI, or **P**ersonal **C**omputer **I**nterconnect, is a system which allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its own special components.

This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

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PNP/PCI CONFIGURATION

Reset Configuration Data : Disabled	Item Help
Resources Controlled By : Auto(ESCD) IRQ Resources : Press Enter PCI/VGA Palette Snoop : Disabled	Menu Level Default is Disabled. Select Enabled to reset Extended System Configuration Data(ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot

↑ ↓ → ← : Move   Enter: Select   +/-/PU/PD: Value   F10: Save   ESC: Exit

F1: General Help   F5: Previous Values   F6: Fail-safe defaults

F7: Optimized Defaults

PNP OS Installed

This item allows you to determine install PnP OS or not.

The choice: Yes, No.

Reset Configuration Data

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system can not boot.

The choice: Enabled, Disabled.

Resource controlled by

The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as

Windows®95. If you set this field to "manual" choose specific resources by going into each of the sub menu that follows this field (a sub menu is preceded by a "➤".

The choice: Auto (ESCD), Manual.

IRQ Resources

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

IRQ 3/4/5/7/9/10/11/12/14/15 assigned to

This item allows you to determine the IRQ assigned to the ISA bus and is not available to any PCI slot. Legacy ISA for devices compliant with the original PC AT bus specification, PCI/ISA PnP for devices compliant with the Plug and Play standard whether designed for PCI or ISA bus architecture.

The choice: Legacy ISA and PCI/ISA PnP.

PCI/VGA Palette Snoop

Leave this field at Disabled.

The choice: Enabled, Disabled.

Frequency/Voltage Control

FREQUENCY/VOLTAGE CONTROL

	Item Help
Auto Detect DIMM/PCI Clk : Enabled Spread Spectrum : Disabled Host CPU/DIMM/PCI Clock : Default CPU Clock Ratio : X4	Menu Level

↑ ↓ → ← : Move   Enter: Select   +/-/PU/PD: Value   F10: Save   ESC: Exit

F1: General Help   F5: Previous Values   F6: Fail-safe defaults

F7: Optimized Defaults

Supervisor/User Password Setting

You can set either the supervisor or the user password, or both of them. The differences are:

Supervisor password : an enter and change the options of the setup menus.

User password   : just can only enter but do not have the right to change the options of

        the setup menus. When you select this function, the following

        message will appear at the center of the screen to assist you in

        creating a password.

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

        ENTER PASSWORD:

Type the password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from the CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

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

        PASSWORD DISABLED.

When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents any unauthorized user from changing any part of your system configuration.

Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted. This would prevent any unauthorized use of your computer.

You determine when the password is required within the BIOS Features Setup Menu and its Security option. If the Security option is set to **"System"**, the password will be required both at boot and at entry to Setup. If set to **"Setup"**, the prompting only occurs when trying to enter Setup.

Exit Selecting

Save & Exit Setup

Pressing Saves the CMOS value changes to CMOS and exits setup.

Save to CMOS and EXIT (Y/N)?   Y

Pressing "Y" stores the selections made in the menus in CMOS –a special section of memory that stays on after you turn your system off. The next time you boot your computer, the BIOS configures your system according to the Setup selections stored in CMOS. After saving the values the system is restarted again.

Exit Without Saving

Pressing ‹Enter› on this item asks for confirmation:

Quit without saving (Y/N)?   Y

This allows you to exit Setup without storing in CMOS any change. The previous selections remain in effect. This exits the Setup utility and restarts your computer.