

451-011400100
REVISION:D

EXP8561

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RMA FORM

CHAPTER 1 INTRODUCTION

1.1 OVERVIEW

The *EXP8561* is complemented by a 512K second-level Write-Back cache providing workstation level computing performance, and SIMM sockets support up to 128MB of DRAM.

The *EXP8561* motherboard offers outstanding I/O capabilities. Four PCI Local Bus slots provide a high bandwidth data path for data-movement intensive function such as Graphics. Four ISA slots complete the I/O mix.

The *EXP8561* motherboard provides the foundation for cost effective, high performance, highly expandable platforms which deliver the latest *EXP8561* in CPU and I/O technologies.

1.2 SYSTEM FEATURES

- Supports INTEL PENTIUM 75/90/100/120/133/150/166/200 MHZ CPU,
CYRIX 6x86-120*(100MHZ)/ 6x86-133*(110MHZ)/6x86-150*(120MHZ)/6x86-166*(133MHZ)
AMD 5x86-P75/5x86-P90/5x86-P100 CPU
- Supports 4 MASTER 32-bit PCI Bus
- Supports L1/L2 Write Back/Write Through Cache Feature
- Supports 256KB/512KB Cache Size
- Supports 72 pin SIMM MODULES
- Supports 2 Serial 1 Parallel 1 FDC on board
- Supports 2 Channels PCI IDE on board
- Supports MESI Protocol (Modified Exclusive Shared Invalid) to maintain the data coherence for L2 Cache to optimize CPU bus utilization.

1.3 SYSTEM SPECIFICATIONS

Processor: INTEL PENTIUM 75/90/100/120/133/150/166/200 MHZ CPU
CYRIX 6x86-120⁺(100MHZ)/6x86-133⁺(110MHZ)/
6x86-150⁺(120MHZ)/ 6x86-166⁺(133MHZ) CPU
AMD 5x86-P75/5x86-P90/5x86-P100 CPU

CPU Clock: 50/55/60/66 MHZ CPU

Memory: 2MB to 128MB

SRAM Configuration: 256K/512K

BIOS Subsystem: AWARD BIOS

Additional BIOS Feature: Set Program Resides in ROM

I/O Subsystem No. Slot: Four 16-bit ISA Bus
Four 32-bit PCI Bus

Dimension: 26x22 cm

Additional Features

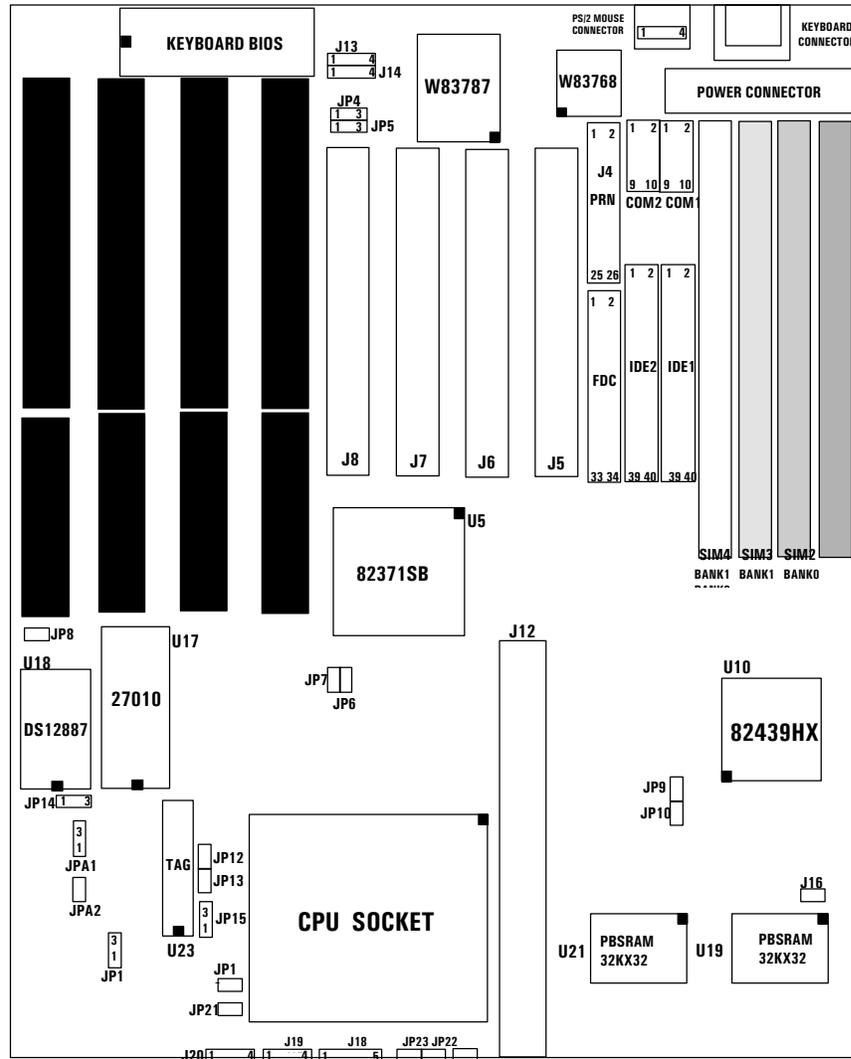
Miscellaneous Connectors: Reset Button, Internal Battery

Board Design: 4-layer Implementation for Low Noise Operation

1.4 SYSTEM PERFORMANCE

SOFTWARE CPU TYPE	LANDMARK V2.0	POWER METER V1.8 MIPS	NORTON V8.0 CPU SPEED
PENTIUM 75	433.85 MHz	36.9 MIPS	238.2
PENTIUM 90	526.85 MHz	45.1 MIPS	289.2
PENTIUM 100	578.51 MHz	49.9 MIPS	317.6
PENTIUM 120	702.43 MHz	61.8 MIPS	385.6
PENTIUM 133	771.33 MHz	67.7 MIPS	423.5
PENTIUM 150	878.06 MHz	76.9 MIPS	482.1
PENTIUM 166	964.19 MHz	83.6 MIPS	529.3
PENTIUM 200	1157.04 MHz	94.8 MIPS	635.2
CYRIX 6x86-120 ⁺ (100MHZ)	1209.95 MHz	67.7 MIPS	680.3
CYRIX 6x86-133 ⁺ (110MHZ)	1353.98 MHz	74.8 MIPS	761.2
CYRIX 6x86-150 ⁺ (120MHZ)	1469.25 MHz	81.3 MIPS	826
CYRIX 6x86-166 ⁺ (133MHZ)	1613.31 MHz	84.3 MIPS	907
AMD 5x86-P75	673.26 MHz	39.0 MIPS	297.7
AMD 5x86-P90	817.55 MHz	47.4 MIPS	361.5
AMD 5x86-P100	892.56 MHz	56.9 MIPS	394.7

1.5 EXP8561 BOARD LAYOUT



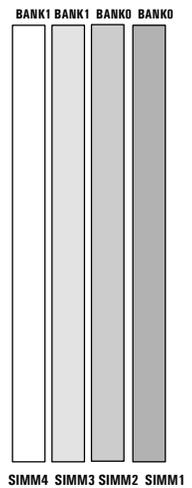
CHAPTER 2 INSTALLATION

Before the system is ready to operate, the hardware must be set up for various functions of the system. To set up the *EXP8561* motherboard is a simple task. The user only has to set a few jumpers, connectors and sockets.

2.1 DRAM INSTALLATION

The *EXP8561* motherboard can support expanded memory from 2MB to 128MB.

■ The board layout below shows the locations of the DRAM memory banks:



DRAM INSTALLATION

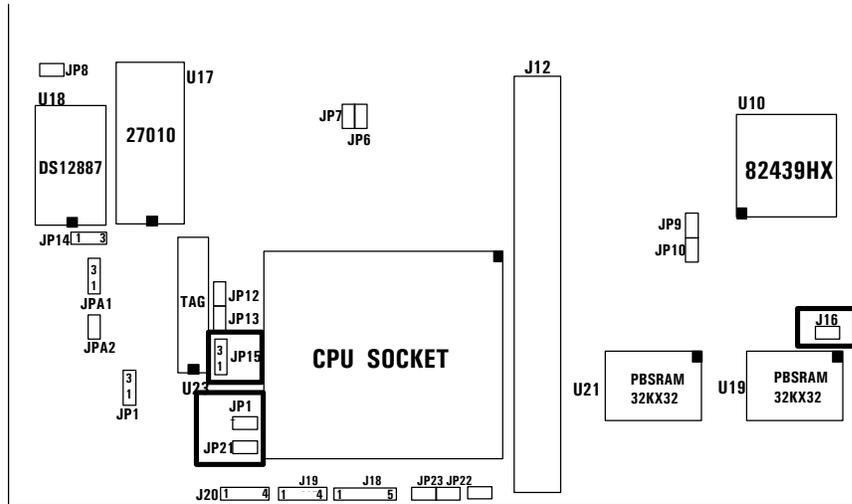
$$\boxed{\text{SIMM1} + \text{SIMM2}} + \boxed{\text{SIMM3} + \text{SIMM4}} = \boxed{\text{TOTAL}}$$

Each group includes two SIMMs each SIMM size can be 1, 2, 4, 8, 16, 32MB, please install the same DRAM size in one group.

■ TABLE (SIMM)

BANK 0		BANK 1		TOTAL MEMORY
SIMM1	SIMM2	SIMM3	SIMM4	
4MB	4MB	None	None	8MB
4MB	4MB	4MB	4MB	16MB
8MB	8MB	None	None	16MB
4MB	4MB	8MB	8MB	24MB
8MB	8MB	4MB	4MB	24MB
8MB	8MB	8MB	8MB	32MB
16MB	16MB	None	None	32MB
4MB	4MB	16MB	16MB	40MB
16MB	16MB	4MB	4MB	40MB
8MB	8MB	16MB	16MB	48MB
16MB	16MB	8MB	8MB	48MB
16MB	16MB	16MB	16MB	64MB
32MB	32MB	None	None	64MB
4MB	4MB	32MB	32MB	72MB
32MB	32MB	4MB	4MB	72MB
8MB	8MB	32MB	32MB	80MB
32MB	32MB	8MB	8MB	80MB
16MB	16MB	32MB	32MB	96MB
32MB	32MB	16MB	16MB	96MB
32MB	32MB	32MB	32MB	128MB

2.2 SRAM INSTALLATION



CACHE SIZE CONFIGURATION

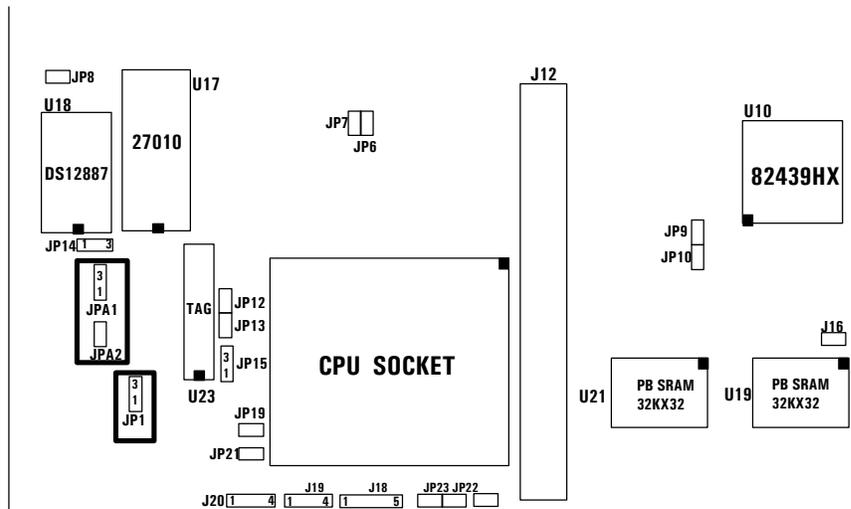
♣ 256K		512K	
TAG RAM	DATA RAM	TAG RAM	DATA RAM
U23 8KX8, 16KX8, 32KX8	U19, U21 32KX32	U23 16KX8, 32KX8	U19, U21, J12 32KX32
 JP15	 JP19	 JP19	 JP21

♣ Default setting

2.3 CPU TYPE JUMPER SETTING

CPU TYPE	JUMPER SETTING
AMD 5x86-P75/PENTIUM 75MHZ	JP9 JP10 JP23 JP22
AMD 5x86-P90/PENTIUM 90MHZ	JP9 JP10 JP23 JP22
AMD 5x86-P100/PENTIUM 100MHZ	JP9 JP10 JP23 JP22
INTEL PENTIUM 120MHZ	JP9 JP10 JP23 JP22
INTEL PENTIUM 133MHZ	JP9 JP10 JP23 JP22
INTEL PENTIUM 150MHZ	JP9 JP10 JP23 JP22
INTEL PENTIUM 166MHZ	JP9 JP10 JP23 JP22
INTEL PENTIUM 200MHZ	JP9 JP10 JP23 JP22
CYRIX 6x86-120+(100MHZ)	JP9 JP10 JP23 JP22
CYRIX 6x86-133+(110MHZ)	JP9 JP10 JP23 JP22
CYRIX 6x86-150+(120MHZ)	JP9 JP10 JP23 JP22
CYRIX 6x86-166+(133MHZ)	JP9 JP10 JP23 JP22
INTEL PENTIUM MMX 166MHZ	JP9 JP10 JP23 JP22 JP18 JPA1 JPA2
INTEL PENTIUM MMX 200MHZ	JP9 JP10 JP23 JP22 JP18 JPA1 JPA2
CYRIX 6x86-166+(133MHZ) (Dual Voltage)	JP9 JP10 JP23 JP22 JP18 JPA1 JPA2

2.4 CPU I/O & CPU CORE VOLTAGE SELECT



CPU I/O VOLTAGE SELECT

The jumper setting is only for Dual Voltage CPU (INTEL P55C etc..)

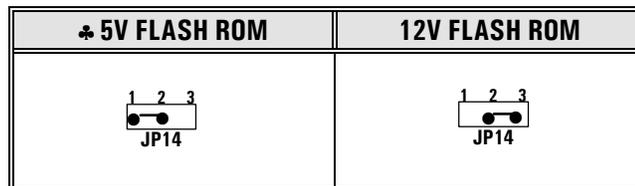
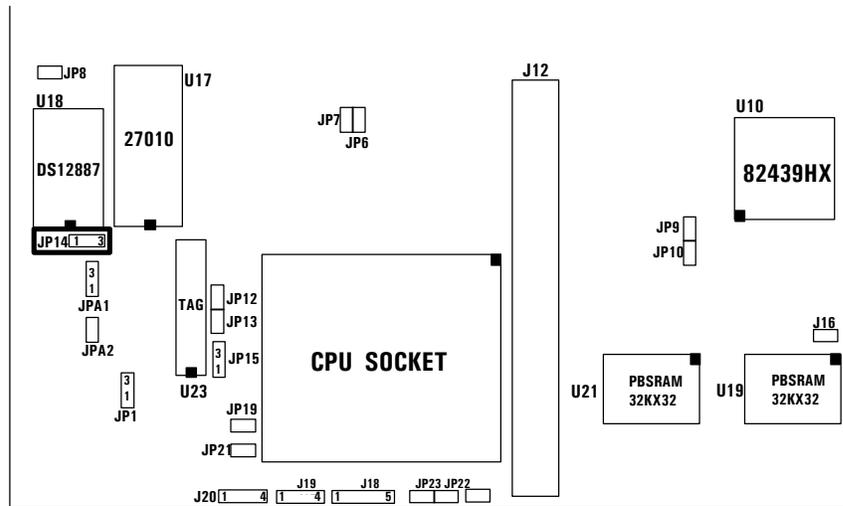
3.3V	3.45V	♣ Normal CPU (Single Voltage)

CPU CORE VOLTAGE SELECT

2.9V	♣ 3.3V	3.45V ~ 3.6V

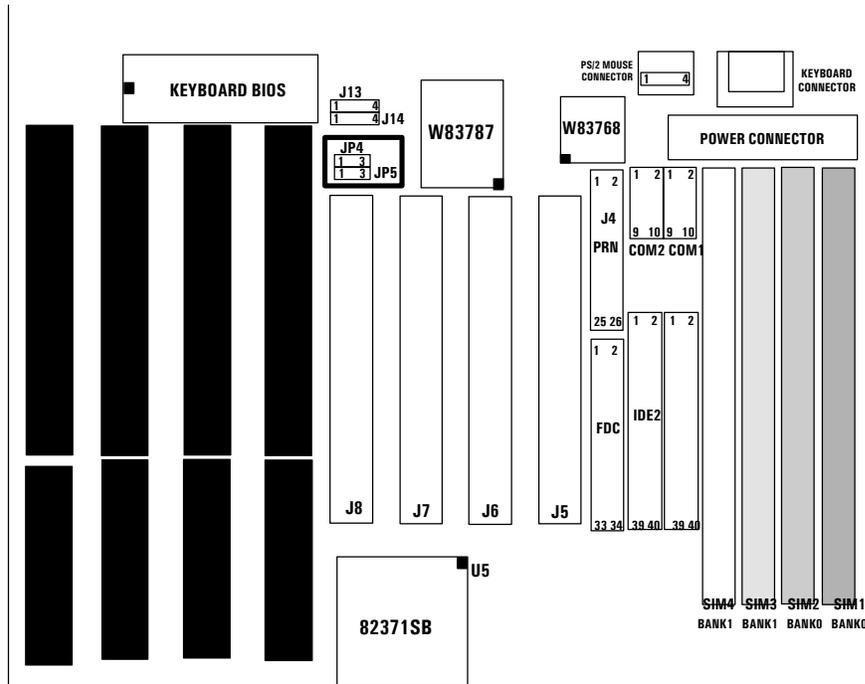
♣ Default setting

2.5 FLASH ROM INSTALLATION

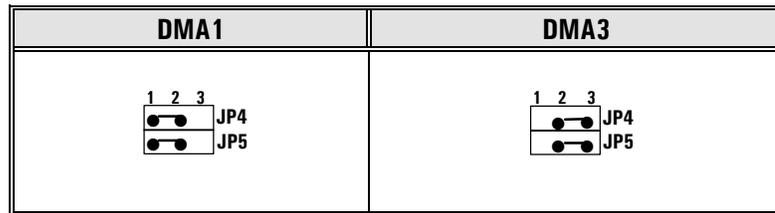


♣ Default Setting

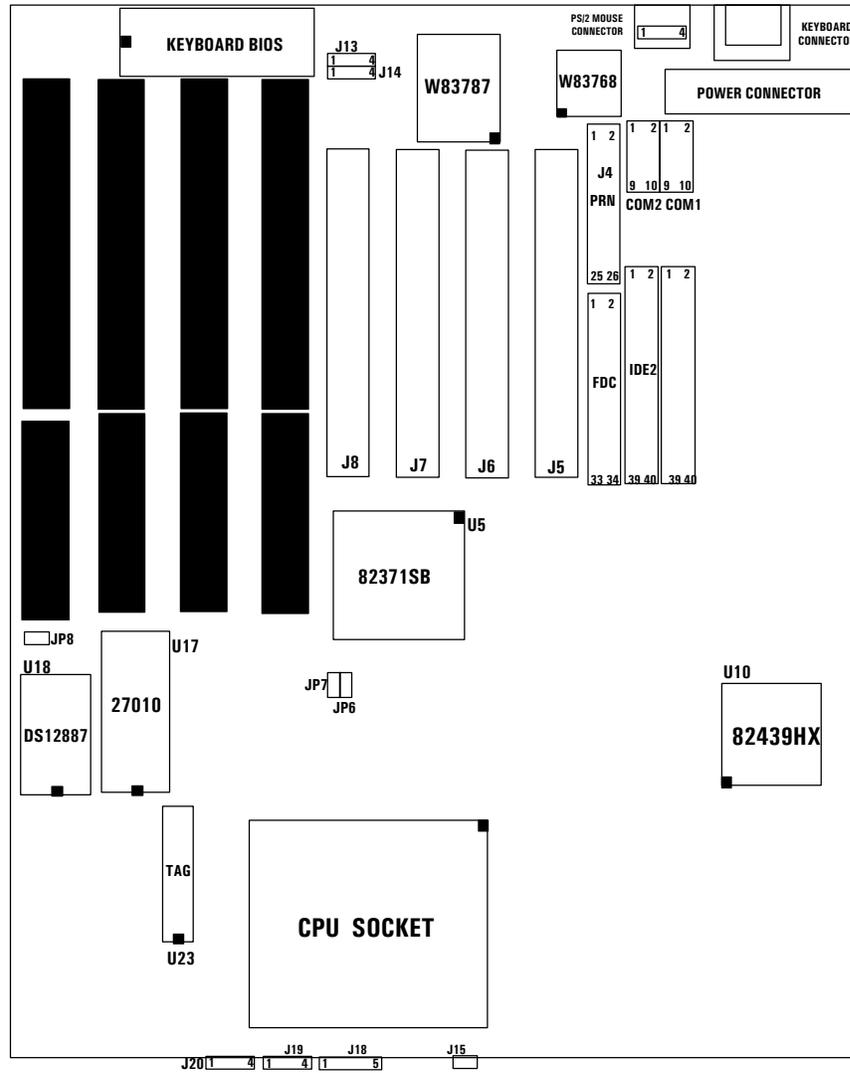
2.6 EPP MODE SETTING



DMA CHANNEL CONFIGURATION (FOR EPP DEVICE)



2.7 OTHER JUMPER & CONNECTOR INSTALLATION



OTHER JUMPER DESCRIPTION

JUMPER	DESCRIPTION	
JP6	<input type="checkbox"/> NORMAL MODE	<input checked="" type="checkbox"/> SMI MODE
JP7	<input type="checkbox"/> AT BUS CLOCK EQUAL PCICLK/3 (FOR FREQUENCY 50MHZ)	<input checked="" type="checkbox"/> AT BUS CLOCK PCICLK/4 ♣ (FOR FREQUENCY 60, 66MHZ)
JP8	<input type="checkbox"/> NORMAL	<input checked="" type="checkbox"/> CLEAR CMOS

♣ Default Setting

CONNECTOR DESCRIPTION

CONNECTOR	PIN OUT	SIGNAL NAME
J13, J14 USB CONNECTOR	1	+5V DC
	2	DATA OUT
	3	DATA OUT
	4	GROUND
J15 RESET	1	GROUND
	2	RESET IN
J18 KEYLOCK CONNECTOR	1	VCC
	2	NC
	3	GROUND
	4	KEYBOARD INHIBITOR
	5	GROUND
J19 SPEAKER CONNECTOR	1	DATA LINE
	2	NC
	3	GROUND
	4	+5V DC
J20 IDE_LED	1	+5V DC
	2	DATA OUT
	3	DATA OUT
	4	+5V DC
PS/2 MOUSE CONNECTOR	1	DATA
	2	DATA
	3	GROUND
	4	VCC

CHAPTER 3

SYSTEM BIOS SETUP

The section will explain how to set up the system configuration (CMOS) under the AWARD BIOS. The SETUP program is contained in the system's Read-Only-Memory rather than on a diskette.

3.1 ENTERING SETUP

Power on the computer and press immediately will allow you to enter Setup. The other way to enter Setup is to power on the computer, when the below message appears briefly at the bottom of the screen during the (Power On Self Test), press key or simultaneously press <Ctrl>, <Alt>, and <Esc> keys.

TO ENTER SETUP BEFORE BOOT PRESS <CTRL-ALT-ESC> OR KEY

If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to,

PRESS <F1> TO CONTINUE, <CTRL-ALT-ESC> OR TO ENTER SETUP

3.2 CONTROL KEYS

Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item in the left hand
Right arrow	Move to the item in the right hand
Esc key	Main Menu -- Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu -- Exit current page and return to Main Menu
PgUp / "+" key	Increase the numeric value or make changes
PgDn / "-" key	Decrease the numeric value or make changes
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu
(Shift)F2 key	Change color from total 16 colors. F2 to select color forward, (Shift) F2 to select color backward
F3 key	Reserved
F4 key	Reserved
F8 key	Reserved
F9 key	Reserved
F10 key	Save all the CMOS changes, only for Main Menu

3.3 GETTING HELP

- *Main Menu*

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu/Option Page Setup Menu

Press **F1** to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press **<F1>** or **<Esc>**.

3.4 THE MAIN MENU

Once you enter AWARD BIOS CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from ten setup functions and two exit choices. Use arrow keys to select among the items and press **<Enter>** to accept or enter the sub-menu.

ROM PCI/ISA BIOS
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	HDD LOW LEVEL FORMAT
LOAD BIOS DEFAULTS	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
Esc : Quit	↑↓→← : Select Item
F10 : Save & Exit Setup	(Shift) F2 : Change Color
Time, Date, Hard Disk Type...	

- *Standard CMOS Setup*

This setup page includes all the items in a standard compatible BIOS.

- *BIOS Features Setup*

This setup page includes all the items of Award special enhanced features.

- *Chipset Features Setup*

This setup page includes all the items of chipset special features.

- *Power Management Setup*

This category determines how much power consumption for system after selecting below items. Default value is Disable.

- *PNP/PCI Configuration Setup*

This category specifies the value (in units of PCI bus clocks) of the latency timer for this PCI bus master and the IRQ level for PCI device.

- *Load BIOS Defaults*

BIOS defaults indicates the most appropriate value of the system parameter which the system would be in minimum performance. The OEM manufacturer may change the defaults through MODBIN before the binary image burn into the ROM.

- *Load Setup Defaults*

Chipset defaults indicates the values required by the system for the maximum performance. The OEM manufacturer may change to defaults through MODBIN before the binary image burn into the ROM.

- *User Password*

Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.

- *IDE HDD Auto Detection*

Automatically configure hard disk parameters.

- *Save & Exit Setup*

Save CMOS value changes to CMOS and exit setup.

- *Exit Without Save*

Abandon all CMOS value changes and exit setup.

3.5 STANDARD CMOS SETUP MENU

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes no, one or more than one setup items. 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.

ROM PCI/ISA BIOS
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Date (mm:dd:yy)	:	Wed, Jun 25 1996							
Time (hh:mm:ss)	:	10:21:21							
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDE	SECTOR	MODE	
Primary Master	: Auto	0	0	0	0	0	0	AUTO	
Primary Slave	: Auto	0	0	0	0	0	0	AUTO	
Secondary Master	: Auto	0	0	0	0	0	0	AUTO	
Secondary Slave	: Auto	0	0	0	0	0	0	AUTO	
Drive A		: 1.44M, 3.5 in.							
Drive B		: None							
Video	: EGA/VGA								
Halt On	: All Errors								
		Base Memory		: 640K					
		Extended Memory		: 15360K					
		Other Memory		: 384K					
		Total Memory		: 16384K					
ESC: Quit		↑↓→←: Select Item			PU / PD /+ /- : Modify				
F1 : Help		(Shift)F2: Change Color							

- **Date**

The date format is <day>, <date> <month> <year>. Press <F3> to show the calendar.

DAY	The day of week, from Sun to Sat, determined by the BIOS, is read only
DATE	The date, from 1 to 31 (or the maximum allowed in the month), can key in the numerical / function key
MONTH	The month, Jan through Dec.
YEAR	The year, depend on the year of BIOS

- **Time**

The time format is <hour> <minute> <second>. which accepts both function key or numerical key The time is calculated based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

- **Drive C Type/Drive D Type**

The categories identify the types of hard disk drive C or drive D that have been installed in the computer. There are 45 predefined types and 2 user definable types are for Normal BIOS.. Type 1 to Type 45 are predefined. Type User is user-definable.

- **Primary Master/Primary Slave/Secondary Master/Secondary Slave**

The categories identify the types of 2 channels that have been installed in the computer. There are 45 predefined types and 4 user definable types are for Enhanced IDE BIOS. Type 1 to Type 45 are predefined. Type User is user-definable.

Press PgUp/< + > or PgDn/< - > to select a numbered hard disk type or type the number and press <Enter>. Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category. If your hard disk drive type is not matched or listed, you can use Type User to define your own drive type manually.

If you select Type User, related information is asked to be entered to the following items. Enter the information directly from the keyboard and press <Enter>. This information should be provided in the documentation from your hard disk vendor or the system manufacturer.

If the controller of HDD interface is ESDthe selection shall be "Type 1".

If the controller of HDD interface is SCSIthe selection shall be "None".

If the controller of HDD interface is CD-ROMthe selection shall be "None".

CYLS.	Number of Cylinders
HEADS	Nnumber of Heads
PRECOMP	Write Precom
LANDZONE	Landing Zone
SECTORS	Nnumber of Sectors
MODE	HDD Aaccess Mode

If a hard disk has not been installed select NONE and press <Enter>.

- **Drive A Type/Drive B Type**

The category identifies the types of floppy disk drive A or drive B that have been installed in the computer.

NONE	NO FLOPPY DRIVE INSTALLED
360K, 5-1/4 inch	5-1/4 inch PC-type standard drive; 360 kilobyte capacity
1.2M, 5-1/4 inch	5-1/4 inch AT-type high-density drive; 1.2 megabyte capacity
720K, 3-1/2 inch	3-1/2 inch double-sided drive; 720 kilobyte capacity
1.44M, 3-1/2 inch	3-1/2 inch double-sided drive; 1.44 megabyte capacity
2.88M, 3-1/2 inch	3-1/2 inch double-sided drive; 2.88 megabyte capacity

- **Video**

The category selects the type of adapter used for the primary system monitor that must match your video display card and monitor. Although secondary monitors are supported, you do not have to select the type in Setup.

You have two ways to boot up the system:

1. When VGA as primary and monochrome as secondary, the selection of the video tape is "VGA Mode".

2. When monochrome as primary and VGA as secondary, the selection of the video type is "Monochrome mode".

EGA/VGA	Enhanced Graphics Adapter/video Graphics Array. For EGA, VGA, SEGA, or PGA monitor adapters.
CGA 40	Color Graphics Adapter, power up in 40 column mode
CGA 80	Color Graphics Adapter, power up in 80 column mode
MONO	Monochrome adapter, includes high resolution monochrome adapters

- **Error Halt**

The category determines whether the computer will stop if an error is detected during power up.

No errors	Whenever the BIOS detects a non-fatal error the system will be stopped and you will be prompted.
All errors	The system boot will not be stopped for any error that may be detected.
All, But Keyboard	The system boot will not stop for a keyboard error; it will stop for all other errors.
All, But Diskette	The system boot will not stop for a disk error; it will stop for all other errors.
All, But Disk/Key	The system boot will not stop for a keyboard or disk error; it will stop for all other errors.

- **Memory**

The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

Base Memory

The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system. The value of the base memory is typically 512K for systems with 512K memory installed on the motherboard, or 640K for systems with 640K or more memory installed on the motherboard.

Extended Memory

The BIOS determines how much extended memory is present during the POST. This is the amount of memory located above 1MB in the CPU's memory address map.

Other Memory

This refers to the memory located in the 640K to 1024K address space. This is memory that can be used for different applications. DOS uses this area to load device drivers to keep as much base memory free for application programs. Most use for this area is Shadow RAM.

- **Total Memory**

System total memory is the sum of basic memory, extended memory, and other memory.

3.6 BIOS FEATURES SETUP MENU

ROM PCI/ISA BIOS
BIOS FEATURES SETUP
AWARD SOFTWARE, INC.

Virus Warning	: Disabled	Video BIOS Shadow	: Enabled
CPU Internal Cache	: Enabled	C8000-CBFFF Shadow	: Disabled
External Cache	: Enabled	CC000-CFFFF Shadow	: Disabled
Quick Power On Self Test	: Disabled	D0000-D3FFF Shadow	: Disabled
Boot Sequence	: A ,C	D4000-D7FFF Shadow	: Disabled
Swap Floppy Drive	: Disabled	D8000-DBFFF Shadow	: Disabled
Boot Up Floppy Seek	: Enabled	DC000-DFFFF Shadow	: Disabled
Boot Up NumLock Status	: On		
Boot Up System Speed	: High		
Gate A20 Option	: Fast		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250		
Security Option	: Setup		
PCI/VGA Palette Snoop	: Disabled		
OS Select For DRAM > 64MB	: Non-OS2		
		ESC : Quit	↑ ↓ → ← : Select Item
		F1 : Help	PU/PD/+/=: Modify
		F5 : Old Values	(Shift) F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

- **Virus Warning**

This category flashes on the screen. During and after the system boots up, any attempt to write to the boot sector or partition table of the hard disk drive will halt the system and the following error message will appear, in the mean time, you can run an anti-virus program to locate the problem.

! WARNING !
Disk boot sector is to be modified Type "Y" to accept write or "N" to abort write
Award Software, Inc.

ENABLED	Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.
DISABLED	No warning message to appear when anything attempts to access the boot sector or hard disk partition table.

Note: This function is available only for DOS and other OSES that do not trap INT13.

- ***CPU Internal Cache/External Cache***

These two categories speed up memory access. However, it depends on CPU/chipset design. The default value is Enable. If your CPU without Internal Cache then this item "CPU Internal Cache" will not be show.

Enabled	Enable cache
Disabled	Disable cache

- ***Quick Power On Self Test***

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

Enabled	Enable quick POST
Disabled	Normal POST

- ***Boot Sequence***

This category determines which drive computer searches first for the disk operating system (i.e., DOS). Default value is A,C.

C,A	System will first search for hard disk drive then floppy disk drive.
A,C	System will first search for floppy disk drive then hard disk drive.

Note: This function is only available for IDE type
For SCSI type is always boot from A.

- ***Boot Up Floppy Seek***

During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360K type is 40 tracks while 760K, 1.2M and 1.44M are all 80 tracks.

Enabled	BIOS searches for floppy disk drive to determine if it is 40 or 80 tracks. Note that BIOS can not tell from 720K, 1.2M or 1.44M drive type as they are all 80 tracks.
Disabled	BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360K.

- ***Boot Up NumLock Status***

The default value is On.

On	Keypad is number keys
Off	Keypad is arrow keys

- **Boot Up System Speed**

It selects the default system speed - the speed that the system will run at immediately after power up.

High	Set the speed to high
Low	Set the speed to low

- **IDE HDD Block Mode**

Enabled	Enable IDE HDD Block Mode. The BIOS will detect the block size of the HDD and send block command automatically.
Disabled	Disable IDE HDD Block Mode

- **Gate A20 Option**

Normal	The A20 signal is controlled by keyboard controller or chipset hardware.
Fast	Default : Fast. The A20 signal is controlled by Port 92 or chipset specific method.

- **Typematic Rate Setting**

This determines the typematic rate

Enabled	Enable typematic rate and typematic delay programming
Disabled	Disable typematic rate and typematic delay programming. The system BIOS will use default value of this 2 items and the default is controlled by keyboard.

- **Typematic Rate (Chars/Sec)**

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 holding a key, the time between the first and second character displayed.

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

Note: To disable security, select **PASSWORD SETTING** at Main Menu and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter Setup freely.

- **System BIOS Shadow**

It determines whether system BIOS will be copied to RAM or the system BIOS is always shadow to support LBA HDD.

Enabled	System shadow is enabled
Disabled	System shadow is disabled

- **Video BIOS Shadow**

It determines whether video BIOS will be copied to RAM, however, it is optional from chipset design. Video Shadow will increase the video speed.

Enabled	Video shadow is enabled
Disabled	Video shadow is disabled

3.7 CHIPSET FEATURES SETUP

ROM PCI/ISA BIOS
 CHIPSET FEATURES SETUP
 AWARD SOFTWARE, INC.

Auto Configuration	: Enabled	Memory Parity/ECC Check	: Auto
DRAM Timing	: 70 ns	Single Bit Error Report	: Enabled
DRAM RAS# Precharge Time	: 4	L2 Cache Cacheable Size	: 64MB
DRAM R/W Leadoff Timing	: 7/6	Chipset NA# Asserted	: Enabled
Fast RAS# To CAS# Delay	: 3	Pipeline Cache Timing	: Faster
DRAM Read Burst (EDO/FPM)	: x333/x444		
DRAM Write Burst Timing	: x333		
Trubo Read Leadoff	: Disabled		
DRAM Speculative Leadoff	: Disabled		
Turn-Around Insertion	: Disabled		
ISA Clock	: PCICLK/3		
System BIOS Cacheable	: Disabled		
Video BIOS Cacheable	: Disabled		
8 Bit I/O Recovery Time	: 1		
16 Bit I/O Recovery Time	: 1	ESC	: Quit ↑↓→← : Select
Memory Hole At 15M-16M	: Disabled	F1	: Help PUPD +/- : Modify
Peer Concurrency	: Enabled	F5	: Old Values (Shift)F2 : Color
Chipset Special Features	: Enabled	F6	: Load BIOS Defaults
DRAM ECC/PARITY Select	: Parity	F7	: Load Setup Defaults

3.8 POWER MANAGEMENT SETUP

The Power management setup will appear on your screen like this:

ROM PCI/ISA BIOS POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.	
Power Management : Disable	** Power Down & Resume Events **
PM Control by APM : Yes	IRQ3 (COM2) : ON
Video Off Method : V/H SYNC+ Blank	IRQ4 (COM1) : ON
MODEM Use IRQ : 3	IRQ5 (LPT2) : ON
Doze Mode : Disable	IRQ6 (Floppy Disk) : ON
Suspend Mode : Disable	IRQ7 (LPT1) : ON
HDD Power Down : Disable	IRQ8 (RTC Alarm) : OFF
** Wake Up Events In Doze & Standby **	IRQ9 (IRQ2 Redir) : ON
IRQ3 (Wake-up Event) : ON	IRQ10 (Reserved) : ON
IRQ4 (Wake-up Event) : ON	IRQ11 (Reserved) : ON
IRQ8 (Wake-up Event) : OFF	IRQ12 (PS/2 Mouse) : ON
IRQ12 (Wake-up Event) : ON	IRQ13 (Coprocessor : ON)
	IRQ14 (Hard Disk) : ON
	IRQ15 (Reserved) : ON
	ES : Quit ↑↓→← : Select
	C
	F1 : Help PU / PD / + / - : Modify
	F5 : Old (Shift)F2 : Color
	Values
	F6 : Load BIOS Defaults
	F7 : Load Setup Defaults

- **Power Management**

This category determines how much power consumption for system after selecting below items. Default value is Disable. The following pages tell you the options of each item & describe the meanings of each options.

ITEM	OPTIONS	DESCRIPTIONS
A. Power Management	1. Disable	Global Power Management will be disabled
	2. User Define	Users can configure their own power management
	3. Min Saving	Pre-defined timer values are used such that all timers are in their MAX value
	4. Max Saving	Pre-defined timer values are used such that all timers MIN value
B. PM Control by APM	1. No	System BIOS will ignore APM when power managing the system
	2. Yes	System BIOS will wait for APM's prompt before it enter any PM mode e.g. DOZE, STANDBY or SUSPEND Note: If APM is installed, & if there is a task running, even the timer is time out, the APM will not prompt the BIOS to put the system into any power saving mode! Note: – if APM is no installed, this option has no effect
C. Video Off Option	1. Always On	System BIOS will never turn off the screen
	2. Suspend -> Off	Screen off when system is in SUSPEND mode
	3. Susp, Stby -> Off	Screen off when system is in STANDBY or SUSPEND mode
	4. All Modes -> Off	Screen off when system is in DOZE, STANDBY or SUSPEND mode Note: The M/B markers are recommended to fix this item to (2) or (3) & hidden it by using MODBIN Utility

3.9 PNP/PCI CONFIGURATION SETUP

You can manually configurate the PCI Device's IRQ. The following pages tell you the options of each item & describe the meanings of each options.

ROM PCI/ISA BIOS
PNP/PCI CONFIGURATION SETUP
AWARD SOFTWARE, INC.

Resources Controlled By	: Manual	PCI IRQ Activated BY	: Level
Reset Configuration Data	: Disabled	PCI IDE IRQ Map To	: PCI-AUTO
IRQ-3 assigned to	: Legacy ISA	Primary IDE INT#	: A
IRQ-4 assigned to	: Legacy ISA	Secondary IDE INT#	: B
IRQ-5 assigned to	: PCI/ISA PnP		
IRQ-7 assigned to	: PCI/ISA PnP		
IRQ-9 assigned to	: PCI/ISA PnP		
IRQ-10 assigned to	: PCI/ISA PnP		
IRQ-11 assigned to	: PCI/ISA PnP		
IRQ-12 assigned to	: PCI/ISA PnP		
IRQ-14 assigned to	: PCI/ISA PnP		
IRQ-15 assigned to	: PCI/ISA PnP		
DMA-1 assigned to	: PCI/ISA PnP	ESC : Quit	↑↓→← : Select Item
DMA-3 assigned to	: PCI/ISA PnP	F1 : Help	PU/PD/+/- : Modify
DMA-5 assigned to	: PCI/ISA PnP	F5 : Old Values	(Shift)F2 : Color
DMA-7 assigned to	: PCI/ISA PnP	F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

3.10 INTEGRATED PERIPHERALS

ROM PCI/ISA BIOS
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.

IDE HDD Block MODE	: Enabled	
PCI Slot IDE 2nd Channel	: Enabled	
On-Chip Primary PCI IDE	: Enabled	
On-Chip Secondary PCI IDE	: Enabled	
IDE Primary Master PIO	: Auto	
IDE Primary Slave PIO	: Auto	
IDE Secondary Master PIO	: Auto	
IDE Secondary Slave PIO	: Auto	
USB Controller	: Enabled	
Onboard FDD Controller	: Enabled	
Onboard Serial Port 1	: COM1/3F8	
Onboard Serial Port 2	: COM2/2F8	
Onboard Parallel Port	: 378H	
Onboard Parallel Mode	: ECP	
Onboard Game Port	: Enabled	
Serial Port 1 MIDI	: Disabled	
Serial Port 2 MIDI	: Disabled	
		ES : Quit ↑↓→← : Select
		C
		F1 : Help PU/PD/+/- : Modify
		F5 : Old Values (Shift)F2 : Color
		F6 : Load BIOS Defaults
		F7 : Load Setup Defaults

3.11 PASSWORD SETTING

ROM PCI/ISA BIOS
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	HDD LOW LEVEL FORMAT
LOAD BIOS DEFAULT	ENTER PASSWORD: <input type="text"/> T SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
Esc : Quit	↑↓→← : Select Item
F10 : Save & Exit Setup	(Shift)F2 : Change Color
Change /set /Disable 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 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 password, just press < Enter > when you are prompted to enter password. A message will confirm the password being disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

PASSWORD DISABLED.

If you select System at Security Option of BIOS Features Setup Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter Setup. If you select Setup at Security Option of BIOS Features Setup Menu, you will be prompted only when you try to enter Setup.

3.12 IDE HDD AUTO DETECTION

The Enhance IDE features was included in all Award BIOS. Below is a brief description of this feature.

1. Setup Changes

<I> Auto-detection

- BIOS setup will display all possible modes that supported by the HDD including NORMAL, LBA & LARGE.
- If HDD does not support LBA modes, no 'LBA' option will be shown.
- If no of cylinders is less than or equal to 1024, no 'LARGE' option will be show.
- Users can select a mode which is appropriate for them.

ROM PCI/ISA BIOS
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master :		1282	621	64	0	2483	63	LBA
Primary Slave :								

Select Primary Slave Option (N = Skip) : N

OPTIONS	SIZE	CYLS	HEADS	PRECOMP	LANDZ	SECTOR	MODE
1(Y)	0	0	0	0	0	0	NORMAL

Note: Some OSes (like SCO-UNIX) must use "NORMAL " for installation

| ESC: |

RMA FORM

When the motherboard can not work well, please fill up this form to describe related situations. If the space is not enough to use, you can attach separate paper.

MODEL:

MODEL NO:

HARDWARE

CPU: Brand _____, Model _____, Speed _____ MHz

CD-PROCESSOR Brand _____, Model _____, Speed _____ MHz

SIMM: Brand _____, Speed _____ ns, Q'ty _____ pcs, Total _____ MB

CACHE: Brand _____, Speed _____ ns, Total _____ K

TAG RAM Brand _____, Speed _____ ns

BIOS DATA CODE _____

SYSTEM SPEED RUNNING _____ MHz

VIDEO CARD Chip _____, RAM _____, VGA Mode _____
Bus _____ (ISA, VESA or PCI)

OTHER ADD-ON CARDS

SOFTWARE

OPERATING SYSTEM _____ VERSION _____

SOFTWARE PROGRAM _____

BIOS SETUP: DRAM Wait State _____ CACHE Wait State _____

If you change BIOS SETUP, please describe the changes:

< A > ERROR

- HANG UP NO SCREEN FLOPPY R/W ERROR
 HARD DISK R/W ERROR PARITY MEMORY ERROR
 OTHER _____

< B > ERROR MESSAGES ON YOUR SCREEN (PLEASE SHOW US THE WHOSE SENTENCE)

< C > PROBLEM DESCRIPTION