

USER'S MANUAL

1000 Series

Part no. 48200490
March 2002 V1.1

1000 User's Manual

This Manual was written for installation purposes. It is to provide the information about the 1000 series for Book PC and POS PC with B59/B63 all-in-one motherboard. .

Outlooking of Book PC 1000 Series



Outlooking of POS PC 1000 Series



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NOTICE

The contents of this manual are subject to change without notice.

FEDERAL COMMUNICATIONS COMMISSION NOTICE

This equipment has been tested and found to comply with the limits for a Class A computing device, pursuant to Subpart B of Part 15 of FCC Rules. Only peripherals (computer input/output devices, monitors, printers, etc.) certified to comply with the Class A limits may be attached to this computer. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

NOTICE: This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with this user's manual, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class A computing device, pursuant to Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Relocate the computer with respect to the receiver
- Plug the computer into a different outlet so that computer and receiver are on different branch circuits.

If necessary, the user should consult the supplier or an experienced radio/television technician for additional suggestions.

The user may find the following booklet prepared by the Federal Communications Commission helpful :

"How to identify and Resolve Radio-TV Interference Problems".
This book is available from the US Government Printing Office,
Washington, D.C. 20402

CE

WARNING:

This is a Class A product. In a domestic environment this product

may cause radio interference in which case the user may be required to take adequate measures.

BATTERY REPLACEMENT

 **WARNING:**

Your computer is provided with a battery-powered Real-Time Clock circuit. There is a danger of explosion and risk of personal injury if the battery is incorrectly replaced or mistreated. Do not attempt to disassemble the battery, immerse it in water or dispose of it in fire.

Model No. Decode

The following are the standard model number, CPU Type and main board version : -

1	59 /63	X	XXX
1000 Series	B59 all-in-one mainboard B63 all-in one mainboard	0:Front Panel without FDD /CD-ROM opening 1:Front Panel with FDD / CD-ROM opening	CPU Speed

CHAPTER 1. PRECAUTIONS.....	1
1-1. Check the Line Voltage	1
1.2 Environmental Conditions.....	1
1.3 Handle the System Carefully.....	2
1.4 When Not In Use	2
1.5 When Operation is Faulty	2
CHAPTER 2 GETTING STARTED	3
2.1 Unpacking the package	3
2.2 Introduction	4
2.3 1000 series PC Outlooking	5
a Front View.....	5
2.4 Expansion Slot	9
2.4.1.Expansion Slot Card Type (Without LAN).....	9
2.5 Installing a Floppy Disk Drive	11
2.6 Installing a CD-ROM drive	11
CHAPTER 3 1591 TECHNICAL SPECIFICATION.....	13
3.1.Technical Specification for "B59" main board.....	13
3.2. Jumpers Location Diagram for "B59 V1.X " main board.....	14
3.3.Memory configuration for "B59 V1.X" main board.....	15
3.5 Connector' s description.....	22
CHAPTER 4 1631 TECHNICAL SPECIFICATION.....	30
4.1.Technical Specification for "B63" main board.....	30
4.2.Jumpers Location Diagram for "B63 V2.X " main board.....	32
4.3.Memory configuration for "B63 V2.X" main board.....	33
4.4. Jumper Setting	34
4.5.Connector	40
APPENDIX A1- AWARD BIOS SETUP 1591.....	47
APPENDIX A2- AWARD BIOS SETUP 1631.....	81
APPENDIX B. FAST ETHERNET CONTROLLER.....	114

Chapter 1. Precautions

This section is written to protect both you and the system itself. In order to lengthen the service life of the system, Please read this section carefully.

1-1. Check the Line Voltage

The operating voltage for the internal switching power should be within the range of 90V AC ~ 260V AC, otherwise the system may be damaged.

Rating	Line Voltage	Frequency
90 ~ 260V AC	100 ~ 240V AC	50/60 Hz

IMPORTANT !

Use the internal switching power adapter that supports your 1000 series PC system unit only. Using a different switching power adapter may cause system damage.

1.2 Environmental Conditions

Place your 1000 series PC on a solid level surface.

Avoid installing this system in an extremely hot or cold place.

Avoid putting this system in a place exposed to direct sunlight, in a closed car in the summer time, or near a heating device such as a stove.

Operating Temperature: 5 °C ~ 40 °C. Storage Temperature: -20 °C ~ 60 °C.

Do not use a system that has been left outdoors on a cold winter day. The lowest operating ambient temperature is 5 °C.

Avoid moving the system rapidly from a hot place to a cold place or vice versa. Otherwise, condensation may form inside the system.

Keep the system away from damp air, water and dust. The operating ambient humidity is 20 ~ 80% (non - condensing). The Non - operating Relative

Humidity is 5% ~ 80% (non-condensing). Avoid putting a water-filled container such as a vase on or near the system.

Do not put the system in a place of strong vibration which may cause serious damage to the hard disk inside the system(if a hard disk is installed inside).

Do not place the system too close to a radio, television, or other communication systems to avoid interference.

1.3 Handle the System Carefully

Do not put heavy objects on the system except a small light monitor.

Do not turn the system upside down. Otherwise, the disk drive may not work properly.

When you transport the system outdoors, it is always advisable to protect it by inserting a protective diskette into the disk drive.

1.4 When Not In Use

When the system is not in use, remember to cover the system and store it with care.

1.5 When Operation is Faulty

Double check the operating procedure and if problem persists, contact your supplier.

Chapter 2 Getting Started

This chapter explains how to set up your new 1000 series. It helps you to unpack the computer, identify all the parts, and put it all together.

2.1 Unpacking the package

Upon unpacking the 1000 series package, make sure that you have the following items in good condition:

- The main system unit
- Power cord
- Accessory Bag including (jumper setting, warranty card)
- CD driver Bank

If any of the above items are damaged or missing , please contact your supplier immediately.

After you have removed all items, put the packing material and plastic wraps into the packing box and move it to a storage area. Save them for use when moving or shipping the computer.

2.2 Introduction

The 1000 series PC are high performance 16/32/64-bit personal computers. They are IBM PC compatible PC with 3 expansion slots.

The main board used in the 1000 series PC is an all-in-one motherboard which contains CPU, RAM, ROM BIOS, floppy disk drive controller, IDE hard disk controller, VGA chip, etc.

The Dimension for 1000 series PC is as following: -

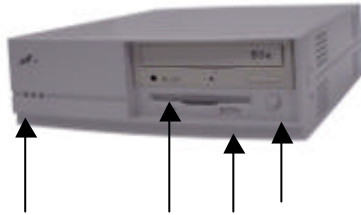
Model	Dimension
1000 Series	300 (W) x 320 (L) x 90 (H) mm

The system unit is the main body of a PC system. Its equipment and structures define almost all of the features & functions of the PC system. It is a box-like structure with a metal casing enclosing all its electronic components.

The outside of the system unit has LED indicating lights and input /output connectors on it. The casing is made of metal so as to help with heat dissipation to assure the proper function of the inside components.

2.3 1000 series PC Outlooking

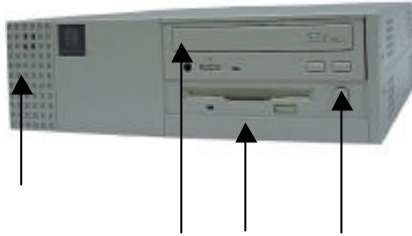
a Front View



Power / HDD FDD

5.25" CD-ROM / 3.5" FDD / Power button

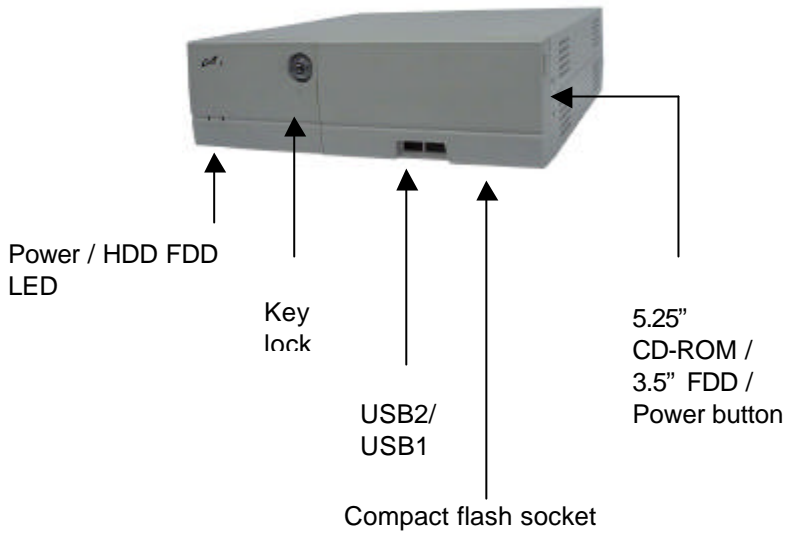
Carry-I front panel



Power / HDD FDD

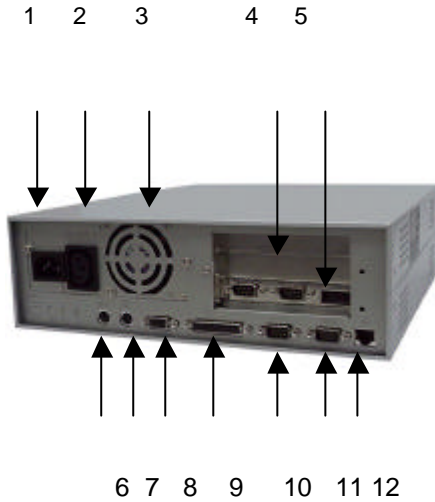
5.25" CD-ROM / 3.5" FDD / Power

OEM-1 front panel (QP front panel)



POS PC 1000 front panel

b)Rear Panel



1	AC Power Inlet	2	AC Power Outlet
3	System Fan	4	Expansion slot x3
5	COM3/COM4/DIO Port (Option for Book 1000, standard kits for POS1000)	6	PS2 keyboard Port
7	PS2 mouse port	8	Display Port
9	Parallel Port	10	Serial 2 port
11	Serial 1 port	12	RJ-45 LAN Port

CAUTION :

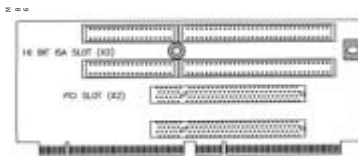
Whenever you connect or disconnect any component, be sure that your computer is turned off and that your computer is disconnected from its power source. Plugging or unplugging any item when the computer is receiving power can cause power surges and damage your computer.

2.4 Expansion Slot

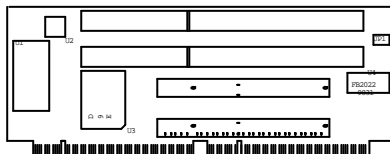
The 1000 series offer 3 (Three) expansion slots, 1xPCI, 1xPCI/ISA, 1xISA slot. The maximum dimension of the expansion card of the system is 104 (H) x 278 (L) mm

2.4.1.Expansion Slot Card Type (Without LAN)

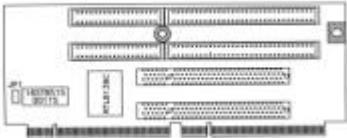
1.Riser Card (FT -7363 : standard)



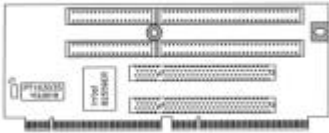
2.Riser Card with UM9008 10Base-T LAN (FT -7324 : option)



3. Riser Card with RTL8139 10/100Base-T LAN :(FT-7329 : option)



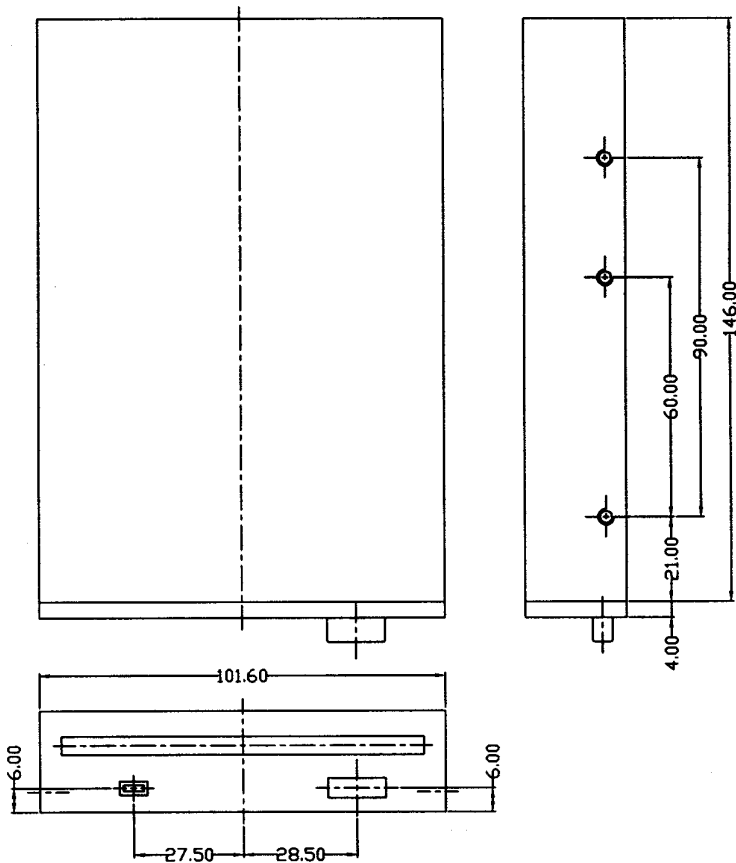
4. Riser Card with Intel 82559 10/100 Base-T LAN: (FT -7365 : option)



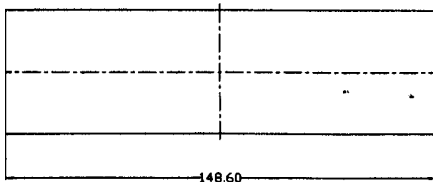
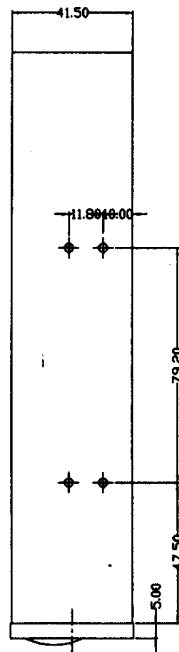
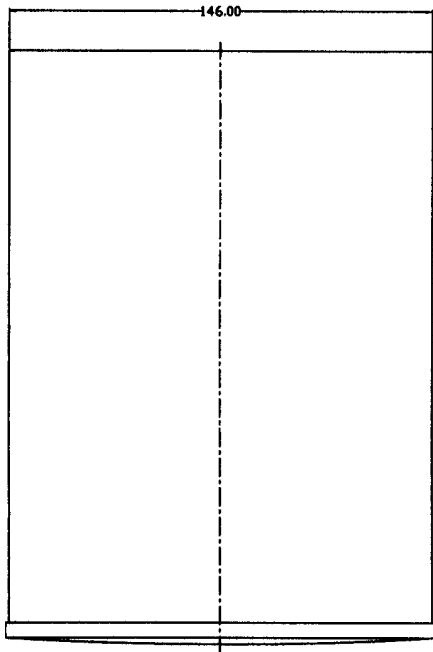
2.5 Installing a Floppy Disk Drive

To install a 3.5-inch Floppy Disk Drive to 1000 series, the maximum dimension of the Floppy Disk Drive is 101.60mm width by 6.00mm height, and make sure the location of the LED indicator and FDD eject button order can fit 1000 series cabinet. The use of NEC (part no. 134-506791-301-3) and MITSUMI (part no. 0359M3R69-2010) are recommended. Or contact your distributor for more information.

2.6 Installing a CD-ROM drive



To install a 5.25-inch Floppy Disk Drive to 1000 series, the maximum dimension is 148.60mm width by 42.30mm height. Please contact your distributor in case you have problem to find it. (see below figure)



Chapter 4 1631 Technical Specification

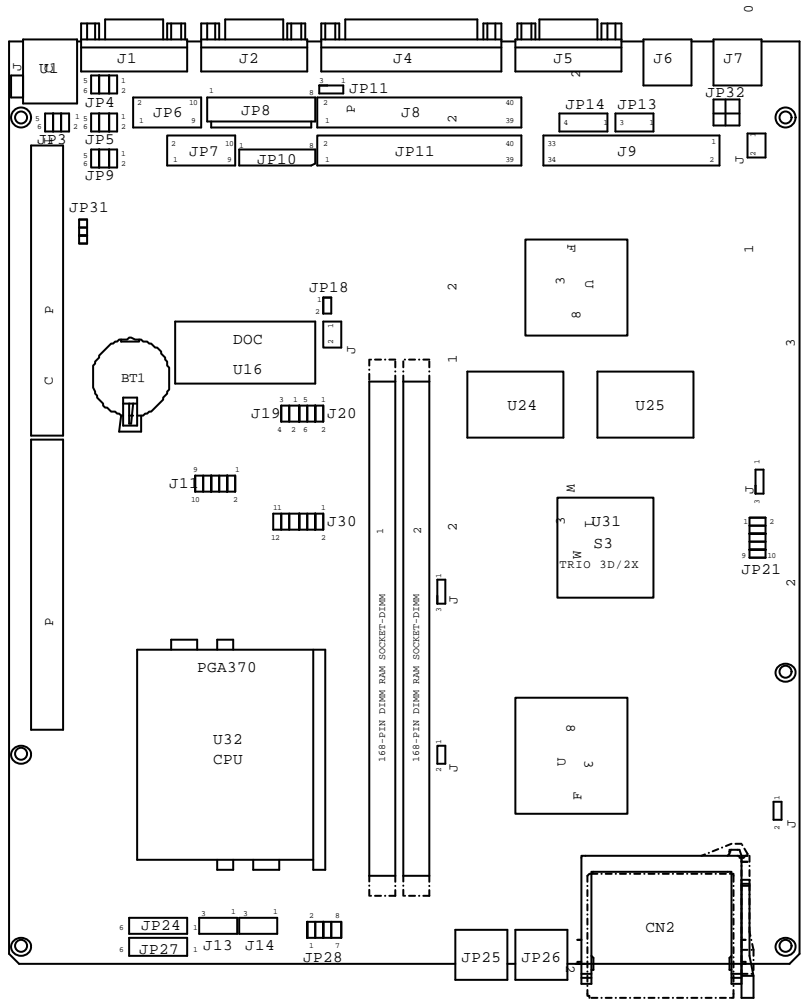
The above model was installed with a “B63” Pentium all-in-one as system main board. The following are the technical details of the "B63" main board.

4.1. Technical Specification for "B63" main board

MODEL	1631 -XXX
Main Board	"B63" all-in-one M/B
CPU	Intel socket 370 CPUs Celeron /PIII PPGA/FC-PGA
Co-processor	Built-in CPU
Internal Cache	Built-in CPU
External Cache	Built-in CPU
System RAM	2x 168pin DIMM sockets, support 16 / 32 / 64 / 128 /256 MB
BIOS	AWARD PnP BIOS
Core Logic	Intel FW82443ZX/BX
Video Display	S3 Trio 3D AGP
Video RAM	4MB SGRAM
Video Display port	One 15-pin D-SUB female VGA monitor connector
HDD Controller	support two 40-pin 2.54 pitch IDE pin-header
FDD Controller	SMSC37C602 support one 34-pin 2.54mm pitch pin-header .
I/O Port	2x 9-pin D-SUB RS232 FIFO Serial Ports connector 2x 10-pin header support COM3/COM4 port 1x 25-pin D-SUB Parallel Port (SPP/EPP/ECP) connector
Keyboard & Mouse	1x PS2 Keyboard connector , 1x PS2 mouse connector
LAN port	Optional LAN Rising Card
USB port	2 x USB ports
ROM disk	Disk On Chip Socket supported
Compact Flash	Compact Flash Socket Supported
Expansion Slot on board	1 FLYTECH EISA Bus Slot for system expansion slot used
Power Supply	Internal AT -FT-8075 75W (5V/8.5A, 12V/2.4A, -12V/0.3A,) -Optional FT-8075E 1202 ((5V/6A, 12V/2A, -12V/0.3A, 24V/2A,)

The content of this specification is subject to change without notice.

4.2.Jumpers Location Diagram for "B63 V2.X " main board



4.3.Memory configuration for “B63 V2.X” main board

Capacity	DIMM 1	DIMM 2
16MB	16MB	none
16MB	none	16MB
32MB	16MB	16MB
32MB	32MB	none
32MB	none	32MB
80MB	16MB	64MB
80MB	64MB	16MB
64MB	64MB	none
64MB	none	64MB
128MB	64MB	64MB
128MB	128MB	None
128MB	None	128MB
256MB	128MB	128MB

VGA Memory Configuration.

Capacity	U24	U25	Video DRAM Type
4MB	close	close	512KB X 32 SOP package

4.4. Jumper Setting

CPU Frequency Selection: JP30

CPU Clock	PCI Clock	JP30			
		FS0	FS1	FS2	FS3
100.3MHz	33.43MHz	1-3	7-9	2-4	10-12
66.8MHz	33.40MHz	1-3	7-9	4-6	10-12

- M-System Disk On Chip: JP20, JP19

Address	JP19	JP20
0C800-0C9FF (Default)	1-2	1-2
0CC00 - 0CDFF	3-4	1-2
0D000 - 0D1FF	1-2	3-4
0D400 - 0D5FF	3-4	3-4
0D800 - 0D9FF	1-2	5-6
0DC00 - 0DDFF	3-4	5-6

- CMOS Operation mode: J12

Function	J12
CMOS Normal	2-3 (Default)
CMOS Reset	1-2

- ATX / AT power mode: JP18, J3

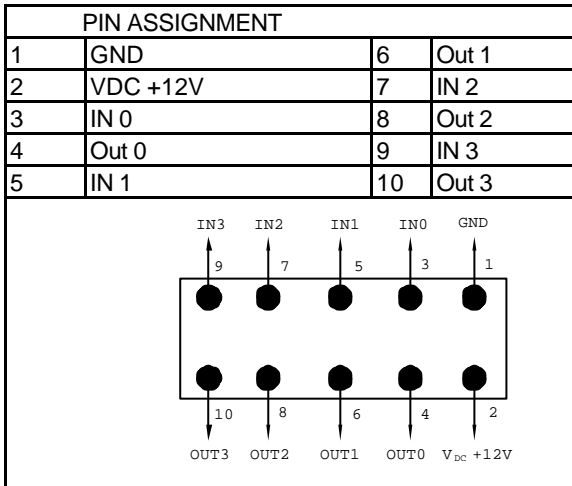
Function	JP18	J3
Default AT power supply 4000 series : FT-8050 AT Internal power supply 1000 series: FT-8075 AT Internal Power Supply	Close	1-2
ATX power supply	Open	2-3

● COM Port Jumper Setting

COM Port		Pin 1	
COM1	JP4	1-2 (Default)	Data Line
		3-4	+5V
		5-6	+12V
COM2	JP3	1-2(Default)	Data Line
		3-4	+5V
		5-6	+12V
COM3	JP9	1-2(Default)	Data Line
		3-4	+5V
		5-6	+12V
COM4	JP5	1-2(Default)	Data Line
		3-4	+5V
		5-6	+12V

● Digital I/O (4 Output & 4 Input) : J11

This main board provides the basic digital I/O signal Controller. User can develop the program and extra controller to open and sense the cash drawer that based on the digital I/O function on this main board.



v Digital output programming

The output is TTL Level. The output signal has to be TTL compatible.

Output	Address	Bit
Out 0	206	0
Out 1	206	1
Out 2	206	2
Out 3	206	3

Example : ("0" = off "1" =on)

Data 00 = Out 0 and Out 1 = "0"
 Data 01 = Out 0 = "1"
 Data 02 = Out 1 = "1"
 Data 03 = Out 0 and Out 1 = "1"

Digital input programming

The input signal has to be TTL compatible.

Input	Address	Bit
IN 0	206	0
IN 1	206	1
IN 2	206	2
IN 3	206	3

Example : If input 206 is [0111], then input 3 is "0", If input 206 is [0011], then input 3 & 4 are "0"

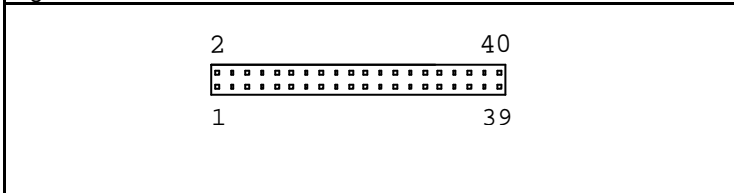
4.5.Connector

IDE connector :

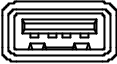
Primary :J8 40pin 2.54mm , Primary :JP11 40pin 2.0mm

Pin#	Assignment	Pin#	Assignment	Pin#	Assignment
1	Reset	16	Data bit 14	31	IRQ 14
2	Ground	17	Data bit 0	32	NC
3	Data bit 7	18	Data bit 15	33	Disk address 1
4	Data bit 8	19	Ground	34	NC
5	Data bit 6	20	NC	35	Disk address 0
6	Data bit 9	21	IDE DRQ	36	Disk address 2
7	Data bit 5	22	Ground	37	Disk chip select 0
8	Data bit 10	23	Disk Write	38	Disk chip select 1
9	Data bit 4	24	Ground	39	Disk LED
10	Data bit 11	25	Disk read	40	Ground
11	Data bit 3	26	Ground		
12	Data bit 12	27	Disk ready		
13	Data bit 2	28	NC		
14	Data bit 13	29	IDE DACK		
15	Data bit 1	30	Ground		

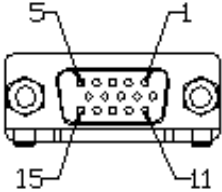
Figure



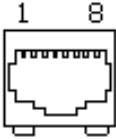
- USB port connector (Pin-Header 4 pin) : JP25, JP26

Pin #	Assignment	Figure
1	+5V	
2	USB Port Data -	
3	USB Port Data +	
4	Ground	

VGA connector (D-SUB 15-pin female connector) : J5

Pin #	Assignment	Figure
1	Red signal	
2	Green signal	
3	Blue signal	
4	NC	
5	Ground	
6	Red Ground	
7	Green Ground	
8	Blue Ground	
9	+5V (via polyfuse)	
10	Ground	
11	NC	
12	Data of monitor ID (with 10K Ω pull high)	
13	H Sync.	
14	V Sync.	
15	Clock of monitor ID (with 10K Ω pull high)	

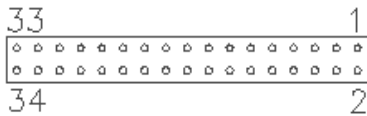
- LAN (10 /100Base- T RJ- 45 connector) : U1

Pin #	Assignment	Figure
1	Transmit output (+)	
2	Transmit output (-)	
3	Receive input (+)	
4	NC	
5	NC	
6	Receive input (-)	
7	NC	
8	NC	

Floppy disk connector (34pin 2.54mm pitch Pin-header with housing) : JP9

Pin#	Assignment	Pin#	Assignment	Pin#	Assignment
1	Ground	13	Ground	25	Ground
2	Density select	14	Driver select 2	26	Track 00
3	Ground	15	Ground	26	Ground
4	Vcc	16	Motor on 1	28	Write protected
5	Ground	17	Ground	29	Ground
6	Vcc	18	Data direction	30	Read data
7	Ground	19	Ground	31	Ground
8	Index	20	Step motor active	32	Head select
9	Ground	21	Ground	33	Ground
10	Motor on 0	22	Write data	34	Disk change
11	Ground	23	Ground		
12	Driver select 1	24	Write gate		

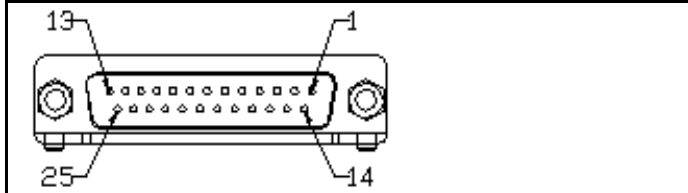
Figure



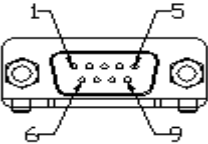
Parallel port : J3 (D-SUB 25pin female)

Parallel port			
Pin #	Assignment	Pin #	Assignment
1	Strobe (-)	14	Auto feed (-)
2	Data bit 0	15	Error (-)
3	Data bit 1	16	INIT (-)
4	Data bit 2	17	SLCT IN (-)
5	Data bit 3	18	Signal Ground
6	Data bit 4	19	Signal Ground
7	Data bit 5	20	Signal Ground
8	Data bit 6	21	Signal Ground
9	Data bit 7	22	Signal Ground
10	ACK (-)	23	Signal Ground
11	Busy	24	Signal Ground
12	Paper empty	25	Signal Ground
13	SLCT		

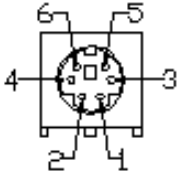
Figure



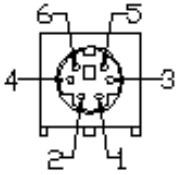
Serial port 1: J1 / Serial port 2 : J2
 Serial port 3: JP7 /Serial port 4 : JP6

Serial port			
1	Data carrier detect	6	Data set ready
2	Receive data	7	Request to send
3	Transmit data	8	Clear to send
4	Data Terminal ready	9	Ring indicator
5	Signal Ground		
Figure			
			

PS2 mouse (Mini Din 6 pin) : J6

Pin #	Assignment	Figure
1	Mouse data	
2	NC	
3	Ground	
4	+5V via Poly-fuse	
5	Mouse clock	
6	NC	

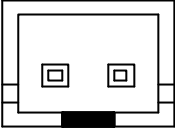
Keyboard (Standard PS2 type) : J7

Pin #	Assignment	Figure
1	Keyboard data	
2	NC	
3	Ground	
4	+5V	
5	Keyboard clock	
6	NC	

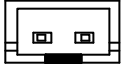
- Fan Connector : J13, J14 (default to use +12V Power)

Pin #	Assignment
1	+12V
2	Ground

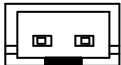
Figure



- COMPACT FLASH POWER : JP29
(default to use +5V Power)

Pin #	Assignment	Figure
1	+5V	
2	Ground	

- POWER PUSH BUTTON : JP12

Pin #	Assignment	Figure
1	Ground	
2	N/A	

Chapter 3 1591 Technical Specification

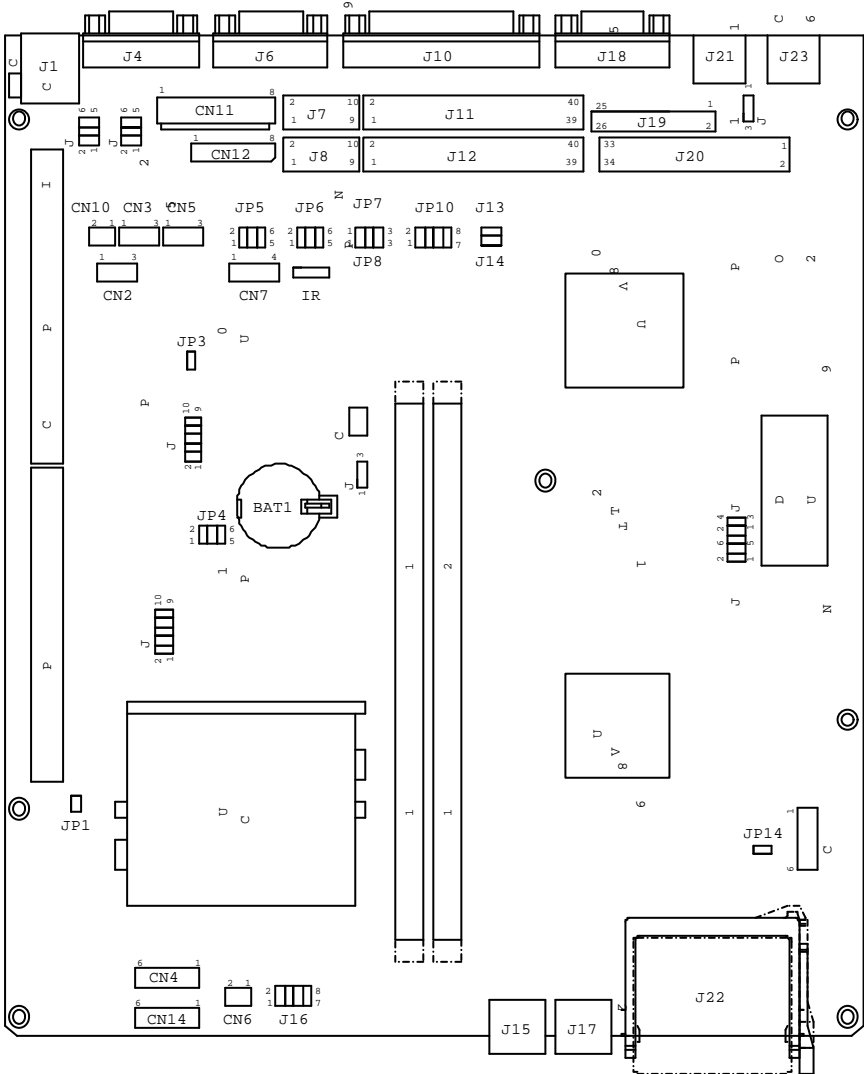
The above model was installed with a “B59” Pentium all-in-one as system main board. The following are the technical detail of the "B59" main board.

3.1. Technical Specification for "B59" main board

MODEL	1591 Pentium PC
Main Board	"B59" all-in-one main board
CPU	Intel Pentium / Pentium MMX , AMD K6 /K6-2/ K6-3, IDT C6
Co-processor	Built-in CPU
Internal Cache	Built-in CPU
External Cache	256KB 512KB Pipeline SRAM on board
System RAM	2 x 168pin DIMM sockets, support 16 / 32 / 64 / 128 /256MB
BIOS	AWARD PnP BIOS
Core Logic	VIA MVP4 VT8501 / VT82C686A
Video Display	3D AGP SVGA
Video RAM	Shared Memory (UMA) 4MB expandable to 8MB
Video Chip	Built-in Core Logic
Video Display port	One 15-pin D-SUB female VGA monitor connector
HDD Controller	Build-in Core Logic VT82C686, supports one 40-pin 2.54 pitch pin header (primary)
FDD Controller	Build-in Core Logic VT82C686, supports one 34-pin 2.54mm pitch pin-header
I/O Port	-2x D-SUB 9-pin RS232 FIFO Serial Ports -2x 10-pin header for COM3/COM4 port -serial port pin 1 supports 5V/12V -One 25-pin D-SUB Parallel Port (SPP/EPP/ECP) connector
Keyboard & Mouse	1x PS2 Keyboard connector, 1 x PS2 mouse connector
LAN port	Optional 100/ 10 Base-T RJ45 built-in LAN Rising Card
USB port	Two USB ports
ROM disk	Disk On Chip Socket supported
Compact Flash	Compact Flash Socket supported
Expansion Slot on board	1 FLYTECH Bus Slot for system expansion slot used
Power Supply	Internal AT -FT-8075 75W (5V/8.5A, 12V/2.4A, -12V/0.3A,) -Optional FT-8075E 120W ((5V/6A, 12V/2A, -12V/0.3A, 24V/2A,)

The content of this specification is subject to change without prior notice.

3.2. Jumpers Location Diagram for "B59 V1.X " main board



3.3.Memory configuration for “B59 V1.X” main board

System Memory Configuration

Capacity	DIMM 1	DIMM 2
16MB	16MB	None
32MB	16MB	16MB
32MB	32MB	None
64MB	32MB	32MB
64MB	64MB	None
80MB	16MB	64MB
80MB	64MB	16MB
128MB	64MB	64MB
128MB	128MB	None
256MB	128MB	128MB

External Cache RAM Configuration.

Capacity	SDRAM Type	Quantity	Location
256KB	32k x 64	1pcs	U15
512KB	64k x 64	1pcs	U15

3.4. Jumper Setting

In order to set up the correct configuration, here is the description about how to set the jumpers to enable/disable or change functions. All jumpers location please refer to jumper location diagram.

CPU type selection :JP4, JP10

CPU	JP4			JP10			
	1-2	3-4	5-6	1-2	3-4	5-6	7-8
Pentium 100MHz	Open	Open	Open	Close	Open	Open	Open
Pentium 120MHz	Close	Open	Open	Open	Open	Open	Open
Pentium 133MHz	Close	Open	Open	Close	Open	Open	Open
Pentium 150MHz	Close	Close	Open	Open	Open	Open	Open
Pentium 166MHz	Close	Close	Open	Close	Open	Open	Open
IDT C6 180MHz	Open	Close	Open	Open	Open	Open	Open
IDT C6 200MHz	Open	Close	Open	Close	Open	Open	Open
Pentium 200MHz MMX	Open	Close	Open	Close	Open	Open	Open
Pentium 233MHz MMX	Open	Open	Open	Close	Open	Open	Open
AMD K6/233MHz(AFR)	Open	Open	Open	Close	Open	Open	Open
AMD K6/266MHz(AFR) AMD K6-2/266MHz	Close	Open	Close	Close	Open	Open	Open
AMD K6-2/300MHz	Open	Close	Open	Close	Close	Close	Open
AMD K6-2/350MHz	Open	Open	Open	Close	Close	Close	Open
AMD K6-2/400MHz AMD K6-3/400MHz	Close	Open	Close	Close	Close	Close	Open
AMD 62-2/450MHz AMD K6-3/450MHz	Close	Close	Close	Close	Close	Close	Open
AMD K6-2/500MHz AMD K6-3/500MHz	Open	Close	Close	Close	Close	Close	Open

CPU Voltage selection :

Vcore	JP2				
	1-2	3-4	5-6	7-8	9-10
1.5	Open	Open	Close	Open	Close
1.6	Open	Close	Close	Open	Close
1.7	Open	Open	Open	Close	Close
1.8	Open	Close	Open	Close	Close
1.9	Open	Open	Close	Close	Close
2.0	Open	Close	Close	Close	Close
2.1	Close	Open	Open	Open	Open
2.2	Open	Close	Open	Open	Open
2.3	Close	Close	Open	Open	Open
2.4	Open	Open	Close	Open	Open
2.5	Close	Open	Close	Open	open
2.6	Open	Close	Close	Open	Open
2.7	Close	Close	Close	Open	Open
2.8	Open	Open	Open	Close	Open
2.9	Close	Open	Open	Close	Open
3.0	Open	Close	Open	Close	Open
3.1	Close	Close	Open	Close	Open
3.2	Open	Open	Close	Close	Open
3.3	Close	Open	Close	Close	Open
3.4	Open	Close	Close	Close	Open
3.5	Close	Close	Close	Close	Open

CMOS data clean function : JP9

CMOS data	JP9
Clean	2-3
Normal (default)	1-2

Disk On Chip address selection: JP12, JP13

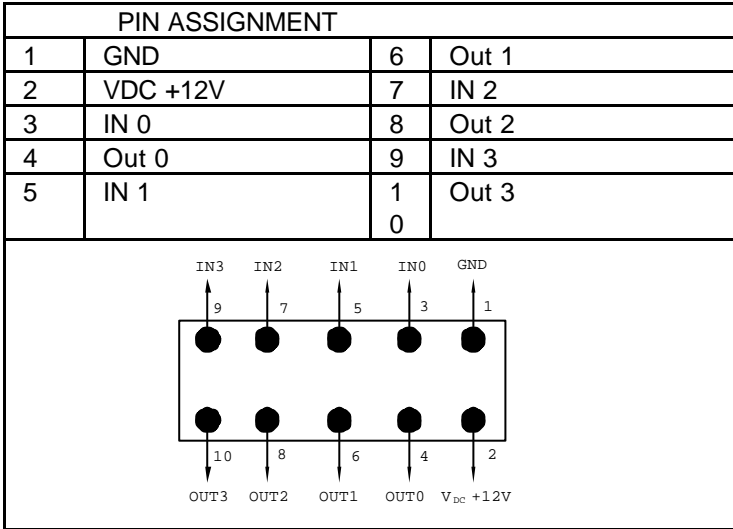
Address	JP12	JP13
0CC00H – 0CDDFFH	1-2	1-2
0D000H – 0D1FFFH	1-2	3-4
0D400H – 0D5FFFH	3-4	3-4
0D800H – 0D9FFFH	1-2	5-6
0DC00H – 0DDFFFH	3-4	5-6

RS232 Select Jumper :JP5,JP6,JP15,JP16

COM Port		Pin 1	
COM1	JP15	1-2 (Default)	Data Line
		3-4	+5V
		5-6	+12V
COM2	JP16	1-2(Default)	Data Line
		3-4	+5V
		5-6	+12V
COM3	JP6	1-2(Default)	Data Line
		3-4	+5V
		5-6	+12V
COM4	JP5	1-2(Default)	Data Line
		3-4	+5V
		5-6	+12V

● Digital I/O (4 Output & 4 Input) : J5

This main board provides the basic digital I/O signal Controller. User can develop the program and extra controller to open and sense the cash drawer that based on the digital I/O function on this main board.



Digital output programming

The output is TTL Level. The output signal must be TTL compatible.

Output	Addresses	Bit
Out 0	206	0
Out 1	206	1
Out 2	206	2
Out 3	206	3

Example : ("0" = off "1" =on)

Data 00 = Out 0 and Out 1 = "0"

Data 01 = Out 0 = "1"

Data 02 = Out 1 = "1"

Data 03 = Out 0 and Out 1 = "1"

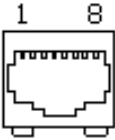
Digital input programming

The input signal must be TTL compatible.

Input	Address	Bit
IN 0	206	0
IN 1	206	1
IN 2	206	2
IN 3	206	3
Example : If input 206 is [0111], then input 3 is "0", If input 206 is [0011], then input 3 & 4 are "0"		

3.5 Connector's description

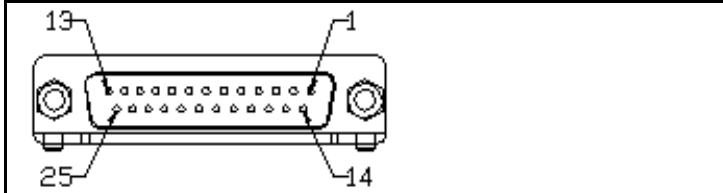
LAN (100 / 10 Base-T RJ45 connector) : J1

Pin #	Assignment	Figure
1	Transmit output (+)	
2	Transmit output (-)	
3	Receive input (+)	
4	NC	
5	NC	
6	Receive input (-)	
7	NC	
8	NC	

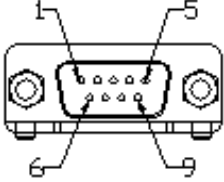
Parallel port 1 (D-SUB 25pin female connector) : J10

Pin #	Assignment	Pin #	Assignment
1	Strobe (-)	14	Auto feed (-)
2	Data bit 0	15	Error (-)
3	Data bit 1	16	INIT (-)
4	Data bit 2	17	SLCT IN (-)
5	Data bit 3	18	Signal Ground
6	Data bit 4	19	Signal Ground
7	Data bit 5	20	Signal Ground
8	Data bit 6	21	Signal Ground
9	Data bit 7	22	Signal Ground
10	ACK (-)	23	Signal Ground
11	Busy	24	Signal Ground
12	Paper empty	25	Signal Ground
13	SLCT		

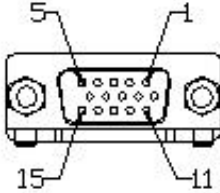
Figure



RS232 COM1 / COM2 (D-SUB 9pin male connector) : J4,J6
 RS232 COM 3 / COM4 (2 x 10-pin pin header) : J7, J8

Pin #	Assignment	Figure
1	Data carrier detect	
2	Receive data	
3	Transmit data	
4	Data Terminal ready	
5	Signal Ground	
6	Data set ready	
7	Request to send	
8	Clear to send	
9	Ring indicator	
10	NC	

VGA monitor (D-SUB 15pin female connector) : J18

Pin #	Assignment	Figure
1	Red signal	
2	Green signal	
3	Blue signal	
4	NC	
5	Ground	
6	Red Ground	
7	Green Ground	
8	Blue Ground	
9	VCC (with poly switch)	
10	Ground	
11	NC	
12	NC (with 10KΩ pull high)	
13	H Sync.	
14	V Sync.	
15	NC (with 10KΩ pull high)	

PS2 mouse (Mini Din 6 pin) : J 21

Pin #	Assignment	Figure
1	Mouse data	
2	NC	
3	Ground	
4	+5V	
5	Mouse clock	
6	NC	

Keyboard (Standard PS2 type) : J23,

Pin #	Assignment	Figure
1	Keyboard data	
2	NC	
3	Ground	
4	+5V	
5	Keyboard clock	
6	NC	

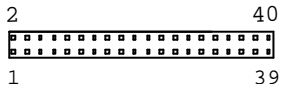
+12V DC fan power (Pin-header 2pin) : CN6, CN10

Pin #	Assignment	Figure
1	+12V	
2	Ground	

IDE harddisk connector (Pin-header 40pin) : J11,J12

Pin#	Assignment	Pin#	Assignment	Pin#	Assignment
1	Reset	16	Data bit 14	31	IRQ 14
2	Ground	17	Data bit 0	32	NC
3	Data bit 7	18	Data bit 15	33	Disk address 1
4	Data bit 8	19	Ground	34	NC
5	Data bit 6	20	NC	35	Disk address 0
6	Data bit 9	21	IDE DRQ	36	Disk address 2
7	Data bit 5	22	Ground	37	Disk chip select 0
8	Data bit 10	23	Disk Write	38	Disk chip select 1
9	Data bit 4	24	Ground	39	Disk LED
10	Data bit 11	25	Disk read	40	Ground
11	Data bit 3	26	Ground		
12	Data bit 12	27	Disk ready		
13	Data bit 2	28	NC		
14	Data bit 13	29	IDE DACK		
15	Data bit 1	30	Ground		

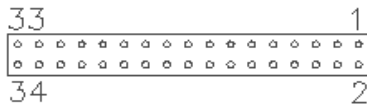
Figure




Floppy disk connector (Pin-header 34pin): J20

Pin#	Assignment	Pin#	Assignment	Pin#	Assignment
1	Ground	13	Ground	25	Ground
2	Density select	14	Driver select 2	26	Track 00
3	Ground	15	Ground	27	Ground
4	Not used	16	Motor on 1	28	Write protected
5	Ground	17	Ground	29	Ground
6	Vcc	18	Data direction	30	Read data
7	Ground	19	Ground	31	Ground
8	Index	20	Step motor active	32	Head select
9	Ground	21	Ground	33	Ground
10	Motor on 0	22	Write data	34	Disk change
11	Ground	23	Ground		
12	Driver select 1	24	Write gate		

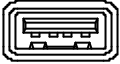
Figure



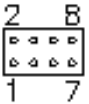
Power input for AT internal power adapter (Pin-header 8pin) : CN12
 FT-8075 for 1000 series / FT-8050 for 4000 series

Pin #	Assignment	Figure
1	+5V	
2	Ground	
3	+5V	
4	Ground	
5	Ground	
6	+12V	
7	Ground	
8	-12V	

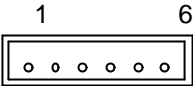
USB port connector (Pin-header 4pin) : J15,J17

Pin #	Assignment	Figure
1	+5V	
2	USB Port Data -	
3	USB Port Data +	
4	Ground	

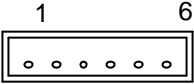
USB port connector (Pin-header 4pin) : J16

Pin #	Assignment	Figure
1	+5V	
2	+5V	
3	USB Port 1 Data -	
4	USB Port 2Data -	
5	USB Port 1 Data +	
6	USB Port 2Data +	
7	Ground	
8	Ground	


HDD, FDD, POWER LED connector:CN4

Pin #	Assignment	Figure
1	+5V	
2	Ground	
3	-MTR0	
4	HD_LED	
5	GPO0	
6	Ground	

HDD, FDD, POWER LED connector:CN14

Pin #	Assignment	Figure
1	-MTR0	
2	+5V	
3	HD_LED	
4	+5V	
5	GPO0	
6	+5V	

Compact Flash power connector: CN13

Pin #	Assignment	Figure
1	+5V	
2	Ground	

Compact Flash II connector: J25

Appendix A2- AWARD BIOS setup 1631

Remark : We select the following model as a sample to analysis how to setup System BIOS. For other models or updated BIOS information, please check with your supplier.

MODEL	1631-XXX
CPU	Intel Pentium II / III / Celeron
M / B	B63
BIOS	AWARD

The above models of the 1000 series computer's BIOS are supplied by AWARD SOFTWARE, INC. AWARD'S BIOS Flash ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed RAM of CMOS chipset so that it retains the Setup information when the power is turned off.

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 POST (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

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

Control Keys

Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item to the left side
Right arrow	Move to the item to the right side
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
F5 key	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
F6 key	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
F7 key	Load the Setup default , only for Option Page Setup Menu
F8 key	Reserved
F9 key	Reserved
F10 key	Save all the CMOS changes, only for Main Menu

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>.

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.

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

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.

Load setup defaults

Setup defaults indicates the values required by the system for the maximum performance.

CPU FEATURE Monitor

Setup defaults indicated the CPU temperature, CPU Fan Speed and the Vcore information.

Integrated Peripherals

Change, set, or disable on board super I/O function.

Supervisor password & Password setting

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.

Standard CMOS Setup Menu

The items in Standard CMOS Setup Menu are divided into 11 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.

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.

Primary master / Primary slave / Secondary master / Secondary slave

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 1 user definable types and 1 automatic type for Normal BIOS. Type 1 to Type 45 are predefined. Type User is user-definable. Type Auto is auto-definition by your computer.

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 in 1 to 45, you can use Type User or **Auto** to define your own drive type manually or **automatically**.

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 ESDI, the selection shall be "Type 1".

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

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

CYLS.	number of cylinders
HEADS	number of heads
PRECOMP	write precom
LANDZONE	landing zone
SECTORS	number of sectors
MODE	HDD access mode

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

Drive A / Drive B

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, 5.25 in	5-1/4 inch PC-type standard drive; 360 kilobyte capacity
1.2M, 5.25 in	5-1/4 inch AT-type high-density drive; 1.2 megabyte capacity
720K, 3.5 i	3-1/2 inch double-sided drive; 720 kilobyte capacity
1.44M, 3.5 in	3-1/2 inch double-sided drive; 1.44 megabyte capacity
2.88M, 3.5 in	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 interface and monitor.

EGA/VGA	Enhanced Graphics Adapter/video Graphics Array. For EGA, VGA, SVGA, 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 stop and you will be prompted.
All errors	The system boot will stop 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 POS (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.

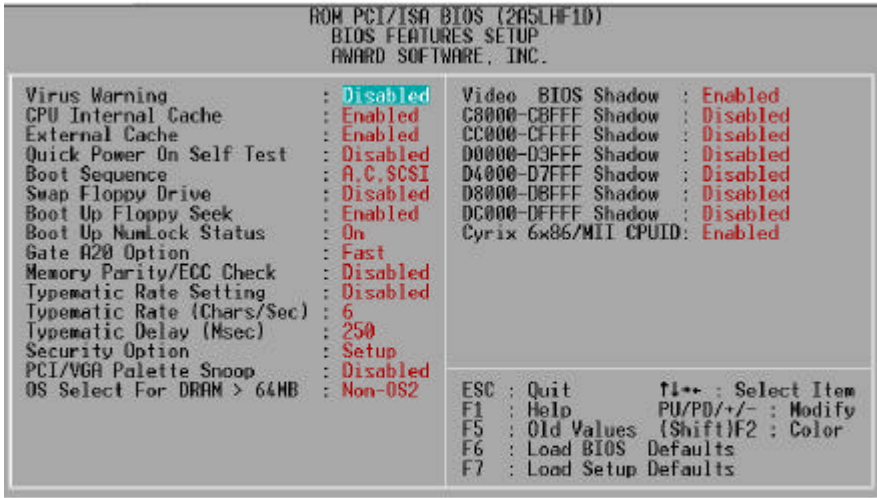
Other Memory

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.

BIOS Features Setup Menu



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.

<p>! WARNING ! Disk boot sector is to be modified Type "Y" to accept write or "N" to abort write AWARD Software, Inc.</p>

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 is without Internal Cache then this item "CPU Internal Cache" will not appear.

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.

A, C,SCSI	System will first search the floppy disk drive then hard disk drive for booting purpose
C, A,SCSI	System will first search the hard disk drive then floppy disk drive for booting puporse
C,CDROM,A	System will first search the harddisk drive then CDROM drive and the next is floppy disk drive for booting purpose
CDROM,C,A	System will first search the CDROM drive then harddisk drive and the next is floppy disk drive for booting purpose
D, A,SCSI	System will first search the hard disk D drive then floppy disk drive for booting puporse
E, A,SCSI	System will first search the hard disk E drive then floppy disk drive for booting puporse
F, A,SCSI	System will first search the hard disk F drive then floppy disk drive for booting puporse
SCSI, A, C	System will first search the SCSI hard disk drive then floppy disk drive for booting puporse
SCSI, C, A	System will first search the SCSI hard disk drive then hard disk drive for booting puporse
C only	System only search the harddisk drive for booting purpose
LS/ZIP, C	System will first search the LS120 drive then hard disk drive for booting purpose

Note: This function is only available for IDE type

Swap Floppy Drive

Enabled	Enable Floppy Drives A and B Swap function
Disabled	Disable Floppy Drives A and B Swap function

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 720K, 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 be no warning message if the drive installed is 360K.

Boot Up NumLock Status

The default value is On.

On	Keypad is number keys after boot-up
Off	Keypad is arrow keys after boot-up

Boot Up System Speed

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

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

Gate A20 Option

This entry allows you to select how the gate A20 is handled. The gate A20 is a device used to address memory above 1 Mbytes. Initially, the gate A20 was support, it is more common, and much faster, for the chipset to provide support for A20.

Normal	Handling gate A20 by keyboard
Fast	Handling gate A20 by chipset

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)

When the typematic rate setting is enabled, this selection allows you select the rate at which the key 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 setting is enabled, this selection 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
0	

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.

PCI/VGA Palette Snoop

It determines whether the MPEG ISA/VESA VGA cards can work with PCI/VGA or not.

Enable	When PCI/GA works with MPEG ISA/VESA VGA card
Disable	When PCI/VGA doesn't work with MPEG ISA/VESA card

OS Select For DRAM > 64MB

This item allows you to access the memory that over 64MB in OS2

Non-OS2	OS2 cannot access the memory address over 64MB
OS2	OS2 can access the memory address over 64MB

Video BIOS Shadow

BIOS Shadow

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

Enabled	System shadow is enabled
Disabled	System shadow is disabled

Video ROM Shadow

It determines whether video ROM 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

C8000 - CBFFF Shadow / CC000 - CFFFF Shadow / D0000 - D3FFF Shadow /
D4000 - D7FF Shadow /D8000 - DBFFF Shadow / DC000 - DFFFF Shadow

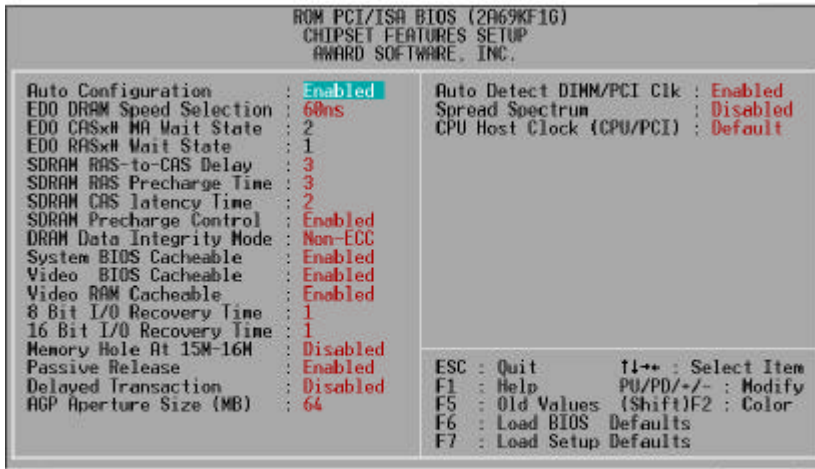
These categories determine whether optional ROMs will be copied to RAM. An example of such option ROM would be support of SCSI add-on card.

Enabled	Optional shadow is enabled
Disabled	Optional shadow is disabled

Cyrix 6x86/MII CPUID

The choice : enable, disable

Chipset Features Setup Menu



Bank 0/1, 2/3 DRAM Timing

This value in this field is set by the system board manufacturer, depending on whether the board has synchronous DRAMs

The Choice: SDRAM 10ns, SDRAM 8ns, Normal, Medium, Fast, Turbo.
SDRAM Cycle Length

This field sets the CAS latency timing.

The Choice: 2, 3.

DRAM Read Pipeline

You may select Enabled for this field when PDSRAMs are installed. Pipelining improves system performance.

The Choice: Enabled, Disabled.

Sustained 3T Write

This item allow you to enable or disable direct map write back / write through secondary cache.

The Choice: Enabled, Disabled.

Cache Rd+CPU Wt Pipeline

This item allows you to enable/disable the cache timing.

The Choice: Enabled, Disabled.

Cache Timing

The Choice : Fast, Fastest

Video BIOS Cacheable

When enabled. The Video BIOS cache will cause access to video BIOS addressed at C0000H to C7FFFH to be cached, if the cache controller is also enabled

The Choice: Enabled, Disabled.

System BIOS Cacheable

As with caching the Video BIOS above, enabling this selection allows accesses to the system BIOS ROM addressed at F0000H-FFFFFH to be cached, provided that the cache controller is enabled.

The Choice: Enabled, Disabled.

Memory Hole

In order to improve performance, certain space in memory is reserved for ISA cards. This memory must be mapped into the memory space below 16MB.
The Choice: Disabled, 15M-16M, 14M-16M.

Aperture Size

Select the size of Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation. See www.apgforum.org for AGP information.
The Choice: 4M, 8M, 16M, 32M, 64M, 128M, 256M.

OnChip USB

Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have a USB peripheral.
The Choice: Enabled, Disabled.

USB Keyboard Support

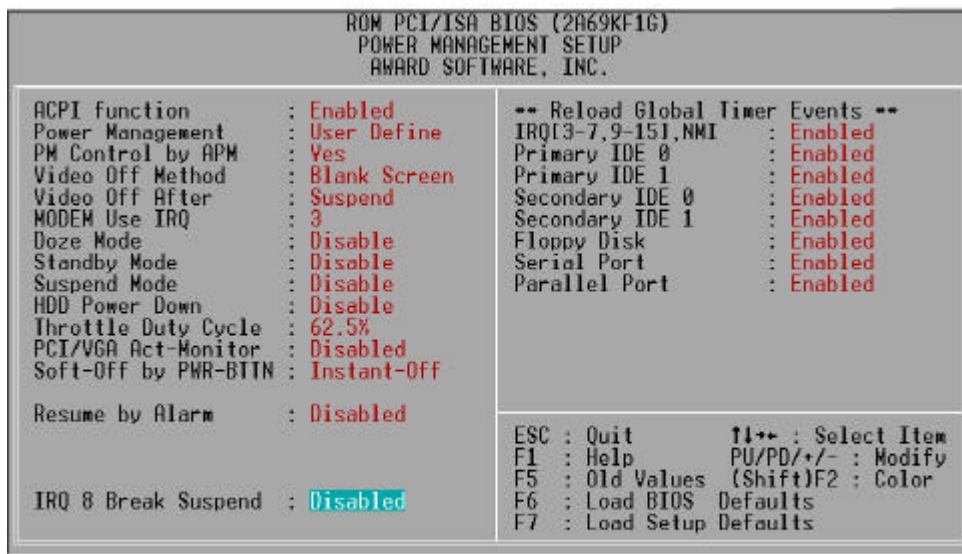
Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.
The Choice: Enabled, Disabled.

Power Management Setup

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

Power Management

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



1. Doze Mode
2. Suspend Mode

3. HDD Power Down

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.

PM Control APM

When enabled, an Advanced Power Management device will be activated to enhance the Max. Power Saving mode and stop the CPU internal clock. If Advance Power Management (APM) is installed on your system, selecting Yes gives better power savings.

If the Max. Power Saving is not enabled, this will be preset to *No*.

Video Off After

When enabled, this feature allows the VGA adapter to operate in a power saving mode.

N/A	Monitor will remain on during power saving modes.
Suspend	Monitor blanked when the systems enters the Suspend mode.
Standby	Monitor blanked when the system enters Standby mode.
Doze	Monitor blanked when the system enters any power saving mode.

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 write 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.

MODEM Use IRQ

This determines the IRQ in which the MODEM can use.

The choice: 1, 3, 4, 5, 7, 9, 10, 11, NA.

Soft-Off by PWRBTN

When Enabled, turning the system off with the on/off button places the system in

a very low-power-usage state, with only enough circuitry receiving power to detect power button activity or Resume by Ring activity.

The choice: Delay 4 Sec, Instant Off.

PM Timers

The following three modes are Green PC power saving functions which are only user configurable when User Defined Power Management has been selected.

See above for available selections.

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.

Doze Mode

When enabled and after the set time of system inactivity, the CPU clock will run at slower speed while all other devices still operate at full speed.

Suspend Mode

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

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 On, even when the system is in a power down mode.

VGA

When set to On (default), any event occurring at a VGA port will awaken a system which has been powered down.

LPT & COM

When set to On (default), any event occurring at a COM(serial)/LPT (printer) port will awaken a system which has been powered down.

HDD & FDD

When set to On (default), any event occurring at a hard or floppy drive port will awaken a system which has been powered down.

DMA/master

When set to On (default), any event occurring to the DMA controller will awaken a system which has been powered down.

Primary INTR

When set to *On* (default), any event occurring at will awaken a system which has been powered down.

The following is a list of IRQ' s, Interrupt **Re**Quests, which can be exempted much as the COM ports and LPT ports above can. 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.

As above, the choices are *On* and *Off*. *Off* is the default.

When set *On*, activity will neither prevent the system from going into a power management mode nor awaken it.

IRQ3 (COM 2)

IRQ4 (COM 1)

IRQ5 (LPT 2)

IRQ6 (Floppy Disk)

IRQ7 (LPT 1)

IRQ8 (RTC Alarm)

IRQ9 (IRQ2 Redir)

IRQ10 (Reserved)

IRQ11 (Reserved)

IRQ12 (PS / 2 Mouse)

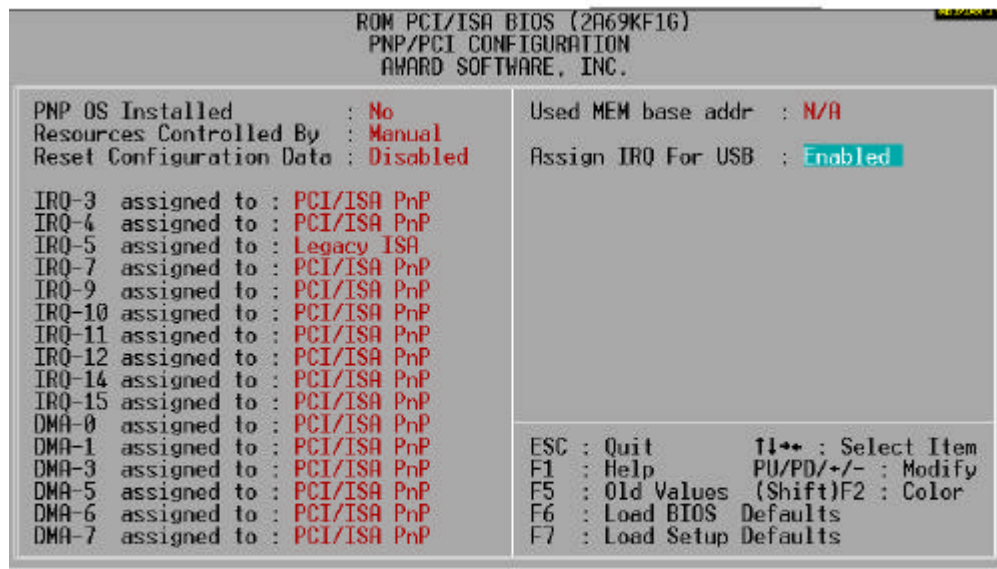
IRQ13 (Coprocessor)

IRQ14 (Reserved)

IRQ15 (Reserved)

PNP/PCI Configuration Setup

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



PNP OS Installed

Select Yes if the system operating environment is Plug-and-Play aware (e.g., Windows 95).

The Choice: Yes and No.

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.

The choice: Auto and Manual.

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 and Disabled .

CPU to PCI Write Buffer

When enabled, up to four D words of data can be written to the PCI bus without interrupting the CPU. When disabled, a write buffer is not used and the CPU read cycle will not be completed until the PCI bus signals that it is ready to receive the data..

The choice: Enabled, Disabled.

PCI Dynamic Bursting

When Enabled, data transfers on the PCI bus, where possible, make use of the high-performance PCI bust protocol, in which greater amounts of data are transferred at a single command..

The choice: Enabled, Disabled.

PCI Master 0 WS Write

When Enabled, writes to the PCI bus are command with zero wait states.

The choice: Enabled, Disabled.

PCI Delay 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.

PCI Master Read Prefetch

This item allows you enable/disable the PCI Master Read Prefetch.
The choice: Enabled, Disabled.
PCI #2 Access #1 Retry

This item allows you enable/disable the PCI #2 Access #1 Retry.
The choice: Enabled, Disabled.
AGP Master 1 WS Write

This implements a single delay when writing to the AGP Bus. By default, two-wait states are used by the system, allowing for greater stability.
The choice: Enabled, Disabled.
AGP Master 1 WS Read

This implements a single delay when reading to the AGP Bus. By default, two-wait states are used by the system, allowing for greater stability.
The choice: Enabled, Disabled.

Assign IRQ For USB/VGA

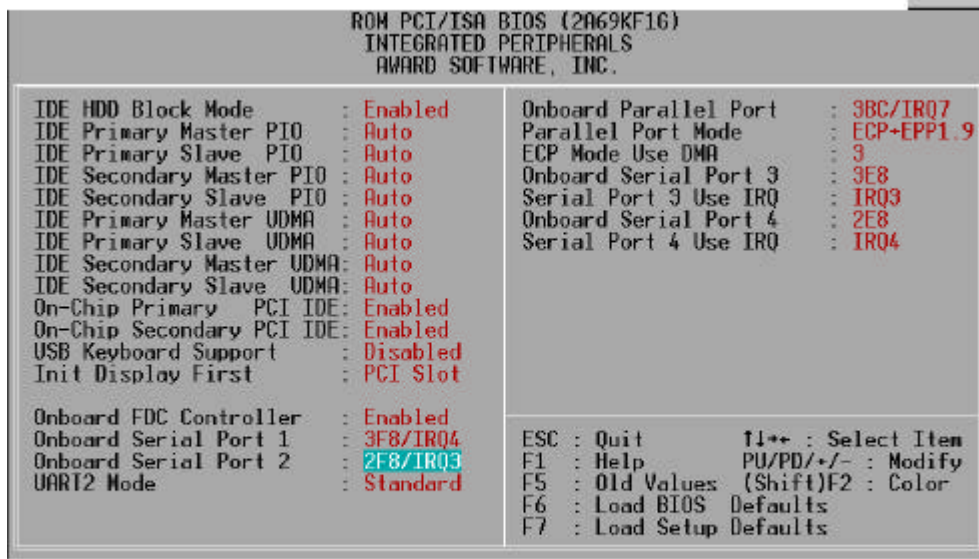
This item allows you enable/disable to assign a system interrupt for USB or VGA.
The choice: Enabled and Disabled

Integrated Peripherals

OnChip Channel 1

This chipset contains a PCI IDE interface with support for two IDE channels. Select Enabled to activate the first and/or second IDE interface. Select Disabled to deactivate this interface, if you install a first and/or second add-in

PH 04/96



IDE interface IDE interface.

Enabled	First HDD controller used – Default
Disabled	First HDD controller not used.

OnChip Channel 2

This chipset contains a PCI IDE interface with support for two IDE channels. Select Enabled to activate the first and/or second IDE interface. Select Disabled to deactivate this interface, if you install a first and/or second add-in IDE interface IDE interface.

Enabled	Second HDD controller used
Disabled	Second HDD controller not used.

IDE Prefetch Mode

Enable prefetching for IDE drive interfaces that support its faster drive accesses. If you are getting disk drive errors, change the setting to omit the drive interface where the errors occur. Depending on the configuration of your IDE subsystem, this field may not appear, and it does not appear when the Internal PCI/IDE field, above, is Disabled.

The choice: Enabled, Disabled.

IDE HDD Block Mode

This item allows your hard disk controller to use the fast block mode to transfer data to and from your hard disk drive (HDD). Select Enabled only if your hard drives support block mode.

Enabled	IDE controller uses block mode.
Disabled	IDE controller uses standard mode.

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.

Auto	System will auto detect the best working type for your harddisk
Mode 0	Assign the harddisk's PIO working type to Mode 0 (Max. access time = 600ns, Max. speed = 3.3MB/sec.)
Mode 1	Assign the harddisk's PIO working type to Mode 1 (Max. access time = 383ns, Max. speed = 5.2MB/sec.)
Mode 2	Assign the harddisk's PIO working type to Mode 2 (Max. access time = 240ns, Max. speed = 8.3MB/sec.)
Mode 3	Assign the harddisk's PIO working type to Mode 3 (Max. access time = 180ns, Max. speed = 11.1MB/sec.)
Mode 4	Assign the harddisk's PIO working type to Mode 4 (Max. access time = 120ns, Max. speed = 16.6MB/sec.)

IDE Primary/Secondary Master/Slave UDMA

Ultra DMA/33 implementation 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, select Auto to enable BIOS support.

The Choice: Auto, Disabled

Onboard FDD Controller

This should be enabled if your system has a floppy disk drive (FDD) installed on the system board and you wish to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature.

The choice: Enabled, Disabled.

Onboard Serial Port 1/Port 2

This item allows you to determine access onboard serial port 1/port 2 controller with which I/O address.

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

This item allows you to determine which Infra Red (IR) function of onboard I/O chip.

Standard	RS232 will work in FIFO standard mode
HPSIR	RS232 will work in Half Phase Serial Infra Red mode
ASKIR	RS232 will work in Amplitude Shift Keyed Infra Red mode

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. Normal EPP (Extended Parallel Port) ECP (Extended Capabilities Port) CEP+EPP PC AT parallel port Bi-directional port Fast, buffered port Fast, buffered, bi-directional port.

Select Normal unless you are certain your hardware and software both support EPP or ECP mode.

The choice: SPP, ECP/EPP, ECP, EPP/SPP.

ECP Mode Use DMA

Select a DMA channel for the parallel port for use during ECP mode.

The choice: 3, 1.

Parallel Port EPP Type

This item allows you to determine the IR transfer mode of onboard I/O chip.

The choice: EPP1.9, EPP1.7.

Appendix B. Fast Ethernet Controller

The Book PC 1000 series supports LAN Riser Card option for bundled with Intel 82559ER /82559C LAN chip, RTL 8139C LAN chip. or UM9008 LAN chip. Below is the basic feature about the LAN chip.

1.The Feature of Intel 82559ER Fast Ethernet PCI Controller

- Integrated IEEE802.3 10BASE-T and 100BASE-TX compatible PHY
- ACPI and PCI Power Management
- Power management event on “interesting” packets and link status change support
- 3 Kbyte transmit and 3 Kbyte receive FIFO’ s
- Fast back-to-back transmission support with minimum interface spacing
- Efficient dynamic standby mode
- Deep power down support
- Clockrun protocol support

2.The Feature of Intel 82559C Fast Ethernet PCI Controller

- Integrated IEEE802.3 10BASE-T and 100BASE-TX compatible PHY
- Modem interface for combination solution in PCI, CardBus, and MiniPCI design
- PXE Support in Combo Design
- Integrated power management function
- ACPI and PCI Power Management
- Wake on “interesting” packets and link status change support
- Magic Packet support
- Remote power up support
- 3 Kbyte transmit and 3 Kbyte receive FIFO’ s
- Fast back-to-back transmission support with minimum interface spacing
- Efficient dynamic standby mode
- Deep power down support
- Clockrun protocol support

3. The Feature of Reltek8139C Fast Ethernet PCI Controller

- Supports 10Mb/s and 100Mbps N-way Auto negotiation operation
- Supports Wake-On-LAN function and remote wake-up(Magic-Packet, LinkChg and Microsoft wake-up frame)
- Supports 4 Wake-On-LAN (WOL) signals (active high, active low, active pulse, and negative pulse)
- Half/Full duplex capability
- Supports Full/Duplex Flow Control (IEEE 802.3x)

4.The Feature of UM9008 10Base-T Ethernet Card

- 100% compatibility with Novell NE2000
- Full compliance with IEEE 802.3 Ethernet standards
- 110Mbps network data transfer rate
- 116KBytes RAM data buffer
- On-board socket for boot ROM
- Support for 10Base-T (UTP) network cabling