CS & CD Series

User’s Manual

Installation Guide Revision JU21

Contents

SECTION 1

INTRODUCTION

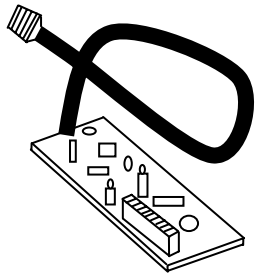
1.1 Unpacking CS-00B / CS-10B / CD-10S Series

1.Take out the CS-00B/CS-10B/CD-10S series unit from the carton box, check if the unit is properly secure in the pearl bag

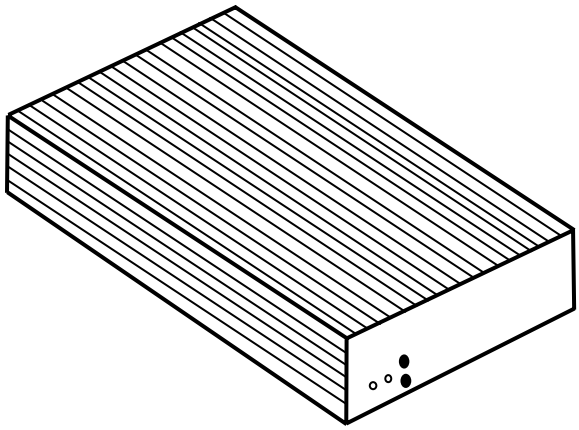
2.Check the contents of the carton box:

a. Chassis main box

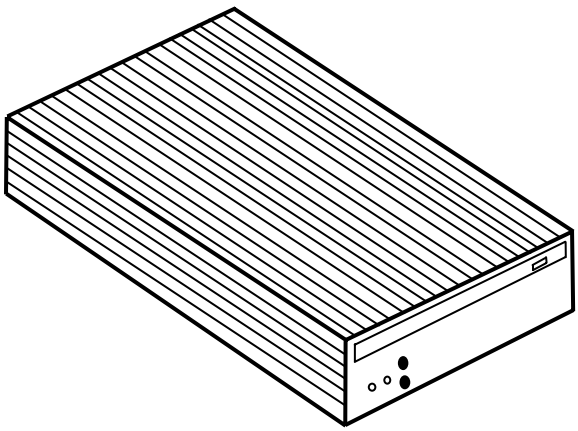
- Embedded 90W DC-to-DC 19V-to-ATX power conversion board x1



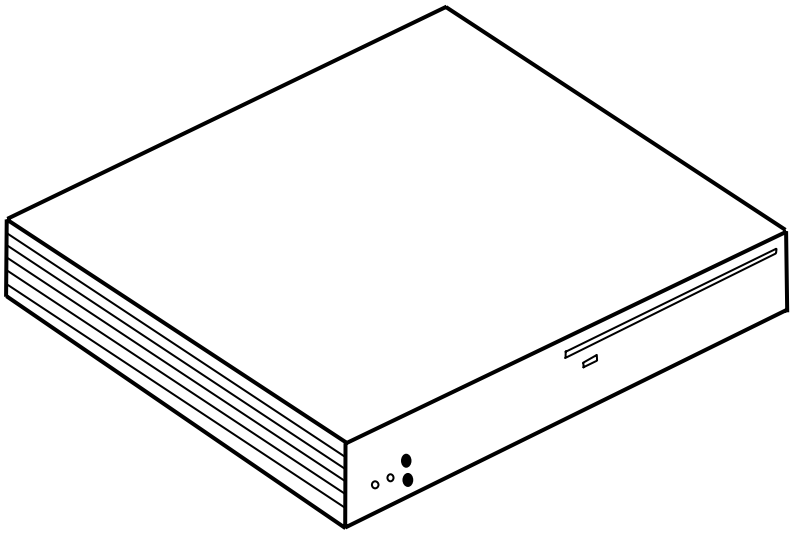
- (CS-00B option):
  - CS-00B chassis without DVD-slot-reserved front panel x1



- (CS-10B option):
  - CS-10B chassis with DVD-slot-reserved front panel x1

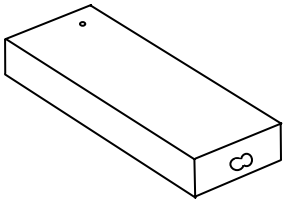


- (CD-10S option):
    - CD-10S chassis with DVD-slot-reserved front panel x1



b. Chassis accessory box

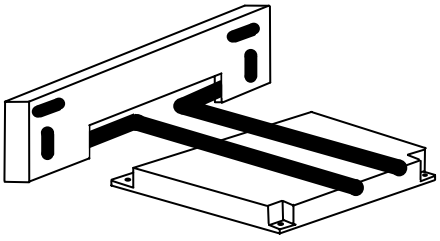
- 120W AC-to-DC(AC110/220V to DC19V) adaptor x1



- AC110/220V power cord x1

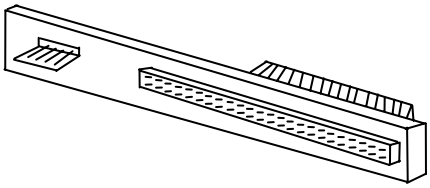
- ATX power cord x1

- Heatpipe(Intel^{R} / VIA^{R}) x1



- (CS-10B/CD-10S option):

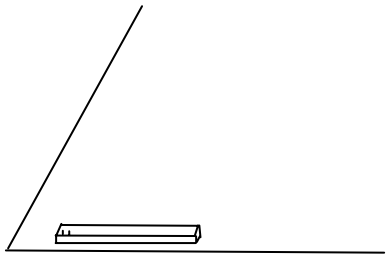
- DVD Back Panel connector with 2 screws x1



- Part bag x1
    1. Screws for 3.5”HDD(6-32*5) x4
    2. Screws for 2.5”HDD(M3*5) x4
    3. Screws for DVD(M2*3) x4
    4. Screws for motherboard(M3*5) x4
    5. Heatsink for northBridge x1
    6. Plastic fan fixators for VIA motherboard x2
    7. Plastic fillets x3
    8. Plastic fillet fixator x2
    9. Heat sink compound injector x1
    10. Heat sink sticker x1

c. Industrial motherboard PWI-8552 box

- Industrial Motherboard PWI-8552 x1



- ATA-33/66 HDD bus cable x2
- Com port cable(for RS-232) x1
- Back IO-Shield x1
- Fan/Heatpipe fixing screwsets(screws and nuts) x4
- Driver CD x1

1.2 Description

The CS-00B / CS-10B series combine the high performance and exceptional value of Intel^{R} 855GME chipset with a full-featured, new generation, industrial motherboard, housed in sleek and stream-lined Chassis CS-00B / CS-10B. Intel^{R} advanced 855GME chipset support socket 478-pins Intel Pentium-M/Celeron-M processor of 1.3GHz and up to 2.0GHz(Dothan^{TM} Core), that memory base on the FSB 400MHz operation supports DDR SDRAM interface. The PWI-8552 system memory size can be up to 1GB DDR memory, with onboard one 10/100 RJ45 ethernet connector, Audio Line-out and one COM ports. Because the PWI-8552 with four USB2.0 ports on the rear panel and two internal USB2.0 ports. They are for high-end applications

The I/O Controller Hub(ICH4) employs the Intel^{R} Accelerated Hub Architecture to make a direct connection from the graphic and memory, the IDE controllers(ATA/33 or ATA/66), six USB ports that are supported USB1.1/2.0 standard meets the performance, stability and reliability requirements.

As for its chassis CS-00B / CS-10B, the 00B series is designed for 3.5” HDD and the 10series is designed for both 2.5”HDD and DVD player/burner.

This Mini system is well supported with the Windows^{R} 98/2000/XP/NT and Linux^{R} operation system.

1.3 Features

1.3.1 Graphic

DVI interface is especially for digit video output

1.3.2 HDD

2 SATA connector

2 ATA IDE connectors

1.3.3 Ethernet

10/100 RJ45 x1

1.3.4 I/O connectivity – ICH4

6 hi-speed USB 2.0DVI interface

7.1 channel(Realtek 850) with S/PDIF RCA connector

DB9 RS-232 / RS-485 Pin Header

6-pin SIR / ASKIR

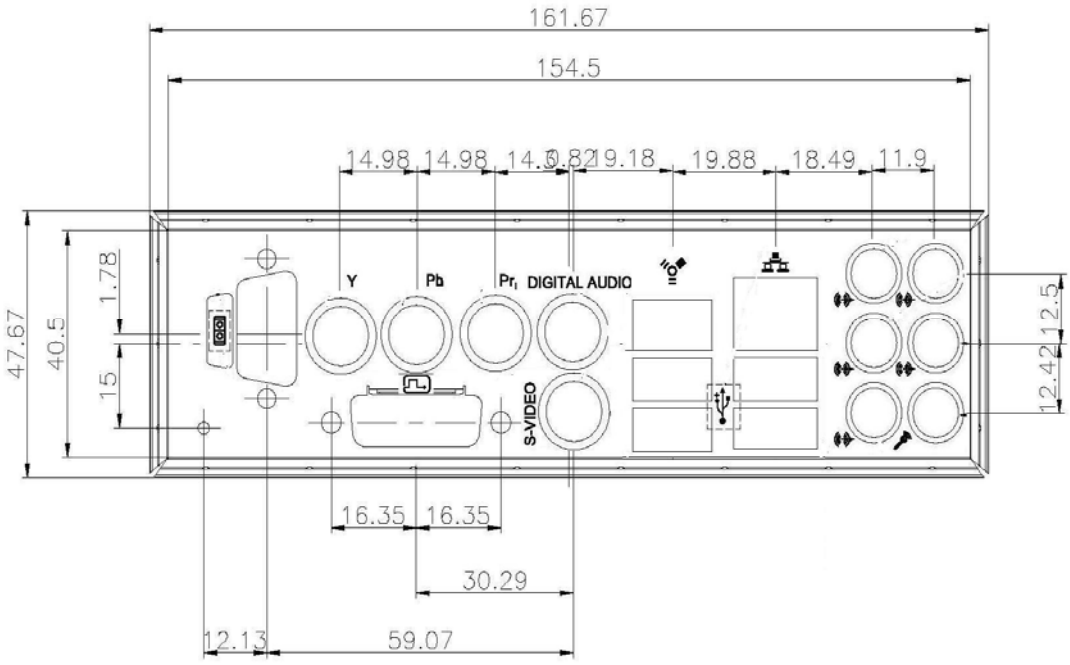
S-Video

YPbPr RCA connector

PCI

Mini PCI

1.3.5 I/O Shield Connector



1.3.6 Hardware Monitoring

Hardfware monitoring allows you to monitor various aspects of your system operations and status . The features include CPU temperature, voltage and RPM of fan.

1.3.7 Power-On Off

The board has a single 20-pins connector for ATX power supplies. For ATX power supplies that support the Remote On/Off feature(Watch Dog Support), this should be connected to the systems front panel for system Power On / Off button. The systems power On / Off button should be a momentary button that is normally open.

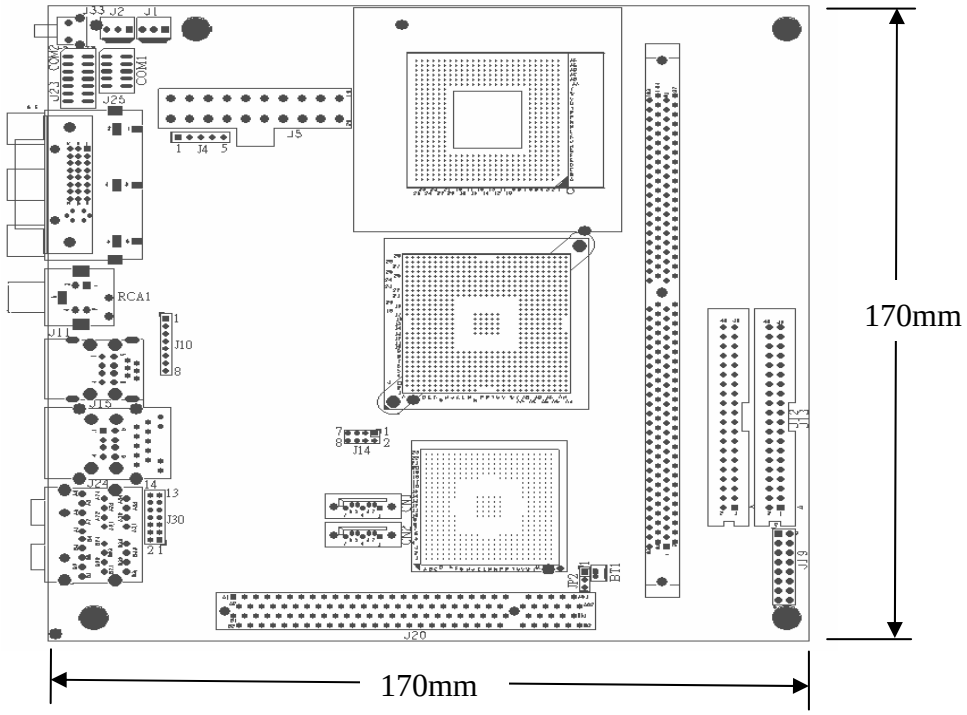
The board has been designed with “Soft Off” functions. You can turn off the system from one of two sources: The first is the front panel Power On / Off the putton, and the other is the “Soft Off” function(coming from the M/B onboard circuit controller) that can be controlled by the operating system such as Windows^{R} 98 / 2000 / XP / NT or Linux^{R}

1.4 Specifications

Form Factor	Mini-ITX (170mm x 170mm)
Processor	Intel Pentium-M/ Celeron-M
Chipset	855GME + ICH4
Memory	Max. 1GB DDR333 DIMMx1
Ethernet	10/100 RJ45 x1
IEEE 1394	IEEE 1394 x 1
VGA	DVI-I X 1

TV-out	S-Video (connector) x 1; RCAx1
USB support	USB 2.0 x 6 (Pin Head X 2; Connector X 4)
SPDIF	SPDIF coaxial RCA Connector x 1
Bus Expansion	PCI X 1, Mini PCI
Serial Ports	DB9 RS-232/ RS485 X 2/ Pin Header (BIOS Select)
GPIOs	4in/ 4out, TTL level pin header
IDE Support	Dual IDE , 4 drive support, Ultra DMA 33 / 66
SATA	SATA connector X 2
Audio	7.1 channel (Realtek 850) S/PDIF RCA connector x 1, Stereo Out, Line Out, Mic In, Line In via stacked audio jacks x 1
IrDA	6-pin SIR/ ASKIR (BIOS Select)
LEDs & Switches	Reset switch;Power & HDD LEDs via ATX enclosure compatible interface
Power Management	ACPI 1.1; Power button support; no individual device control
Power Input	ATX Power connector x1
Speaker	Pin Header
Operating Temperature	0 to 50°C
Relative Humidity	5% to 90% non-condensing
Watch DOG Support	Yes
I/O shield	Standard I/O

1.5 Mechanical Dimensions



SECTION 2

INSTALLATION

2.1 System Installation

2.1.1 Motherboard Installation

2.1.1.1 CPU Installation

1.Check and confirm that you are going to install correctly CPU type and pin numbers(Figure 1)

2.Take the screwdriver and releasing screw-nut of the socket 478

3.Rotate mark of screw-nut to face the “OPEN”

4.Align the pins of the CPU against the pinholes of the socket 478. Be sure to pay attention to the orientation of the CPU

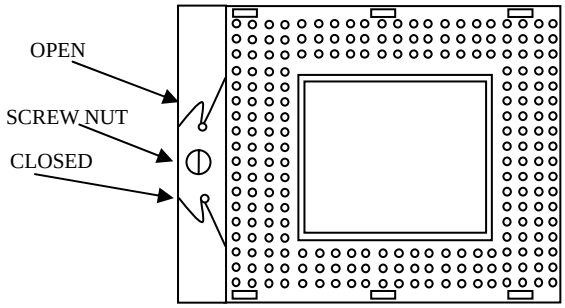


Figure 1:CPU Socket

5. Push down the CPU into the socket 478

6.Rotate mark of screw-nut to face the “CLOSED”

7.Place the CPU cooling fan atop the CPU surface

8.Push down the opposite side of the ZIF clip and hook it

9.Connect the cooling fan cable to the socket as shown below. Be careful not to place the cable on the CPU cooling fan

Removing a CPU

1.Before removing the CPU, turn off the system power; then wait for about 20 minutes until the heat radiation plate of the cooling fan and the CPU cools down

2.Rotate mark of screw-nut to face the “OPEN”

3.To remove the CPU

NOTE: The CPU and the heat radiation plate are hot. They may cause burns

To remove the CPU, reverse the installation steps

2.1.1.2 HeatPipe Installation

Make sure that good contact is made between the processors and the heatpipe.

Insuffucuent contact, incorrect types of heatpipe or thermal compound used or improper amount

of thermal compound applied on the CPU die can cause the processors to overheat, which may crash the system.

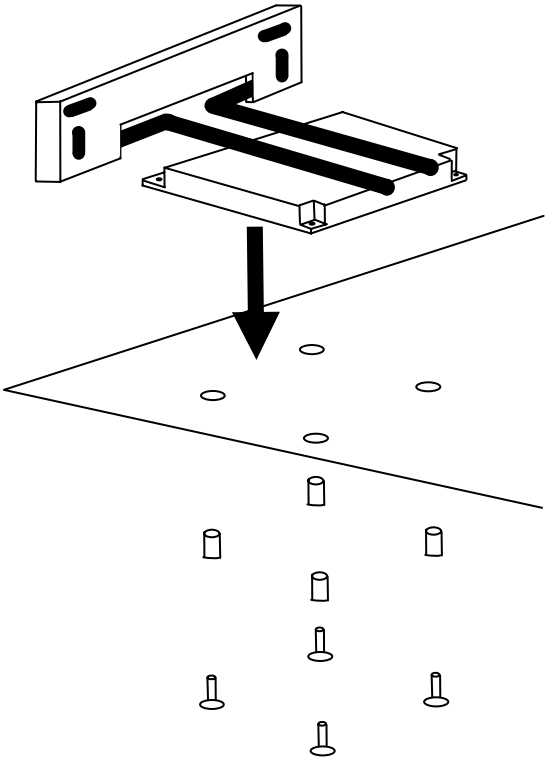


Figure 2:HeatPipe Installation

2.1.1.3 Memory Module Installation

Figure 3 display the notch marks and what they should look like on your DIMM memory module. DIMM have 184-pins and two notches, that will match with the onboard DIMM socket. DIMM modules are installed by placing the chip firmly into the socket at a 90-degree angle and pressing straight down(figure 4) until it fits tightly into the DIMM socket

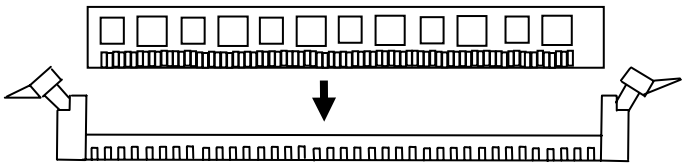


Figure 3:DIMM Memory and 184-pins Socket

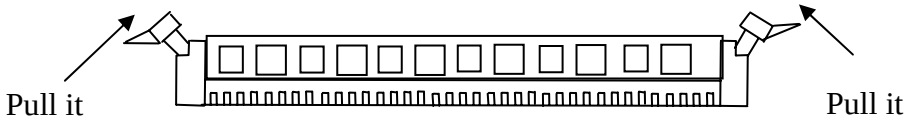


Figure 4:Memory Installation

Carefully follow the steps below in order to install the DIMMs:

1. To avoid generating static electricity and damaging the DIMM, ground yourself by touching a

grounded metal surface or using a ground scrap before you touch the DIMM

2. Do not touch the connector of the DIMM. Dirt residue may cause a malfunction
3. Hold the DIMM with its notch to the front side of the motherboard and insert it completely into the socket. A DIMM should be inserted into the inner socket first. Suiding the hole at each end of the DIMM over the retaining post at each end of the DIMM socket
4. If you install two DIMMs, install the second DIMM using the same procedure as above
5. If DIMM does not go in smoothly, do not force it. Pull it all the way out and try again
6. Make sure the DIMM is properly installed and looked by the tabs on both sides of the socket

Removing a DIMM

To remove the DIMM, use your fingers or a small screwdriver to carefully push away the plastic tabs that secure the DIMM at each end. Lift it out of the socket.

Make sure you store the DIMM in an anti-static bag and must be populated the same size and manufactory of the memory modules

2.1.1.4 Setting Jumpers and DIP Switches

There are jumpers and DIP-switches on the Embedded Board of the motherboard. You can set the jumpers to make the necessary operations.

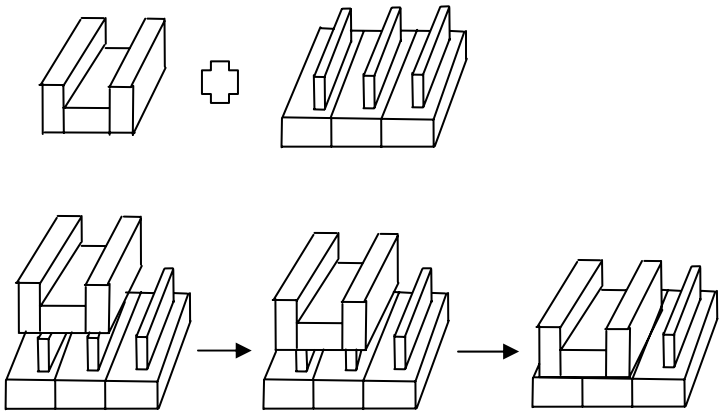


Figure 5:Jumper Connector

For any three-pins jumpers(figure 5), the jumper setting is 1-2 when the jumper connects pin1 and pin2. The setting is 2-3 when pin2 and pin3 are connected and so on. You see a number “1” and a “3” printed on the circuit board to identify these pins. And also, there is a second way of indication – one of the lines surrounding jumpers is thick, which indicates pin NO.1.

To remove a jumper from one position to another, use needle-nose pliers or tweezers to pull the pin cap off the pins and move it to the desired position.

2.1.2 Chassis Installation

2.1.2.1 Motherboard Mounting Installation

After finishing the installation of motherboard, what we have to do next is to mount the installed motherboard onto chassis CS-00B / CS-10B. Steps are as follows:

1.Open the lid of chassis

2.Install the back I/O shield of motherboard first; please insert it onto the chassis back open frame

3.Place the installed motherboard to align with the screw holes on the chassis floor; once mounted, then screw the motherboard's 4 cornors onto chassis.

Be aware: during placing the motherboard onto chassis, the installed heatpipe could be a obstacle for that. Try some pushing and pulling to set the heatpipe to its correct notching position

2.1.2.2 HardDisk / DVD Dive Installation:

1.Uninstall the harddisk rack from the chassis

2.Mount the HDD / DVD Drive:

- (CS-00B/CD-10S option): only 3.5"HDD can be installed
    i. Take out the 3.5" HDD left and right brackets from accessory pack
    ii. Screw them to the HDD brace
    iii. Mount the HDD to that screwed bracket on the brace
    iv. Screwdrive the HDD with the proper attached screws
    v. Connect the IDE cable to 3.5"HDD
    vi. Connect the big 4P power cable to to 3.5"HDD
- (CS-10B/CD-10S option): 2.5"HDD and DVD drive can be installed

    [2.5"HDD]:
    i. Uninstall HDD brace from chassis
    ii. Screw the 2.5" HDD onto back(lower) side of the brace
    iii. Mount the 44pin-to-40pin connecting adaptor to 2.5"HDD
    iv. Connect the IDE cable to that connecting adaptor
    v. Connect the big 4P power cable to that connecting adaptor

    [DVD drive]:
    i. Screw the DVD Drive onto the front(upper) side of the brace
    ii. Mount the DVD back panel to DVD drive
    iii. Connect the IDE cable to that back panel
    iv. Connect the small 4P power cable to that back panel
    v. Re-install HDD brace back to its original chassis position

3.Connect the HDD/DVD drive IDE cable to individual motherboard IDE slot

2.1.2.3 PCI Riser Card Iinstallation(for CD-10B only)

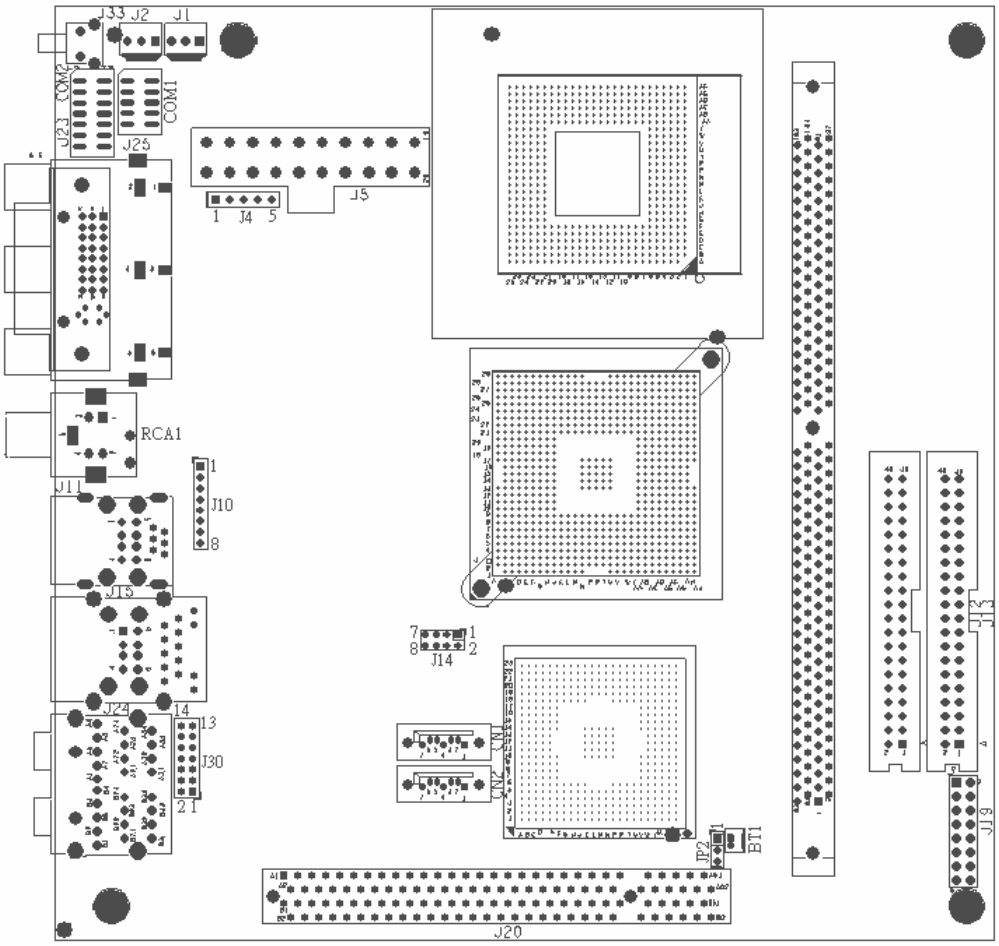
1.remove the chassis back PCI fixing screw

2.plug in the PCI card into the one of the 2 PCI slot on that PCI riser card

3.fix the PCI card onto the chassis back open slot(reserved for PCI card installation)

4.screw the PCI fixing screw again to stabilize the PCI card

. 2.2 Board layout



. 2.3 Jumper Setting

JP2: Clear CMOS Setup

JP2	DESCRIPTION
1-2	Normal Operation (Default)
2-3	Clear CMOS Setup

J19: System Panel Connectors

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	Power LED	2	HDD LED
3		4	
5		6	Power Button
7	Buzzer	8	
9		10	Reset
11		12	
13		14	N/A
15	N/A	16	N/A
17	N/A	18	N/A

19	N/A	20	N/A

J13, J12: Primary/ Secondary IDE Interface Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	RESET#	2	GROUND
3	DATA 7	4	DATA 8
5	DATA 6	6	DATA 9
7	DATA 5	8	DATA 10
9	DATA 4	10	DATA 11
11	DATA 3	12	DATA 12
13	DATA 2	14	DATA 13
15	DATA 1	16	DATA 14
17	DATA 0	18	DATA 15
19	GROUND	20	N/C
21	IDE DRQ	22	GROUND
23	IOW#	24	GROUND
25	IOR#	26	GROUND
27	IDE CHRDY	28	GROUND
29	IDE DACK	30	GROUND–DEFAULT
31	INTERRUPT	32	N/C
33	SA1	34	N/C
35	SA0	36	SA2
37	HDC CS0#	38	HDC CS1#
39	HDD ACTIVE#	40	GROUND

J11A/J15B: USB PART Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	USBVCC1	1	USBVCC2
2	D1F-	2	D2F-
3	D1F+	3	D2F+
4	USBGND1	4	USBGND2

J14: USB Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	USBVCC	1	GND
2	DATA4-	2	DATA5+
3	DATA4+	3	DATA5-
4	GND	4	USBVCC

J15A: 100M-LAN RJ45 PART Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	TX+	6	N/C
2	TX-	7	RX-
3	RX+	8	N/C
4	N/C	9	N/C

J10/J11B: 1394 PART Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	12V	1	12V
2	GND	2	GND
3	TPB1-	3	TPB0-
4	TPB1+	4	TPB0+
5	TPA1-	5	TPA0-
6	TPA1+	6	TPA0+
7	Chassis GND	7	Chassis GND
8	Chassis GND	8	Chassis GND

J5: ATX Power Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
11	NC	1	NC
12	-12V	2	NC
13	GND	3	GND
14	PS_ON	4	VCC5
15	GND	5	GND
16	GND	6	VCC5
17	GND	7	GND
18	NC	8	NC
19	VCC5	9	5VSB
20	VCC5	10	VCC5

J1/ J2: Fan Connector

PIN NO.	DESCRIPTION
1	Fan Speed Detect
2	+12V
3	GND

J24: Audio Connector

Center/Subwoofer Speaker Out : ORANGE	LINE IN: BLUE
Rear Speaker Out : BLACK	LINE OUT: GREEN
Side Speaker Out : GRAY	MIC IN: PINK

J4: IR

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	VCC5	2	IRTX
3	CIR	4	IRRX
5	GND		

COM1: Serial Port Connector (2*5-10pin 2mm Header)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	DCD	6	CTS
2	DSR	7	DTR
3	RX	8	RI
4	RTS	9	GND
5	TX	10	GND

COM2: Serial Port Connector (2*7-14pin 2mm Header)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	DCD	8	RI
2	DSR	9	GND
3	RX	10	GND
4	RTS	11	TX+
5	TX	12	TX-
6	CTS	13	RX+
7	DTR	14	RX-

J30: Audio Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	LINE IN R	2	LINE IN R(J24 JUMPER)
3	LINE IN L	4	LINE IN L(J24 JUMPER)
5	Gnd	6	Gnd
7	LINE OUT R	8	LINE OUT R(J24 JUMPER)
9	LINE OUT L	10	LINE OUT L(J24 JUMPER)
11	GND	12	GND
13	Front MIC1	14	Front MIC2

SECTION 3

BIOS SETUP

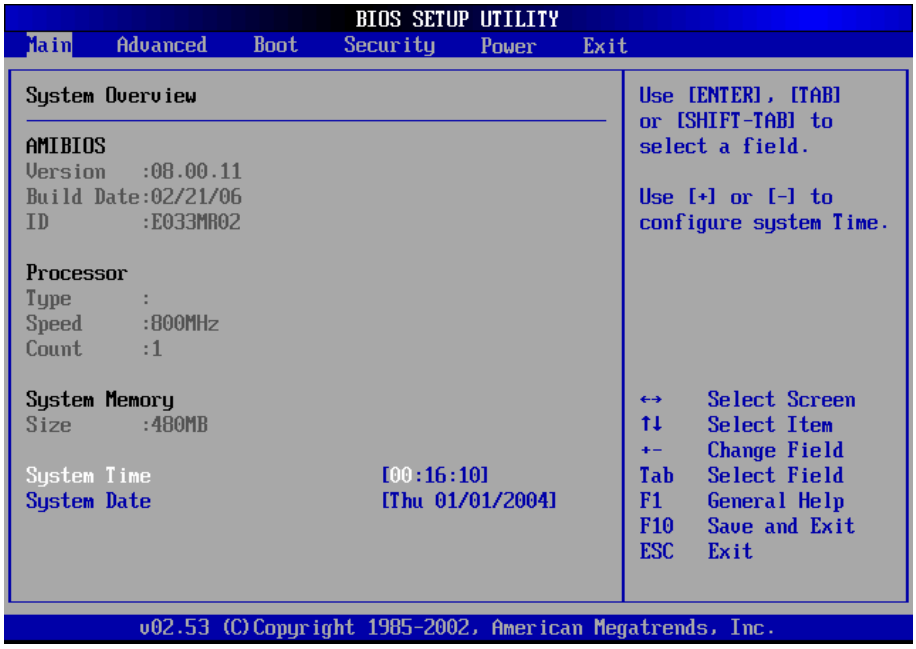
3.1 BIOS Instructions

AMI;s ROM BIOS provides a built-in Setup program, which allows user to modify the basic system configuration and hardware parameters. The modified data will be stored in a battery-backed CMOS, so that data will be retained even when the power is turned off. In general, the information saved in the CMOS RAM will stay unchanged unless there is a configuration change in the system, such as hard drive replacement or a device is added.

It is possible for the CMOS battery to fail, this will cause data loss in the CMOS only. If this does happen you will need to reconfigure your BIOS settings.

3.2 Main Menu

Once you enter the AMI's BIOS COMS Setup Utility, the Main Menu will appear on the screen. The Main Menu gives you the overview information of current hardware and device. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.



AMIBIOS:

Version/date/ID of this BIOS built

Processor:

Working CPU speed/Type

System Memory:

System memory size

System Time:

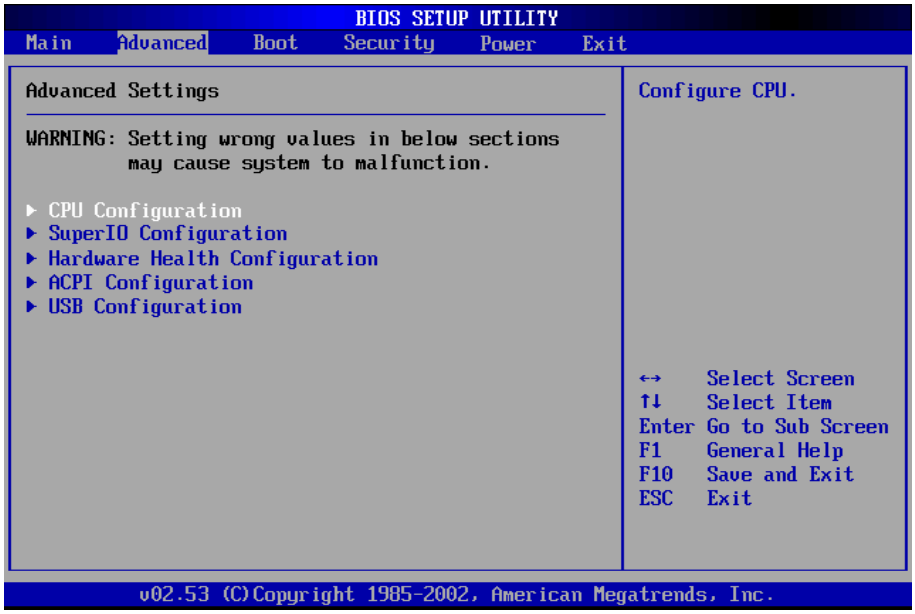
Adjust to correct time

System Date:

Adjust to correct date

3.3 Advanced Menu

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



CPU Configuration:

Configure CPU feature

SuperIO Configuration:

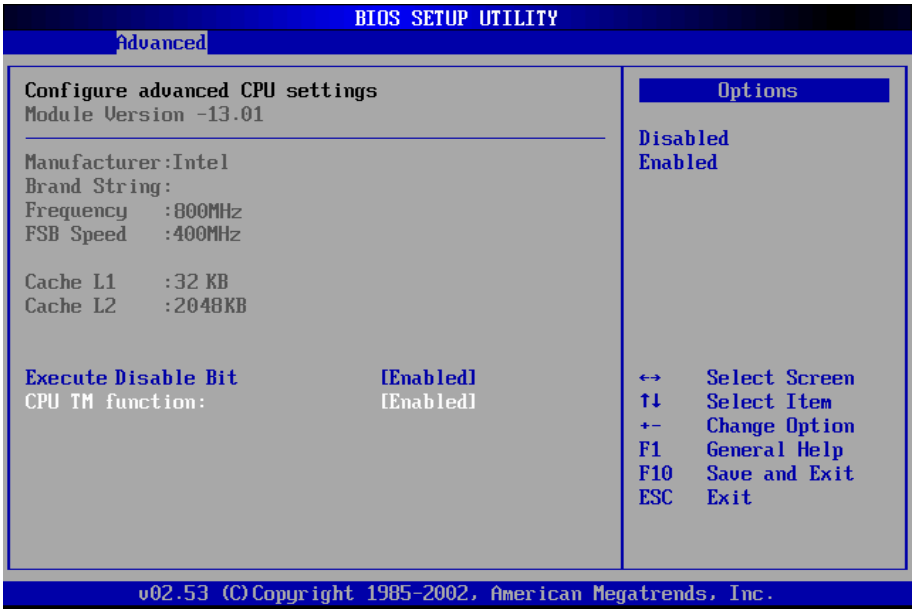
Configure serial port feature

Hardware Health Configuration:

Configure CPU/system working situation feature

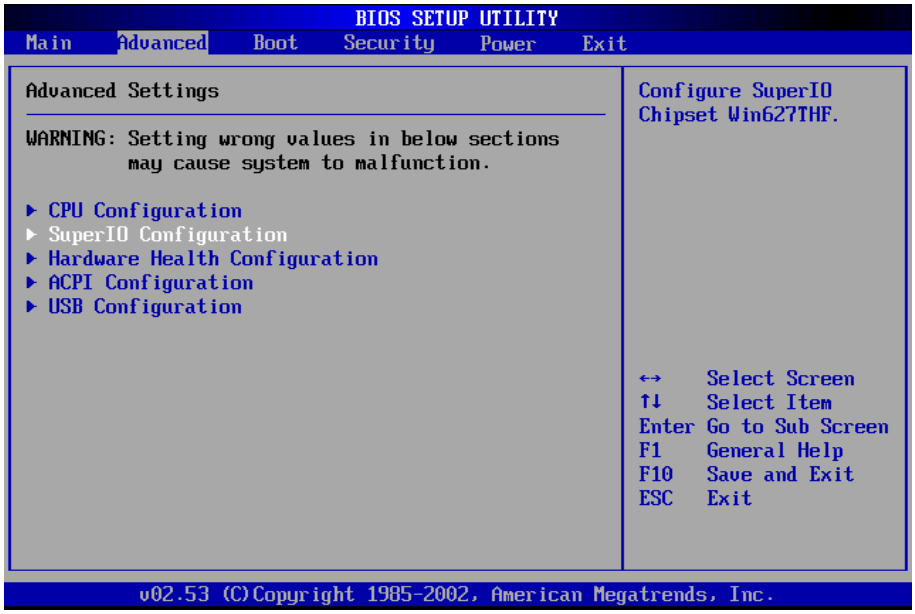
ACPI Configuration:

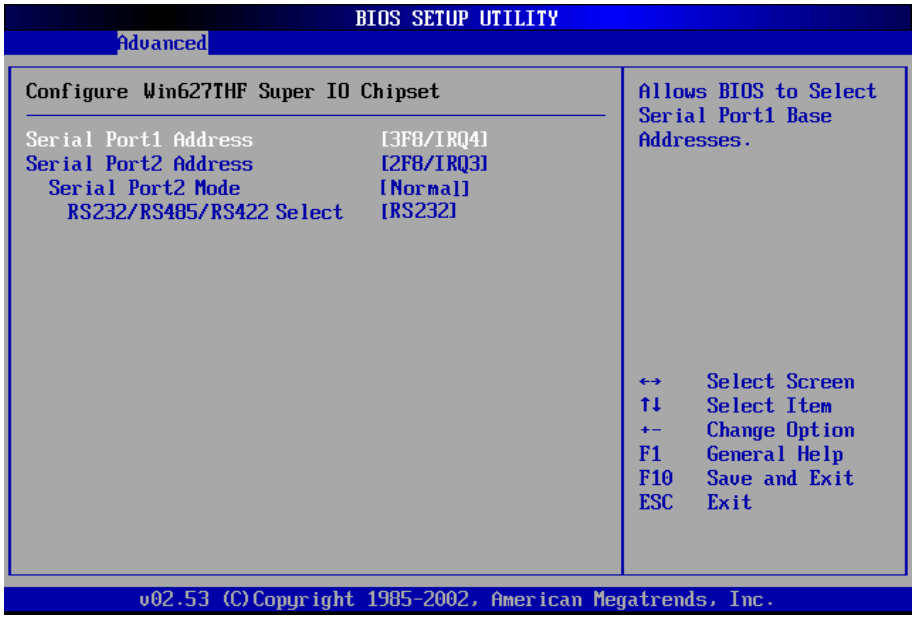
Configure system power management feature



3.3.1 Configure advanced CPU settings:

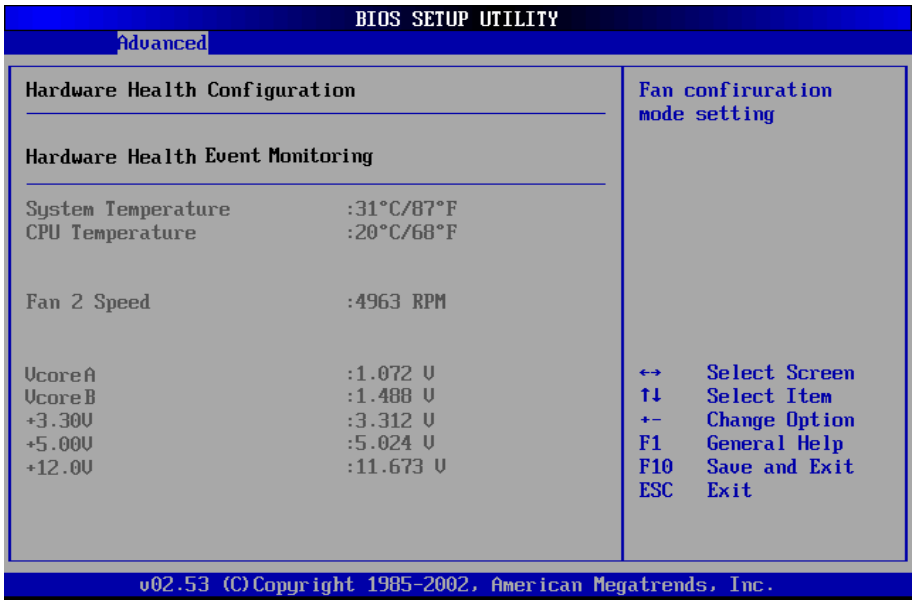
Display CPU more detailed information and configure CPU special feature





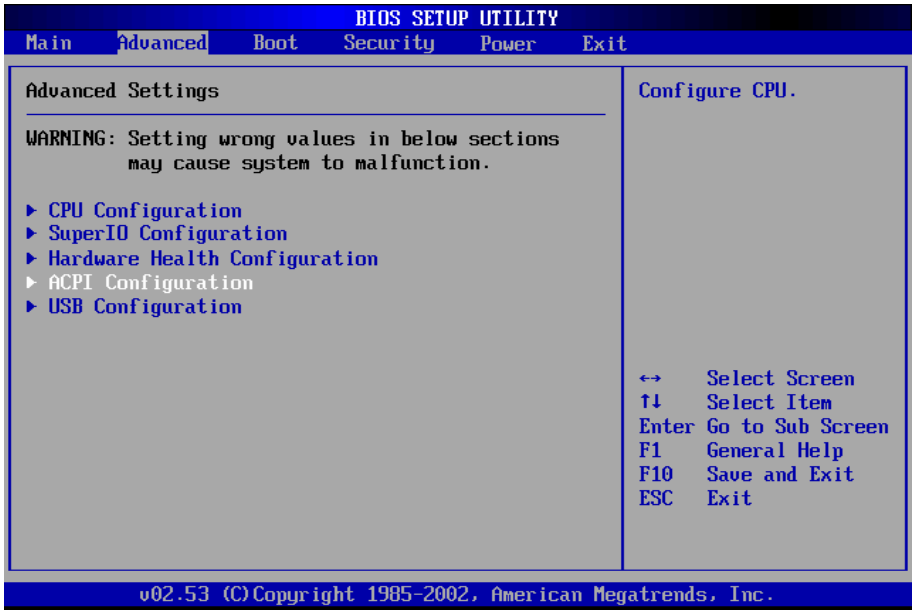
3.3.2 Configure Win627THF Super IO Chipset:

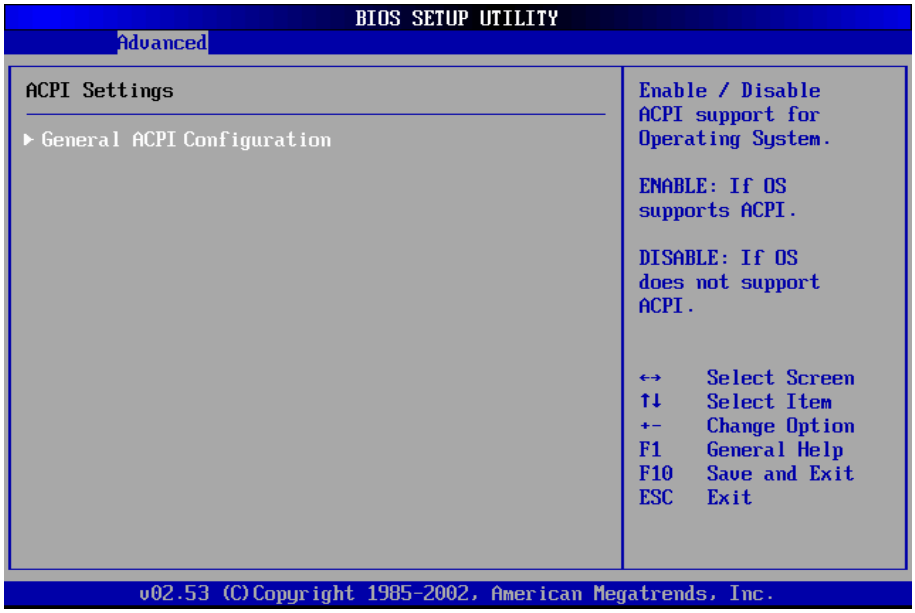
Configure serial port transportation method for RS2323/485/422 and COM port feature



3.3.3 Hardware Health Event Monitoring:

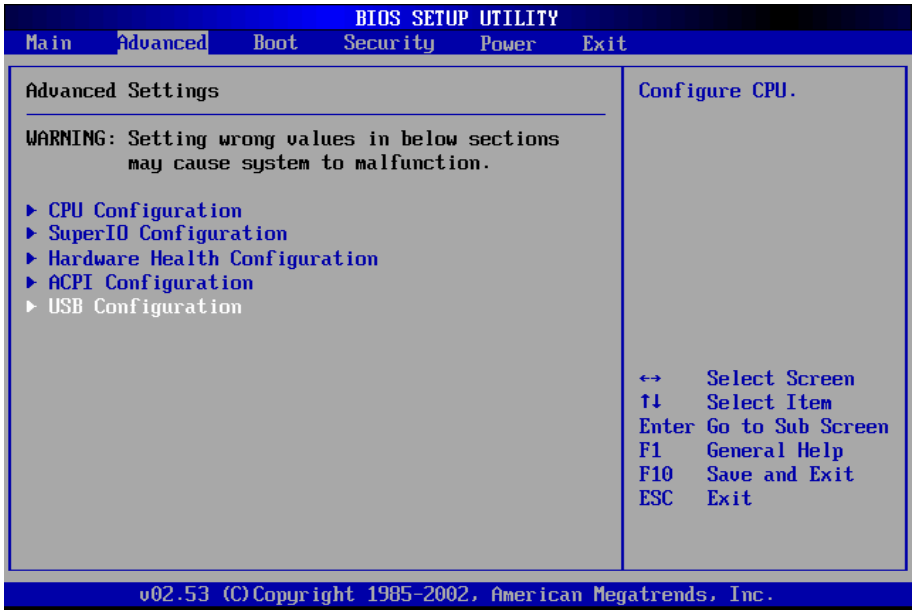
Monitor CPU/system temperature, CPU fan speed, and CPU voltage

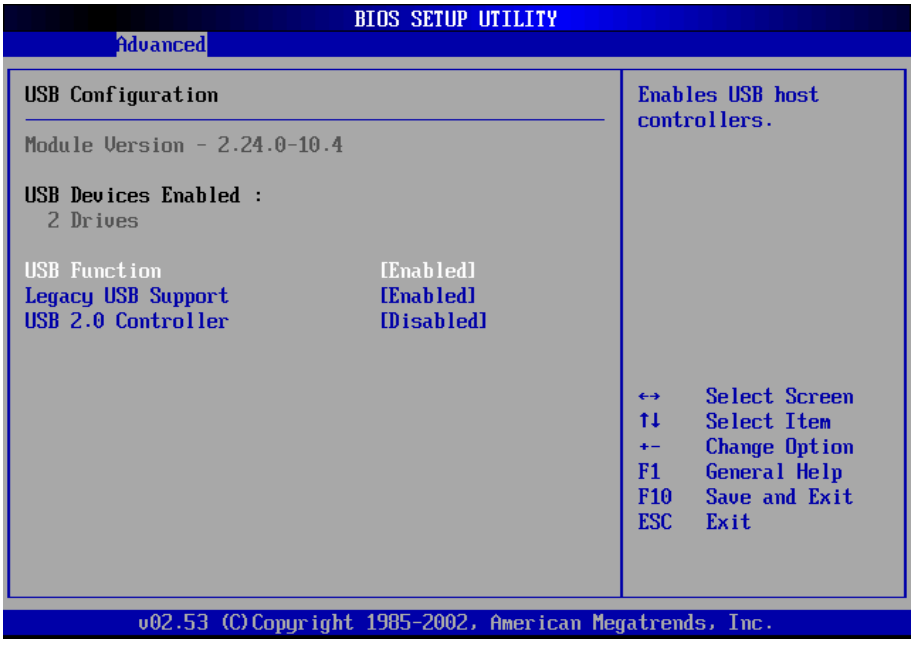




3.3.4 ACPI Configuration:

Configuration ACPI advanced power management setting



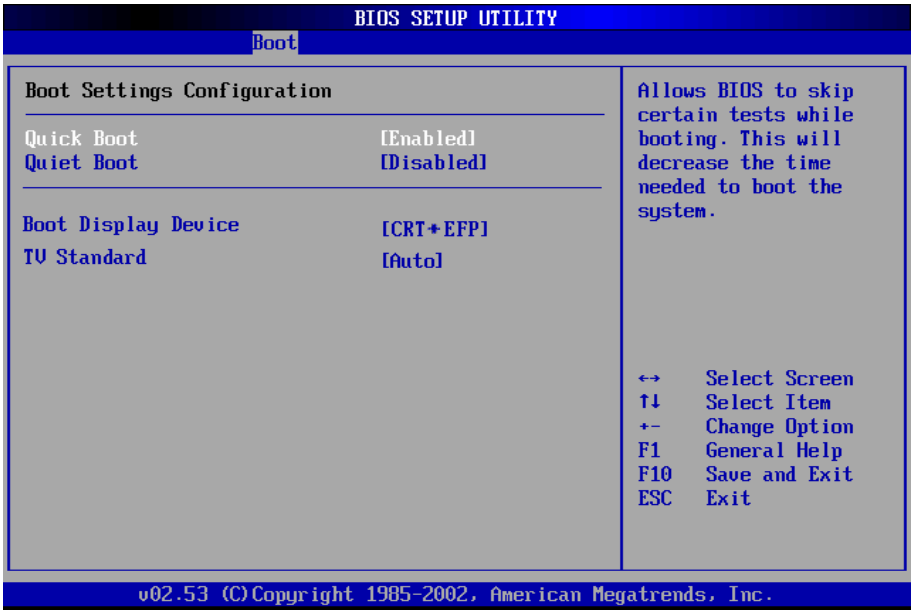


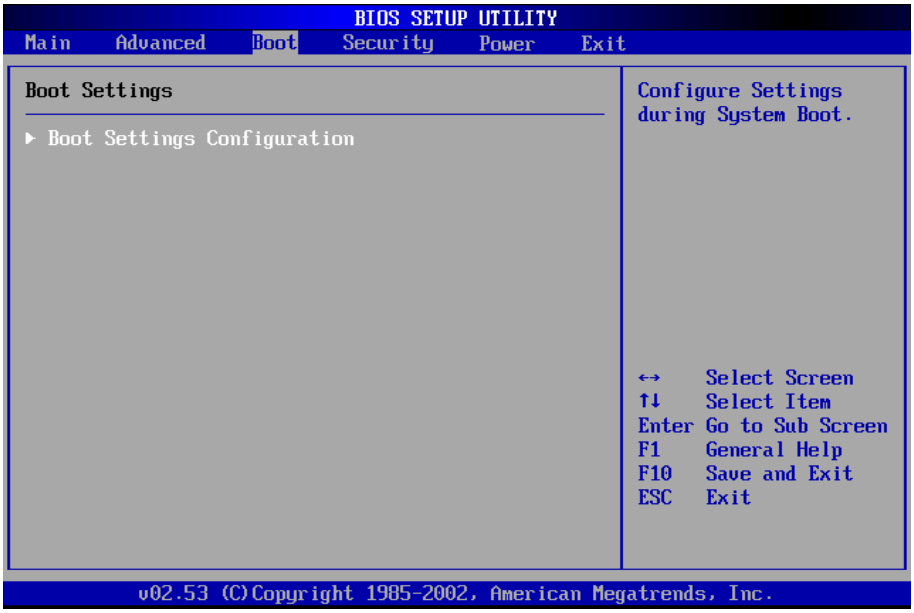
3.3.5 USB Configuration:

USB port type(1.1/2.0) selection and port number selection

3.4 Boot Menu

This feature allows you to set which device bootable. The system searches all possible locations for an operation system if it fails to find one in the devices specified under the first, second, and third boot device.



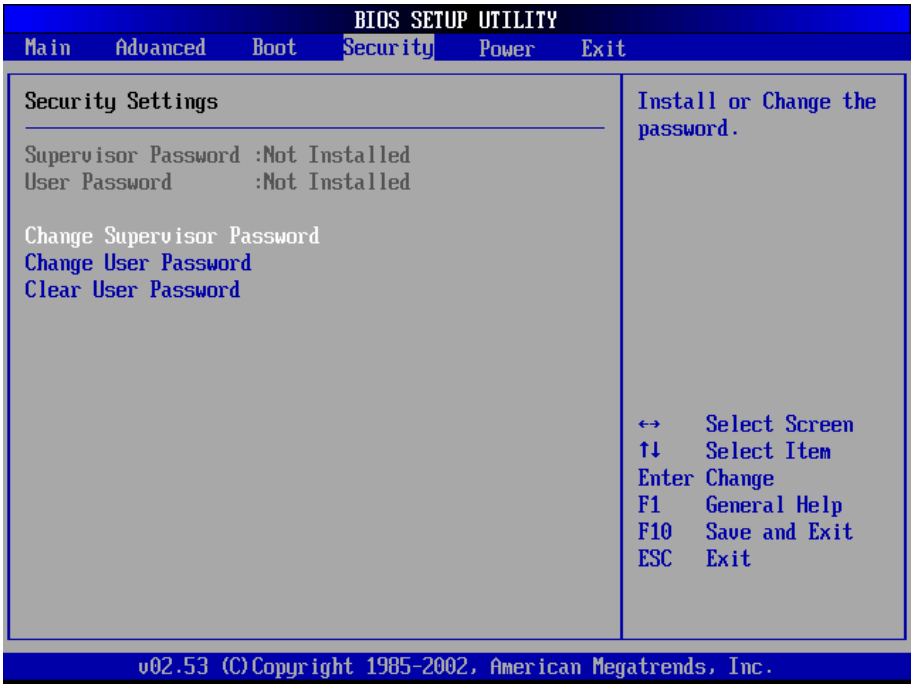


3.5 Security Menu

This feature allows you to set either supervisor or user password, or both of then. The difference between are:

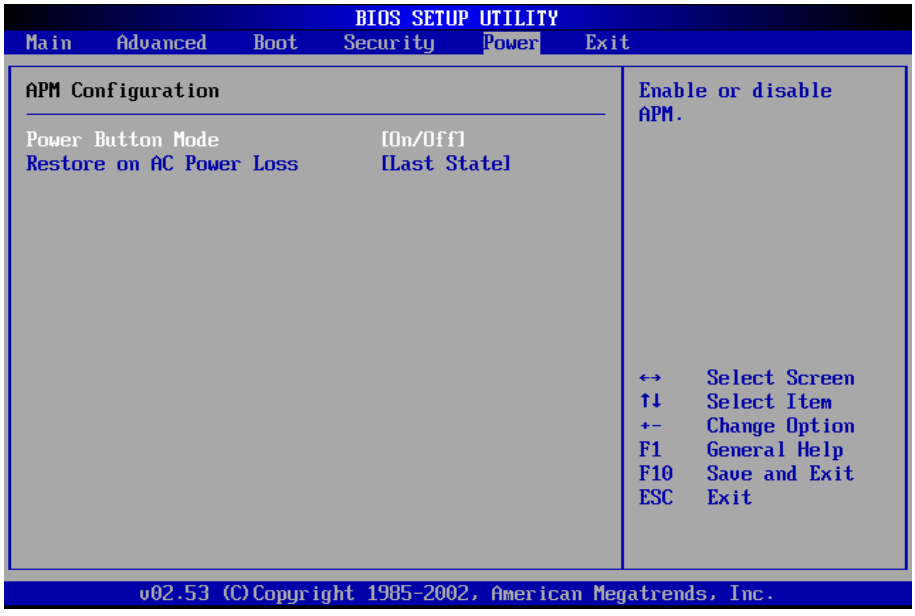
Change Supervisor Password: can enter and change the options of the setup menus

Change User Password: just only enter but do not have the right to change the options of the setup menus. When you select this function, the following message will appear at the center of the screen to assist you increasing a password



3.6 Power Menu

The power menus allows you to configure you system to most effectively ave energy while operating in a manner consistent with your own style of computer use



3.7 Exit Menu

3.7.1 Save Change and Exit:

Pressing <Enter> on this item asks for confirmation:

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

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

in CMOS. After saving the values the system is restarted again.

3.7.2 Discard Change and Exit:

Pressing <Enter> on this item asks for confirmation:

Quit without saving (Y/N)?

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