

IAC-H488 Series

**Half-size 486 SBC
with VGA/LAN/CompactFlash
& STPC Consumer-II 133CPU**

User's Manual

COPYRIGHT©

This document is a copyright of the original manufacturer, 2001. The original manufacturer reserves the right to make improvements to the product(s) described in this manual at any time without notice. This manual may not, in whole or in part, be photocopied, reproduced, transcribed, translated, or transmitted in any form without the written consent of the manufacturer, except for copies retained by the purchaser for backup purposes. All rights reserved.

TRADEMARKS™

Pentium® , Celeron™ are registered trademark of Intel Corporation.

The following are trademarks or registered trademarks of their respective companies: IBM, Intel, AMD, Cyrix, Award, AMI, Microsoft, ST, Windows, Windows NT, Novell, SCO, PC/104, PICMG, ALI, UMC, SMC, Winbond. Products mentioned in this manual are mentioned for identification purposes only. All names of products or services appearing in this manual are the trademarks or registered trademarks of their respective organizations and companies.

© Copyright 2002

Ver. No. V1.0

Date: 2002/11/01

TABLE OF CONTENTS

Chapter 1 . Introduction	1
1.1 Introduction	1
1.2 Features	1
1.3 Specification	2
1.4 Unpack your IAC-H488 and Accessory	2
1.5 Board Layout	3
Chapter 2 . Installation	4
2.1 Hardware Setup and Installation	4
2.1.1 System Memory Installation.....	4
2.2 Jumper Settings and I/O Connectors	5
2.2.1 Board Outline of IAC-H488	5
2.2.2 I/O Connector Summary.....	8
Chapter 3 . BIOS Setup	19
3.1 Running AMI BIOS	19
3.2 AMI BIOS HIFLEX Setup Utility	20
3.3 Standard CMOS Setup	21
3.4 Advanced CMOS Setup	22
3.5 Advanced Chipset Setup	25
3.6 Power Management Setup	27
3.7 PCI Plug and Play Setup	29
3.8 Peripheral Setup.....	30
3.9 Auto-Defect Hard Disks.....	32
3.10 Change User/ Supervisor Password.....	33
3.11 Auto Configuration with Optimal Settings	34
3.12 Save & Exit Setup.....	34
3.13 Exit Without Saving	35
Chapter 4 . Drivers Support	36
4.1 Use Your Driver CD-ROM	36
4.2 File Directory	36
APPENDIXA. Watch-Dog Timer	37
Terms and Conditions.....	38

Chapter 1 . Introduction

1.1 Introduction

The IAC-H488 Series is the ultimate cost-effective solution for limited-space applications. It offers all the functions of an AT-compatible industrial computer on a single board. The IAC-H488 comes with an embedded low power, high-performance STPC Consumer-II processor. For maximum performance, the IAC-H488 supports one SDRAM DIMM socket that can accept up to 128MB memory.

Other on-board features include integrated VGA controller, one Realtek 8139C+ 10/100Mbps PCI Ethernet interface, one CompactFlash™ socket in the rear supports ATA mode Type-I/II, Enhanced IDE interface, two serial ports (RS-232 and RS-232/422/485) with DB-9 connector as COM1, and a mini-DIN PS/2 keyboard/mouse interface. The board is also built-in PC/104 connector for future upgrades, one multi-mode parallel port, and one IrDA header.

1.2 Features

- On-board Low power STPC Consumer-II 133 MHz processor(fan-less)
- Integrated VGA controller, share system memory up to 4MB supports CRT interface
- On-board Realtek 8139C+ support 10/100M BASE-TX Ethernet
- One CompactFlash socket, support ATA mode Type-I/II
- Two 16550 compatible FIFO RS-232 serial ports, one RS-232 and one RS-232/422/485
- Built-in one PC/104 expansion slot
- One multi-mode parallel port, one IrDA header
- Watchdog Timer

1.3 Specification

IAC-H488 Series

Processor	On-board STPC Consumer-II 133 CPU
Chipset	STPC Consumer-II
System Memory / RAM	1 x 168-pin DIMM sockets up to 128MB for SDRAM
BIOS	AMI® BIOS
VGA Controller*	Integrated 135MHz triple RAMDAC allowing for 1280x1024x24bit pixels@75Hz, with VGA connector
Ethernet Controller	On-board Realtek 8139C+ support 10/100M BASE-T
CompactFlash Socket	1 CompactFlash socket, support ATA mode Type-I/II
IDE Drive Interface	1 IDE port supports up to 2 IDE devices
Floppy Drive Interface	1 FDD port supports up to 2 floppy devices
Serial Port	2 x 16550 compatible FIFO RS-232 serial ports, 1 x RS-232 and 1 x RS-232/422/485
Parallel Port	1 multi-mode parallel port (SPP/EPP/ECP)
IR Interface	Support 1 IrDA header
RTC	RTC function with battery
PS/2 Mouse Connector	On-board 6-pin Mini PS/2 Mouse connector
Keyboard Connector	5-pin header and 6-pin Mini-Din PS/2 Keyboard connectors
IR Interface	Support one IrDA header
Bus Interface	ISA bus and Built-in PC-104 expansion bus
External Power Connector	4-pin external power connector
Watchdog Timer	16-level time-out intervals
Operating Temperature	0 °C~60 °C
Storage Temperature	-20 °C~70 °C
Humidity	5% ~ 95%, non-condense
Dimensions	185 x 122 mm (7 1/4" x 4 5/6" inches)
Net weight	224g (0.49 pounds)
EMI/EMS	EN 50081-1/1994>EN 55022/1997>en 61000-3-2/1995>EN 61000-3-3/1995, EN 50082-1/1994>IEC 1000-4-2/1995, IEC 1000-4-3/1995, IEC 1000-4-4/1995,EN 55024

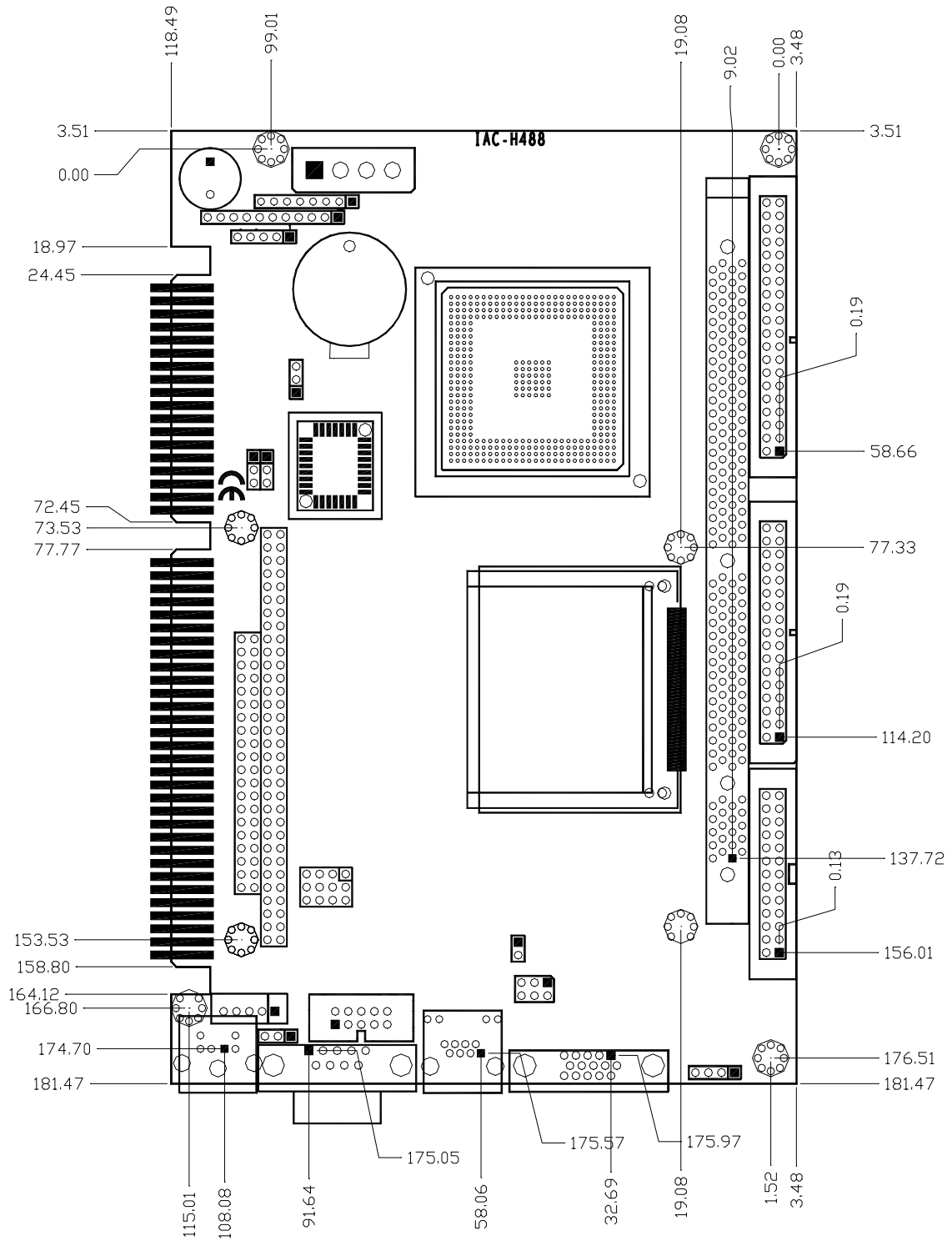
*Under Dos command mode, only support resolution 640×480 60Hz, 800×600 60Hz, and 1280×1024 60Hz.

1.4 Unpack your IAC-H488 and Accessory

Before you begin to install your card, please make sure that you received the following materials as listed below:

- IAC-H488 Series SBC x 1 pc Single Board Computer
- Keyboard and Mouse Cable x 1 pc 6pin Mini-Din PS/2 connector to 6pin PS/2 K/B+6pin PS/2 Mouse Cable
- LPT/COM cable x 1 pc 26-pin to 25-pin with 10-pin to 9-pin D-Sub Cable
- ATX Feature Cable x 1 pc 4-pin 40cm cable
- IDE Cable x 1 pc 40pin IDE Cable
- FDD Cable x 1 pc 34 to 34-pin Standard Header Flat Ribbon Cable
- Keyboard Extension Cable x 1 pc Cable for Keyboard extension
- Driver Utility CD-ROM x 1 pc Drivers & Utilities
- User's Manual x 1 pc This User's Manual

1.5 Board Layout

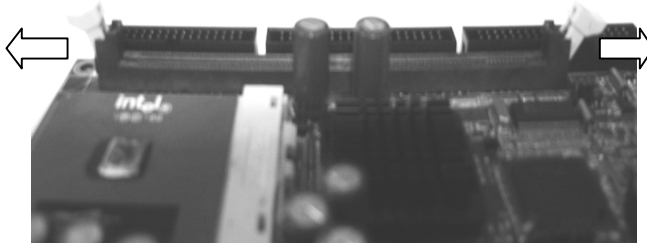


Chapter 2 . Installation

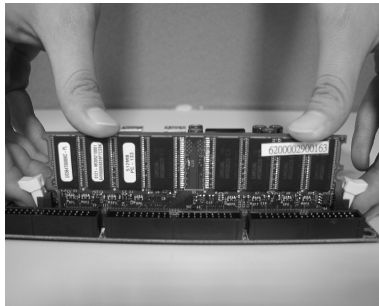
2.1 Hardware Setup and Installation

2.1.1 System Memory Installation

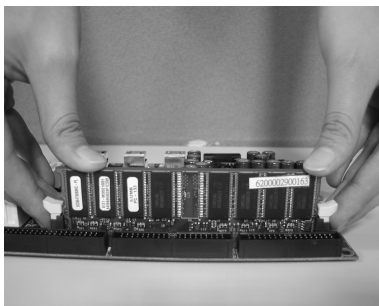
Step 1 Open latches of DIMM socket.



Step 2 Insert the RAM module into the DIMM socket.

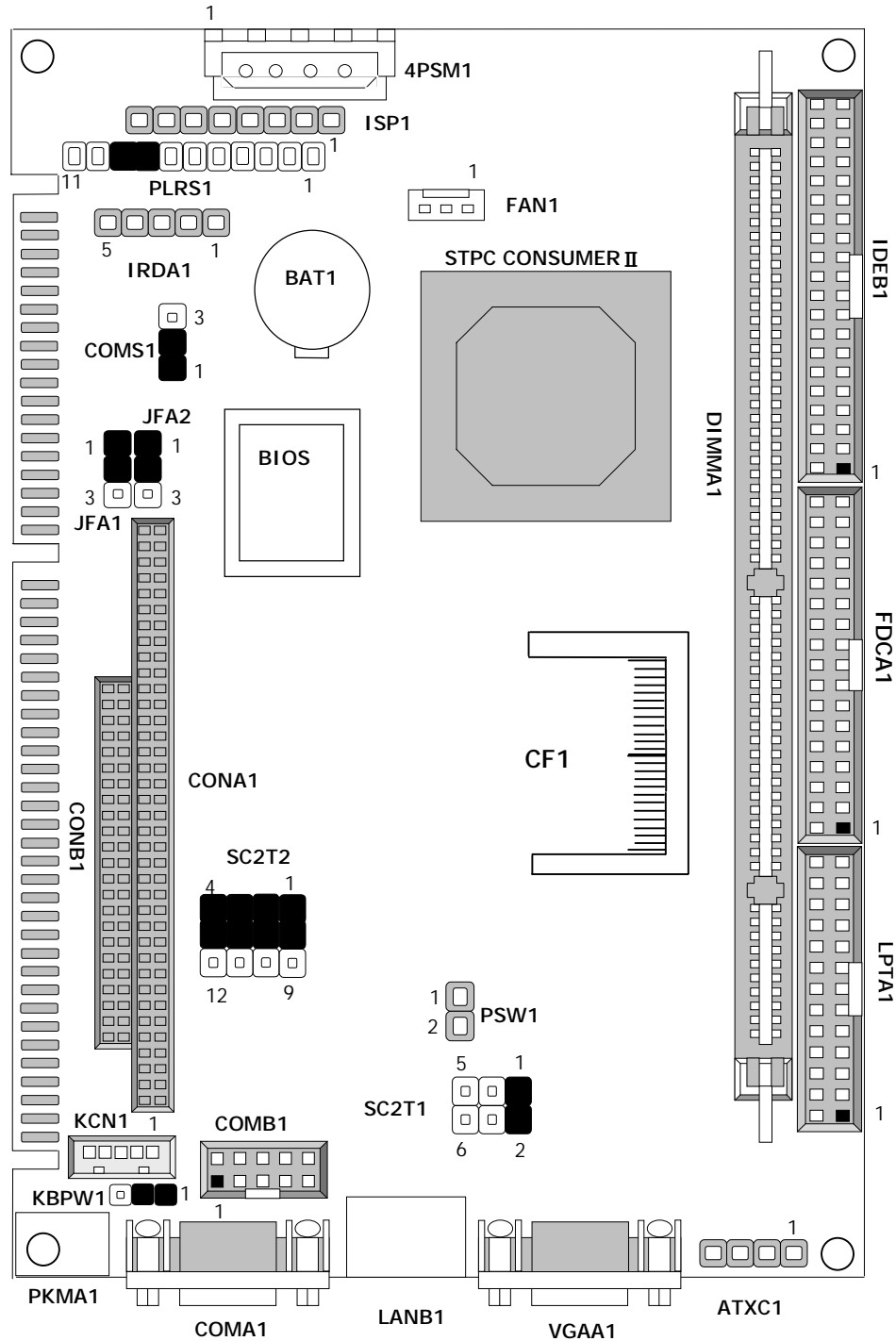


Step 3 Press the latches into the notches of the RAM module.



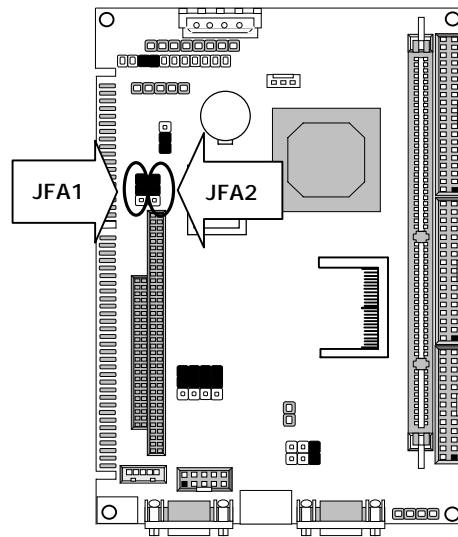
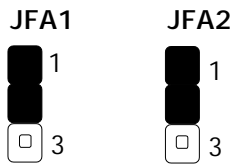
2.2 Jumper Settings and I/O Connectors

2.2.1 Board Outline of IAC-H488



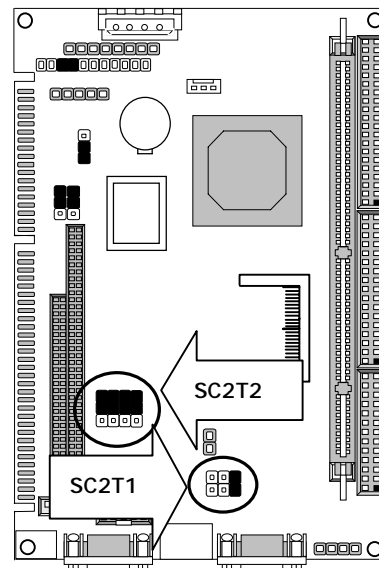
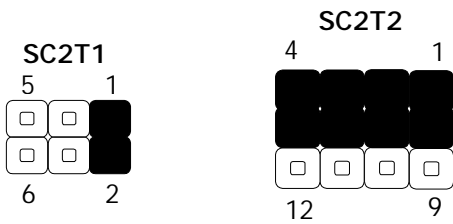
● Watchdog Programming

	JFA1/JFA2
Default	1-2
Program	2-3



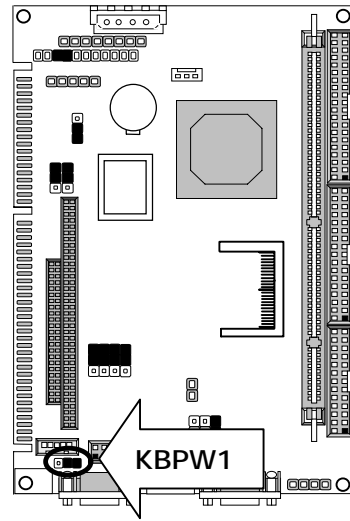
● SC2T1/SC2T2: Select COM2 Type

COM2 Type	SC2T1	SC2T2
RS-232 (Default)	1-2	1-5,2-6,3-7,4-8
RS-422	3-4	5-9,6-10,7-11,8-12
RS-485	5-6	5-9,6-10,7-11,8-12



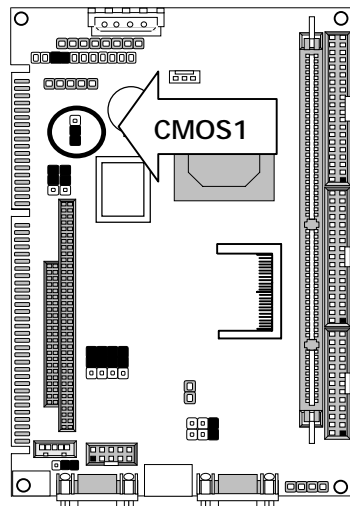
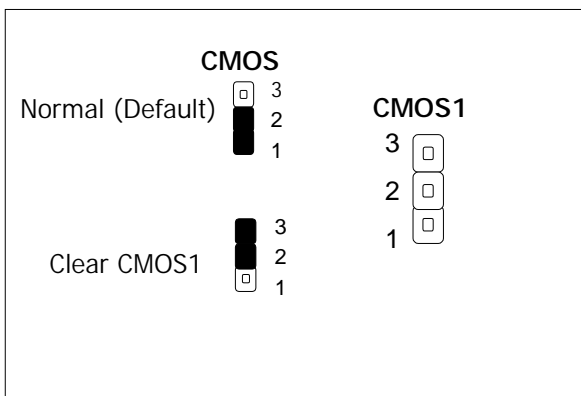
● KBPW1:1x3 Pin 2.54mm

PS/2 Keyboard/Mouse	KBPW1
+5V (Default)	1-2
+5V STANDBY	2-3



● CMOS1:Clear CMOS Data

Description	CMOS1
Normal (Default)	1-2
Clear CMOS	2-3

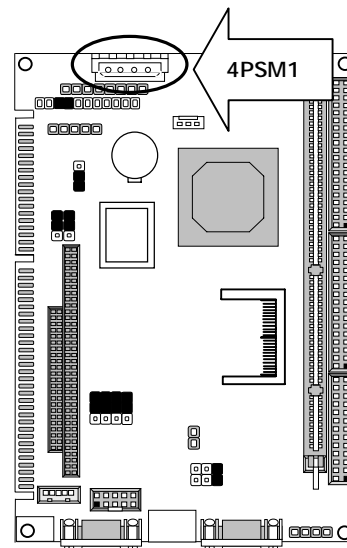
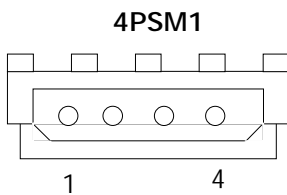


2.2.2 I/O Connector Summary

Connector	Function
4PSM1	4 Pin Power Connector
FAN1	FAN Connector
ISP1	Program ISP GAL Connector (Factory Only)
COMA1	RS-232 Serial Port#1 Connector (D-Sub)
FDCA1	Floppy Interface Connector (Header)
PKM1	PS/2 Keyboard & Mouse Connector (Mini Din)
PSW1	ATX Power Button
PLRS1	Connector for Power LED, Reset, Speaker Connector, HD LED
COMB1	Serial Port#2 Connector (Header)
LANB1	LAN Connector
VGAA1	VGA Connector
LPTA1	Parallel Port Connector (Header)
IDEB1	IDE Interface Connector (Header)
KCN1	5pin Keyboard Cable Connector
ATXC1	ATX Power Expansion (Header)
IRDA1	Alternate IRDA
CONA1+CONB1	PC/104 Connector
CF1	CF Connector
DIMMA1	168 Pin DIMM Connector

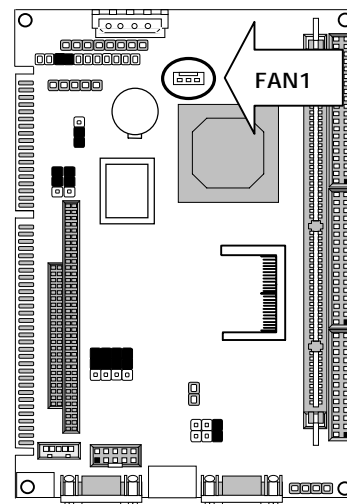
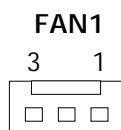
● 4PSM1 : 4 Pin Power Connector (Big-4P Male)

Pin No.	Description
1	+12V
2	Ground
3	Ground
4	+5V



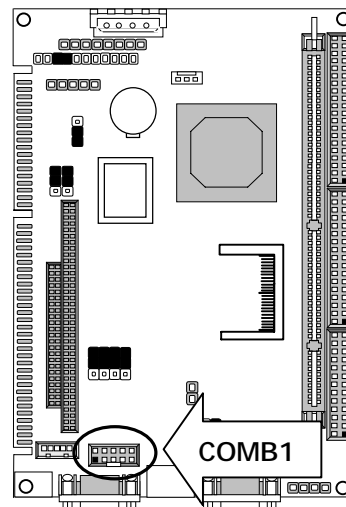
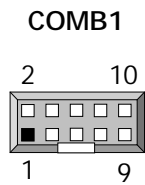
● FAN1: FAN Connector

Pin No.	Description
1	Ground
2	+5V
3	NC



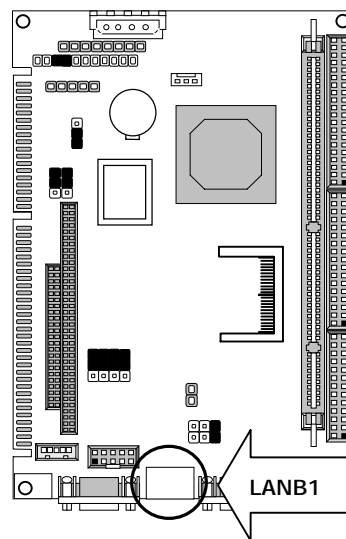
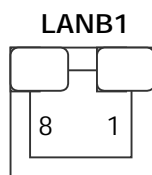
● COMB1: RS-232 Serial Port#2 Connector (Header)

Pin No.	Description		
	RS-232	RS-422	RS-485
1	Data Carrier Detect (DCDB #)	Transmit Data- (TXD-)	Data -
2	Data Set Ready (DSRB #)	NC	NC
3	Receive Data (RXDB)	Transmit Data+ (TXD+)	Data +
4	Request To Send (RTSB #)	NC	NC
5	Transmit Data (TXDB)	Receive Data+ (RXD+)	NC
6	Clear To Send (CTSB #)	NC	NC
7	Data Terminal Ready (DTRB #)	Receive Data- (RXD-)	NC
8	Ring Indicator (RIB #)	NC	NC
9	Ground	NC	NC
10	NC	NC	NC



● LANB1 :Type 2(RJ-45 with LED)

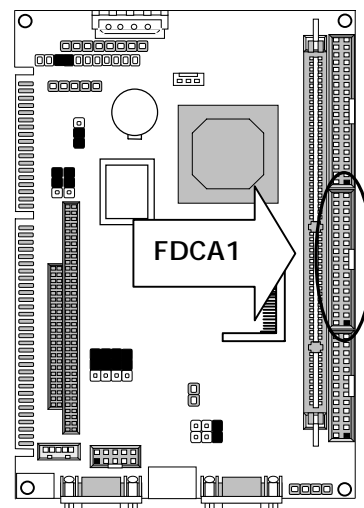
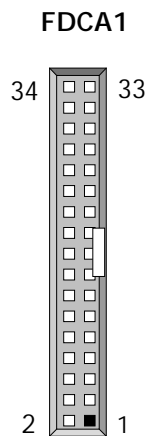
Pin No.	Description
1	TX+
2	TX-
3	RX+
4	T45
5	T45
6	RX-
7	T78
8	T78
9	Link-
10	Link+
11	ACT-
12	ACT+



* Pin9 to pin12 are on the solder side.

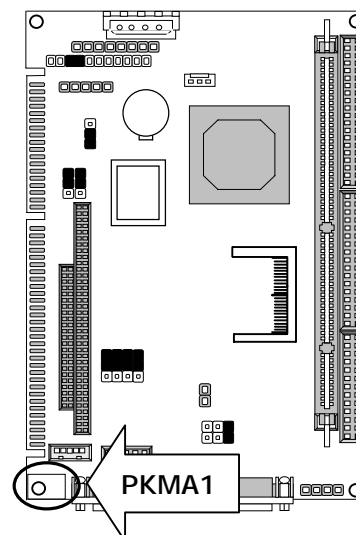
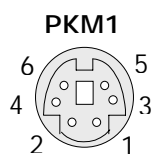
● **FDCA1: Floppy Cable Connector (Header)**

Pin No.	Description	Pin No.	Description
1	Ground	2	Density Select
3	Ground	4	NC
5	Ground	6	DS1
7	Ground	8	Index #
9	Ground	10	Motor Enable A #
11	Ground	12	Drive Select B #
13	Ground	14	Drive Select A #
15	Ground	16	Motor Enable B #
17	Ground	18	Direction #
19	Ground	20	Step #
21	Ground	22	Write Data #
23	Ground	24	Write Gate #
25	Ground	26	Track 0 #
27	Ground	28	Write Protect #
29	NC	30	Read Data #
31	Ground	32	Head Side Select #
33	NC	34	Disk Change #



● **PKMA1: PS/2 Keyboard & Mouse Connector(6P Mini Din · Dual Mini Din)**

Pin No.	Description
1	PS/2 Keyboard Data
2	PS/2 Mouse Data
3	Ground
4	+5V
5	PS/2 Keyboard Clock
6	PS/2 Mouse Clock

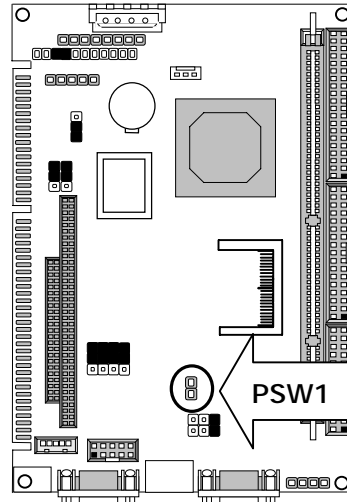


● PSW1: ATX Power ON Switch (Header)

Pin No.	Description
1	PANSW
2	GND



PSW1

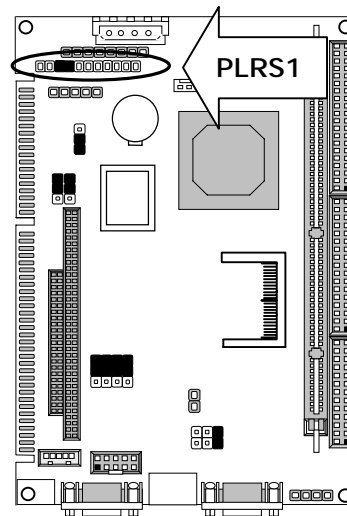


● PLRS1: Power LED, Reset, Speaker Connector

Pin No.	Description
1	Power LED +
2	Power LED+
3	GND
4	HDD LED +
5	HDD LED -
6	RESET SW +
7	RESET SW - (GND)
8	External Speaker -
9	Internal Buzzer -
10	NC
11	External Speaker +

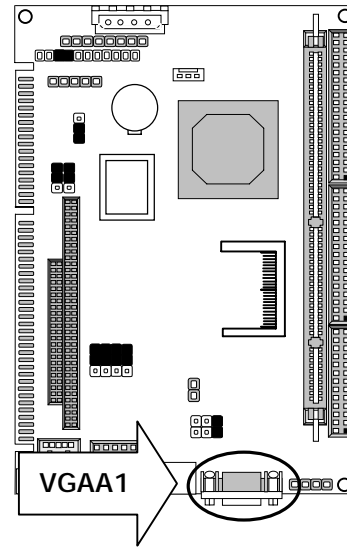
Default :8-9 (ON)Internal Buzzer

PLRS1

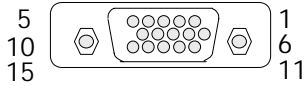


● VGAA1: VGA Connector

Pin No.	Description
1	Red Color Signal
2	Green Color Signal
3	Blue Color Signal
4	NC
5	Ground
6	Ground
7	Ground
8	Ground
9	NC
10	Ground
11	NC
12	DDC-DATA
13	H-Sync.
14	V-Sync.
15	DDC-CLK



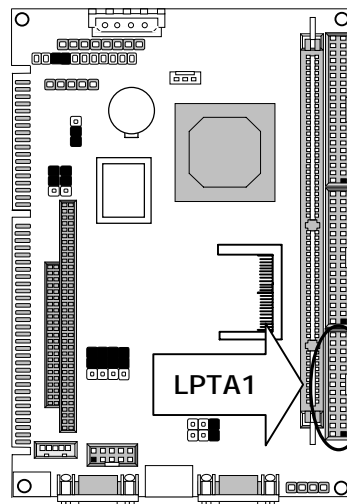
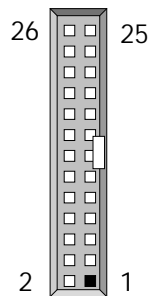
VGAA1



● LPTA1: Parallel Port Connector (Header)

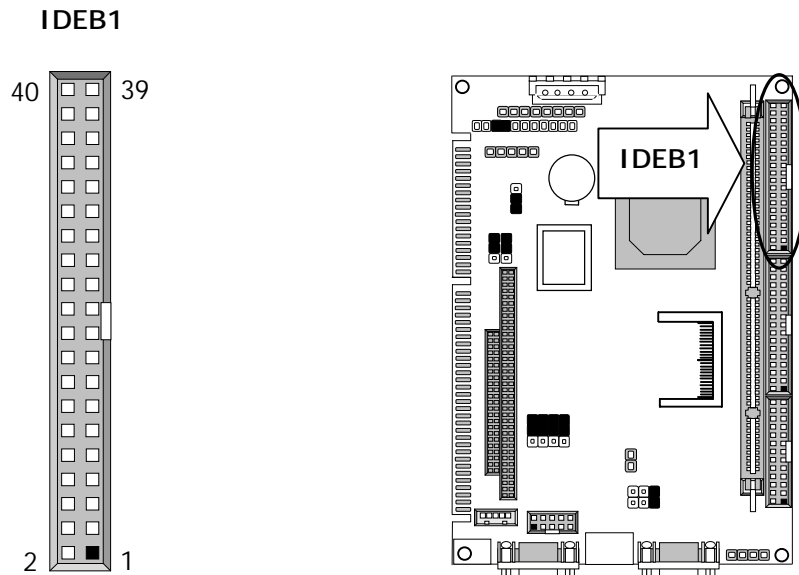
Pin No.	Description	Pin No.	Description
1	Strobe #	2	Auto Form Feed #
3	Data 0	4	Error #
5	Data 1	6	Initialize #
7	Data 2	8	Printer Select In #
9	Data 3	10	Ground
11	Data 4	12	Ground
13	Data 5	14	Ground
15	Data 6	16	Ground
17	Data 7	18	Ground
19	Acknowledge#	20	Ground
21	Busy	22	Ground
23	Paper Empty	24	Ground
25	Printer Select	26	NC

LPTA1



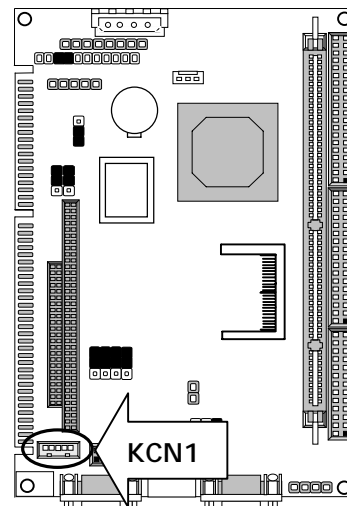
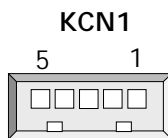
● IDEB1: IDE Interface Connector (Header)

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	NC
21	DMA REQ	22	Ground
23	IOW #	24	Ground
25	IOR #	26	Ground
27	IOCHRDY	28	Ground
29	DMA ACK#	30	Ground
31	Interrupt	32	NC
33	SA1	34	NC
35	SA0	36	SA2
37	HDC CS0#	38	HDC CS1#
39	HDD Active LED#	40	Ground



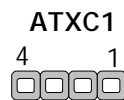
- **KCN1: 5pin Keyboard Cable Connector**

Pin No.	Description
1	Keyboard Clock
2	Keyboard Data
3	NC
4	Ground
5	+ 5V

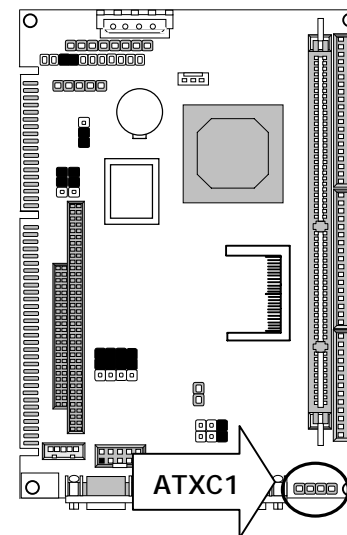


- **ATXC1: ATX Power Expansion Header**

Pin No.	Description
1	Ground
2	5V Standby
3	Ground
4	Power ON

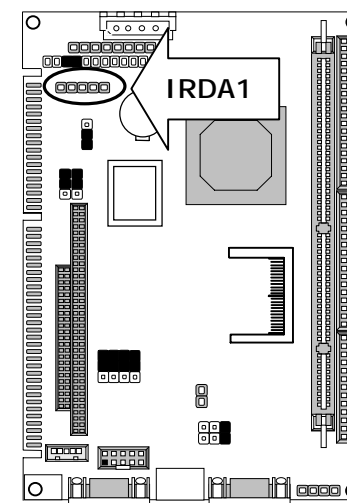
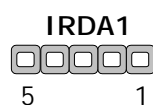


Note: To have full features from ATX power, the ATXC1 should be wired to the connectors with the same function on the Backplane. Please refer to the connector definition and description for more information.



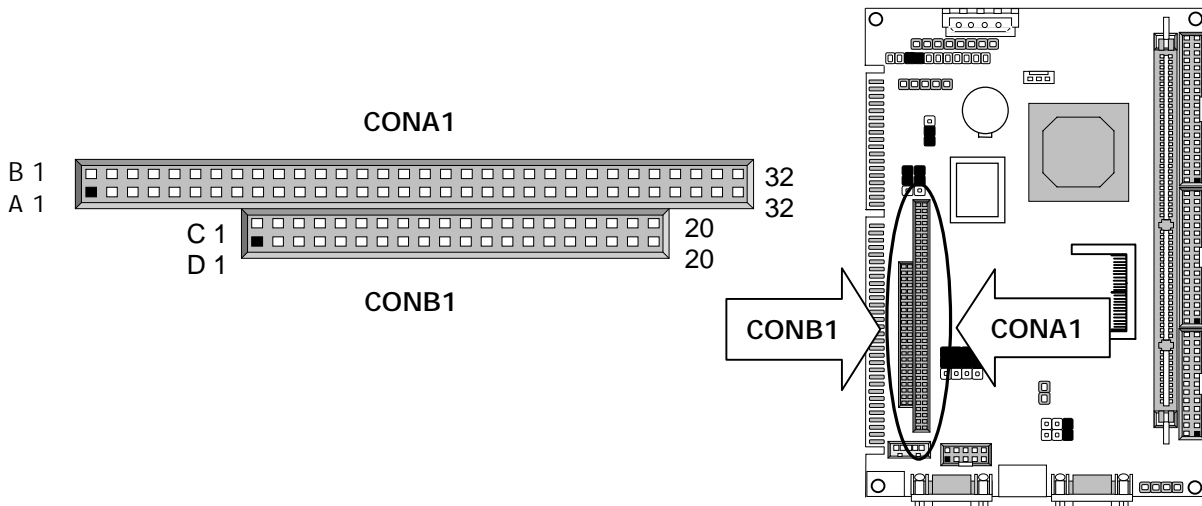
- **IRDA1: Consumer Remote Control IR (CIR)**

Pin No.	Description
1	+5V
2	NC
3	IRRX
4	GND
5	IRTX



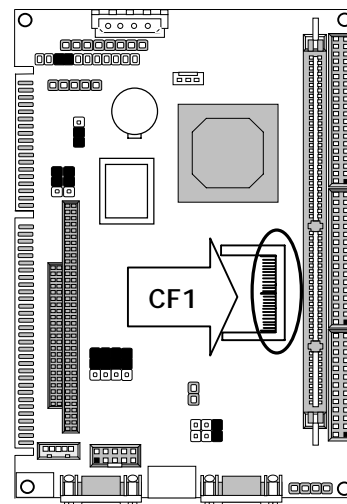
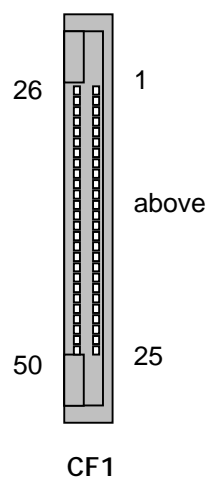
- CONA1:PC/104 Connector (8 bit)
- CONB1:PC/104 Connector (16 bit)

Pin No.	Description			
	CONA1		CONB1	
	Row A	Row B	Row C	Row D
1	IOCHCK#	Ground	Ground	Ground
2	SD7	RSTDRV	SBHE#	MEMCS16#
3	SD6	+5V	LA23	IOCS16#
4	SD5	IRQ9	LA22	IRQ10
5	SD4	-5V	LA21	IRQ11
6	SD3	DRQ2	LA20	IRQ12
7	SD2	-12V	LA19	IRQ15
8	SD1	0 WS#	LA18	IRQ14
9	SD0	+12V	LA17	DACK0#
10	IOCHRDY	NC	MEMR#	DRQ0
11	AEN	SMEMW#	MEMW#	DACK5#
12	SA19	SMEMR#	SD8	DRQ5
13	SA18	IOW#	SD9	DACK6#
14	SA17	IOR#	SD10	DRQ6
15	SA16	DACK3#	SD11	DACK7#
16	SA15	DRQ3	SD12	DRQ7
17	SA14	DACK1#	SD13	+5V
18	SA13	DRQ1	SD14	MASTER#
19	SA12	REFRESH#	SD15	Ground
20	SA11	SYSCLK	NC	Ground
21	SA10	IRQ7	---	---
22	SA9	IRQ6	---	---
23	SA8	IRQ5	---	---
24	SA7	IRQ4	---	---
25	SA6	IRQ3	---	---
26	SA5	DACK2#	---	---
27	SA4	TC	---	---
28	SA3	BALE	---	---
29	SA2	+5V	---	---
30	SA1	OSC	---	---
31	SA0	Ground	---	---
32	Ground	Ground	---	---



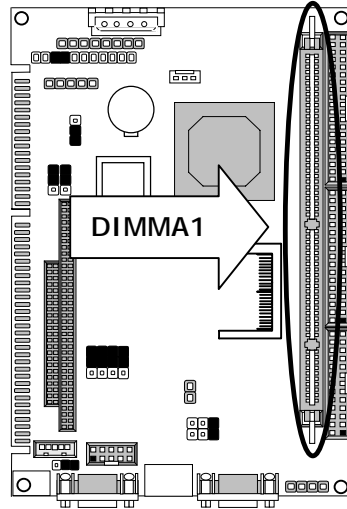
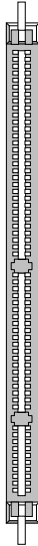
- CF1:CF Connector

Pin	Description	Pin	Description
1	GND	26	CD1-
2	DATA3	27	DATA11
3	DATA4	28	DATA12
4	DATA5	29	DATA13
5	DATA6	30	DATA14
6	DATA7	31	DATA15
7	CE1#	32	CE2#
8	A10	33	VS1#
9	OE#	34	IOR#
10	A9	35	IOW#
11	A8	36	WE#
12	A7	37	READY#
13	CFVCC	38	CFVCC
14	A6	39	CSEL
15	A5	40	VS2#
16	A4	41	RESET
17	A3	42	WAIT#
18	A2	43	INPACK#
19	A1	44	REG#
20	A0	45	DASP#
21	DATA0	46	DIAG#
22	DATA1	47	DATA8
23	DATA2	48	DATA9
24	WP	49	DATA10
25	IOCS16#	50	GND



●DIMMA1:168 Pin DIMM Connector

DIMMA1



Chapter 3 . BIOS Setup

The AMI's ROM BIOS provides a built-in Setup program that allows user to modify the basic system configuration and settings. The modified data will be stored in a battery-backed CMOS RAM so that these data will be retained even when the power is turned off. In general, the information saved in the CMOS RAM stay unchanged unless there is configuration change in the system, such as hard drive replacement or new equipment is installed. AMI is a registered trademark of the American Megatrends, Inc.

3.1 Running AMI BIOS

The Setup Utility is stored in the BIOS ROM. When the power of the computer system is turned on, a screen message appears to give you an opportunity to call up the Setup Utility; while the BIOS will enter the Power On Self Test (POST) routines. The POST routines perform various diagnostic checks while initializing the board hardware. If the routines encounter an error during the tests, the error will be reported in either of the two different ways – (1) hear a series of short beeps, or (2) see an error message on the screen display. There are two kinds of error: fatal or non-fatal. The system can usually continue to boot up sequence with the non-fatal errors. Non-fatal error messages usually appear on the screen along with the following instructions:

" Press <F1> to RESUME "

Write down the message and press the F1 key to continue the bootup sequence. After the POST routines are completed, the following message appears:

" Press DEL to enter SETUP "

Entering Setup

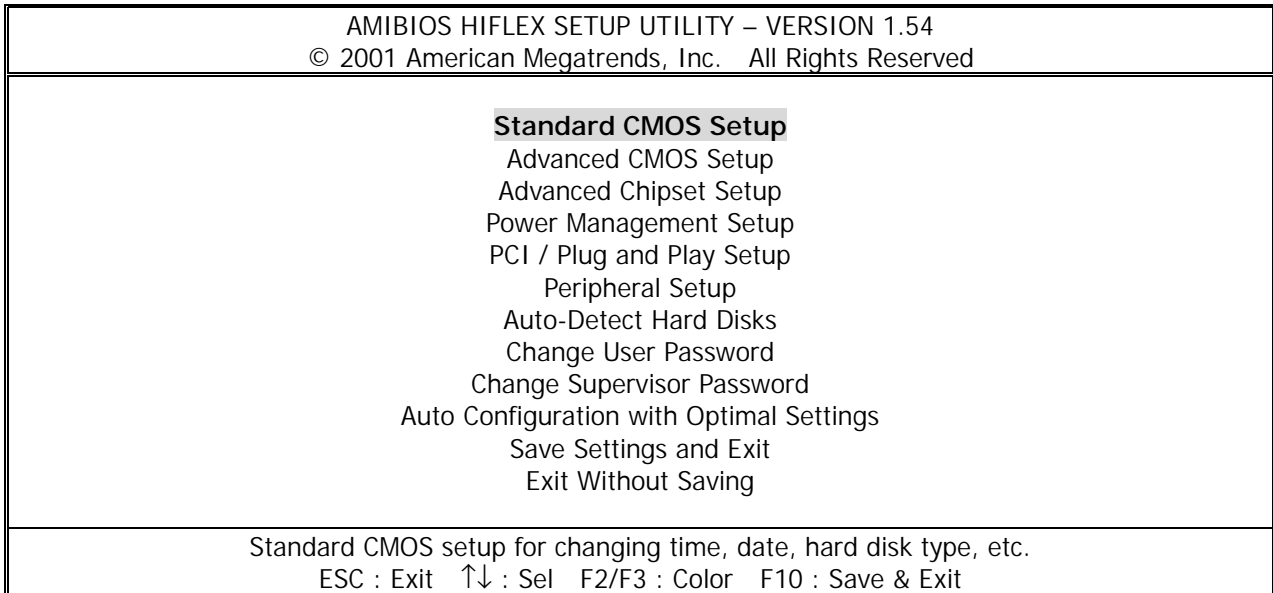
Turn on the power of the computer system and press immediately. If you don't have the chance to respond, reset the system by simultaneously typing the <Ctrl>, <Alt> and <Delete> keys, or by pushing the ' Reset ' button on the system cabinet. You can also restart by turning the system OFF then ON.

Note: BIOS versions are regularly updated form time to time without notices. Therefore, the options available in your setup screen may differ from the options shown in this manual.

3.2 AMI BIOS HIFLEX Setup Utility

To access the AMI BIOS HIFLEX SETUP UTILITY program, press the key. The screen display will appear as:

Main Program Screen



This screen provides access to the utility's various functions.

Listed below are the explanation of the keys displayed at the bottom of the screen:

- <ESC> : Exit the utility.
- ↑ ↓ : Use arrow keys ↑ ↓ to move cursor to your desired selection.
- <F2> / <F3> : Changes background and foreground colors.
- <F10> : Saves all changes made to Setup and exits program.

Standard CMOS Setup : Use this menu for basic system configurations, such as time, date etc.

Advanced CMOS Setup: Use this menu to specify your settings for Advance CMOS.

Advanced Chipset Setup: Use this menu to change the values in the chipset registers and optimize your system's performance.

Power Management Setup: Use this menu to specify your settings for power management.

PCI / Plug and Play Setup: Use this menu to specify your settings for PCI/Plug and Play.

Peripheral Setup: Use this menu to specify your settings for integrated peripherals.

Auto-Detect Hard Disks: Use this menu to automatically detect the characteristics of most hard drives.

Change User Password: Use this menu to set User Password.

Change Supervisor Password: Use this menu to set Supervisor Password.

Auto Configuration with Optimal Settings: This option allows you to load the default values to your system configuration. These default settings are optimal and enable all high performance features.

Save Settings and Exit: Save changes to CMOS and exit setup.

Exit Without Saving: Abandon all changes and exit setup.

3.3 Standard CMOS Setup

When you select the "STANDARD CMOS SETUP" on the main program, the screen display will appear as:

Standard CMOS Setup Screen

AMIBIOS SETUP – STANDARD CMOS SETUP											
© 2001 American Megatrends, Inc. All Rights Reserved											
Date (mm/dd/yyyy)	: Tue Jul 16, 2002					Base Memory	: 639KB				
Time (hh/mm/ss)	: 00:02:45					Extd Memory	: 123MB				
Floppy Drive A :	1.44 MB 3 ¹ / ₂										
Floppy Drive B :	Not Installed										
	Type	Size	Cyln	Head	WPcom	Sec	LBA Mode	Blk Mode	PIO Mode	32 Bit Mode	
Pri Master :	Auto									Off	
Pri Slave :	Auto									Off	
Sec Master :	Auto									Off	
Sec Slave :	Not Installed									Off	
Boot Sector Virus Protection	Disabled										
Month :	Jan	- Dec					ESC:Exit	↑↓ : Sel			
Day :	01	- 31					PgUp/PgDn: Modify				
Year :	1980	- 2099					F1: Help	F2/F3:Color			

Standard CMOS Setup options are displayed by choosing the Standard field from the AMIBIOS HIFLEX SETUP menu. All Standard Setup options are described below.

Date: This allows you to set the system to the date that you want (usually the current date). The format is <week><month><date><year>.

Week	Day of the week, from Sun to Sat, determined by BIOS. Real-only.
Month	The month from Jan. through Dec.
Date	The date from 1 to 31 can be keyed by numeric function keys.
Year	The year can be adjusted by users.

Time: This allows you to set the system time that you want (usually the current time). The time format is <hour><minute><second>.

Pri Master/ Pri Slave: Press PgUp/<+> or PgDn/<-> to select the hard disk drive type. The specification of hard disk drive will show up on the right hand according to your selection.

Type	Type of the device.
Size	Capacity of the device.
Cyln	Number of cylinders.
Head	Number of heads.
Wpcom	Write precompensation cylinder.
Sec	Number of sectors.
Mode	Access mode.

Floppy Drive A, B : Choose the Floppy Drive A or B field to specify the floppy drive type. The settings are 360 KB 5¹/₄", 1.2 MB 5¹/₄", 720 KB 3¹/₂", 1.44 MB 3¹/₂", or 2.88 MB 3¹/₂".

Boot Sector Virus Protection: The item is to set the Virus Warning feature for IDE Hard Disk boot sector protection. When *Enabled*, BIOS will issue a virus warning message and beep if a write to the boot sector or the partition table of the HDD is attempted. Setting options: *Disabled* and *Enabled*.

Note: This feature only protects the boot sector, not the whole hard disk.

3.4 Advanced CMOS Setup

When you select the "ADVANCED CMOS SETUP" on the main program, the screen display will appears as:

Advanced CMOS Setup Screen

AMIBIOS SETUP – ADVANCED CMOS SETUP		
©2001 American Megatrends, Inc. All Rights Reserved		
Quick Boot	Enabled	Available Options: Disabled ▶ Enabled
1st Boot Device	Disabled	
2nd Boot Device	Disabled	
3rd Boot Device	Disabled	
Try Other Boot Devices	Yes	
Floppy Access Control	Read-Write	
Hard Disk Access Control	Read-Write	
S.M.A.R.T. for Hard Disks	Enabled	
BootUp Num-Lock	On	
Floppy Drive Swap	Disabled	
Floppy Drive Seek	Disabled	
PS / 2 Mouse Support	Enabled	
Primary Display	VGA / EGA	
Password Check	Setup	
Boot To OS / 2	No	
Wait For 'F1' If Error	Enabled	
Internal Cache	WriteBack	
System BIOS Cacheable	Enabled	
C000, 16K Shadow	Enabled	
C400, 16K Shadow	Enabled	
C800, 16K Shadow	Disabled	
CC00, 16K Shadow	Disabled	
D000, 16K Shadow	Disabled	
D400, 16K Shadow	Disabled	
D800, 16K Shadow	Disabled	
DC00, 16K Shadow	Disabled	
		ESC : Exit ↑↓ : Sel PgUp/PgDn : Modify F1: Help F2/F3: Color

Note : The above page of the Advanced CMOS Setup only shows part of the related options. To proceed to the next options, please move your cursor downwards.

Advanced Setup options are displayed by choosing the Advanced icon from the AMI BIOS Setup main menu. All Advanced Setup options are described in this section.

Quick Boot: Setting the item to Enabled allows the system to boot within 5 seconds by skipping some check items. Settings: Enabled and Disabled.

1st/2nd/3rd Boot Device: The items allow you to set the sequence of boot devices where AMIBIOS attempts to load the operation system. Possible settings are:

IDE-0	The system will boot from the first HDD.
IDE-1	The system will boot from the second HDD.
IDE-2	The system will boot from the third HDD.
IDE-3	The system will boot from the fourth HDD.
Floppy	The system will boot from floppy drive.
ARMD-FDD	The system will boot from any ARMD device, such as LS-120 or ZIP drive, that functions as a floppy drive.
ARMD-HDD	The system will boot from ARMD device, such as MO or ZIP drive, that functions as hard disk drive.
CDROM	The system will boot from the CD-ROM.
SCSI	The system will boot from the SCSI.
NETWORK	The system will boot from the Network drive.
BBS-0	The system will boot from the first BBS (BIOS Boot Specification) compliant device.
BBS-1	The system will boot from the second BBS (BIOS Boot Specification) compliant device.
BBS-2	The system will boot from the third BBS (BIOS Boot Specification) compliant device.
BBS-3	The system will boot from the fourth BBS (BIOS Boot Specification) compliant device.
Disabled	Disable this sequence.

Note: Available settings for "1st/2nd/3rd Boot Device " vary depending on the bootable devices you have installed. For example, if you did not install a floppy drive, the setting " Floppy" does not show up.

Try Other Boot Devices : Setting the option to yes allows the system to try to boot from other devices if the system fails to boot from the 1st/2nd/3rd Boot Device.

Floppy Access Control: This option specifies the read/write access that is set when booting from a floppy drive.

Hard Disk Access Control: This option specifies the read/write access that is set when booting from a hard disk drive.

S.M.A.R.T. for Hard Disks: This allows you to activate the S.M.A.R.T. (Self-Monitoring Analysis & Reporting Technology) capability for the hard disks. S.M.A.R.T is a utility that monitors your disk status to predict hard disk failure. This gives you an opportunity to move data to a safe place before the hard disk becomes offline. Settings: Enabled and Disabled.

BootUp Num-Lock: Set this option to *Off* to turn the Num Lock key off when the computer is booted so you can use the arrow keys on both the numeric keypad and the keyboard. The settings are *On* or *Off*. The default setting is *On*.

Floppy Drive Swap: This option enables you to change the bootable floppy without having to open the case and switch the cable.

Floppy Drive Seek: Set this option to *Enabled* to specify that floppy drive A: will perform a Seek operation at system boot. The settings are *Disabled* or *Enabled*. The Optimal and Fail-Safe default settings are *Disabled*.

PS/2 Mouse Support : When this option is set *Enabled*, AMIBIOS supports a PS/2 type mouse. The settings are *Enabled* or *Disabled*. The default setting is *Enabled*. System Boot Up Sequence.

Primary Display : This option specifies the type of display monitor and adapter in the computer. The settings are *Mono*, *CGA40*, *CGA80*, *VGA/EGA* or *Absent*. The Optimal and Fail-Safe default settings are *VGA/EGA*.

Password Check : This option enables password checking every time the computer is powered on or every time AMI BIOS Setup is executed. If *Always* is chosen, a user password prompt appears every time the computer is turned on. If *Setup* is chosen, the password prompt appears if AMI BIOS is executed. The Optimal and Power-On defaults are *Setup*.

Boot To OS / 2: Set this option to *Enabled* if running OS/2 operating system and using more than 64 MB of system memory on the motherboard. The settings are *Enabled* or *Disabled*. The Optimal and Fail-Safe default settings are *Disabled*.

Wait For 'F1' If Error: AMIBIOS POST runs system diagnostic tests that can generate a message followed by:
 Press <F1> to continue
 Enabled → AMIBIOS waits for the end user to press <F1> before continuing.
 Disabled → AMIBIOS continues the boot process without waiting for <F1> to be pressed.

Internal Cache: This option sets the type of caching algorithm used by the L1 internal cache memory on the CPU. The settings are *WriteBack*, *WriteThru*, or *Disabled*.

System BIOS Cacheable : When this option is set to *Enabled*, the contents of the F0000h system memory segment can be read from or written to L2 secondary cache memory. The contents of the F0000h memory segment are always copied from the BIOS ROM to system RAM for faster execution.

The settings are *Enabled* or *Disabled*. The Optimal default setting is *Enabled*. The Fail-Safe default setting is *Disabled*.

- Default: Enable
 C000,16K Shadow
 C400,16K Shadow
- Default: Disable
 C800,16K Shadow
 CC00,16K Shadow
 C000,16K Shadow
 C400,16K Shadow
 C800,16K Shadow
 CC00,16K Shadow

These options control the location of the contents of the 16KB of ROM beginning at the specified memory location. If no adaptor ROM is using the named ROM area, this area is made available to the local bus. The settings are:

Setting	Description
Enable	The contents of the named ROM area are written to the same address in system memory (RAM) for faster execution, if an adaptor ROM will be using the named ROM area. Also, the contents of the RAM area can be read from and written to cache memory.
Disabled	The video ROM is not copied to RAM. The contents of the video ROM cannot be read from or written to cache memory.

In the AMIBIOS for the Intel Triton chipset, the E000h page is used as ROM during POST, but shadowing is disabled and the ROM CS# signal is disabled to make the E000h page available on the local bus.

3.5 Advanced Chipset Setup

When you select the "ADVANCED CHIPSET SETUP" on the main program, the screen display will appear as:

Advanced Chipset Setup Screen

AMIBIOS SETUP – ADVANCED CHIPSET SETUP	
© 2000 American Megatrends, Inc. All Rights Reserved	
VGA Frame Buffer Size (KB)	4096
VGA Clock Frequency (Mhz)	50
CPU No Lock Feature	Enabled
ISA Authorized To Write To IPC	Disabled
IPC Wait State Cycles	4
ISA Clock Frequency	14MHz/2
ISA Insert Wait State	Enabled
ISA to Host Read Buffer	Enabled
ISA to Host Write Posting	Enabled
DMA Clock Frequency	ISACLK/2
DMA MEMR IOW Synchronous	Disabled
DMA 16 Bit Wait State Cycles	4
DMA 8 Bit Wait State Cycles	4
PCI to Host Read Prefetch	Enabled
PCI to Host Write Posting	Enabled
Memory Hole at 15M-16M	Disabled
C0000-C7FFF cacheable	Disabled
SDRAM Clock	100MHz
SDRAM Write Posting	Disabled
ESC : Exit ↑↓ : Sel PgUp/PgDn : Modify F1:Help F2/F3 : Color	

In the 'Advanced Chipset Setup' page, all options are predefined by the system board designer. Any attempt to change the parameter of the fields are not recommended.

VGA Frame Buffer Size (KB): This option help you to use a VGA frame buffer and 16 Mb of RAM at the same time; the system will allow access to the graphics card through a hole in its own memory map; in other words, accesses made to addresses within this hole will be directed to the ISA bus instead of main memory.

VGA Clock Frequency (Mhz): This option let you set the clock frequency of the VGA controller.

CPU No Lock Feature: This option allows you to activate the NOLOCK pin of your CPU, which will improve your computers overall speed by 5-10%.

ISA Authorized To Write To IPC: This options controls the ISA master writes to IPC register.

IPC Wait State Cycles: This option specifies the number of ISACLK wait states for read or write to PCI register1.

ISA Clock Frequency: This option sets the ISA clock frequency.

ISA Insert Wait State: The option if extra wait state is inserted of slow ISA devices.

ISA to Host Read Buffer: The option controls suffered reads of host memory by ISA DMA or ISA bus master.

ISA to Host Write Posting: This option controls posted writes to host memory by ISA DMA or ISA bus master.

DMA Clock Frequency: This option sets the DMA controller clock.

DMA MEMR IOW Synchronous: If enabled, the DMA controller will assert MEMR# at the same time as IOW#. If disabled, MEMR# will be asserted one clock after IOW#.

DMA 16 Bit Wait State Cycles: This option specifies the number of wait states in 16-bit DMA cycle.

DMA 8 Bit Wait State Cycles: This option specifies the number of wait states in 8-bit DMA cycle.

PCI to Host Read Prefetch: If enabled, all QWORD aligned burst reads from a PCI master addressed to the North Bridge system memory will use prefetch. If disabled, memory read cycles from PCI to host are allowed to complete before the PCI cycle is terminated and all burst read attempts will be disconnected on the PCI bus.

PCI to Host Write Posting: If enabled, all QWORD aligned burst write from a PCI master addressed to the North Bridge system memory will be posted. If disabled, memory write cycles from PCI to host are allowed to complete before the PCI cycle is terminated and all burst write attempts will be disconnected on the PCI bus.

Memory Hole at 15M-16M: This option is used to reserve the memory block 15M-16M for ISA adapter ROM.

C0000-C7FFF cacheable: This option allows you to control the cacheability of C0000-C7FFF address.

SDRAM Clock: This option let you set the clock frequency of the SDRAM.

SDRAM Write Posting: This option controls the ability of SDRAM write posting.

3.6 Power Management Setup

The "Power Management Setup" controls the CPU card's "Green" features. When you select the "POWER MANAGEMENT SETUP" on the main program, the screen display will appear as:

Power Management Setup Screen

AMIBIOS SETUP – POWER MANAGEMENT SETUP © 2000 American Megatrends, Inc. All Rights Reserved		
Power Management /APM ***Select Power Down Mode**	Enabled	Available Options: Disabled ▶ Enabled
Video Power Down Mode	Stand By	
Hard Disk Power Down Mode ***Select Time Out Mode***	Stand By	
Doze Time Out (Second)	Disabled	
Standby Time Out (Minute)	Disabled	
Suspend Time Out (Minute) ***Select Clock Throttle Mod	Disabled	
Green PC Monitor Power State ***Select Monitor Event***	Off	
DMA Activity	Ignore	
PCI Master Activity	Ignore	
Parallel IO Activity	Ignore	
Serial IO Activity	Ignore	
Keyboard Activity	Monitor	
Floppy Disk Activity	Ignore	
Hard Disk Activity	Ignore	
IRQ1-15 Interrupt	Monitor	
System Timer Interrupt	Ignore	
		ESC : Exit ↑↓ : Sel PgUp/PgDn : Modify F1:Help F2/F3 : Color

Power Management Setup options are displayed by choosing the Power Management field from the AMI BIOS Setup main menu. All Power Management Setup options are described in this section.

Power Management /APM: Setting to Enabled will activate the Advanced Power Management (APM) feature to enhance power saving modes. Settings: Enabled and Disabled.

Video Power Down Mode: This option specifies the power conserving state that the VESA VGA video subsystem enters after the specified period of display inactivity has expired.

Hard Disk Power Down Mode: This option specifies the power conserving state that the hard disk drive enters after the specified period of hard drive inactivity has expired. The settings are Standby, Suspend, Doze, or Disable.

Doze Time Out (Second): This option specifies the length of the period of system inactivity before the computer is placed in Doze mode.

Standby Time Out (Minute): This option specifies the length of the period of system inactivity while the computer is in Full-On power state before the computer is placed in Standby mode. When this length of the time expires, the computer enters Standby Timeout state. In Standby mode, some power use is curtailed.

Suspend Time Out (Minute): This option specifies the length of a period of system inactivity while in Standby state. When this length of time expires, the computer enters Suspend power state.

Green PC Monitor Power State: This option specifies the power state that the green PC-compliant video monitor enters when AMIBIOS places it in a power saving state after the specified period of display inactivity has expired. The settings are Off, Standby, Suspend, or On.

DMA Activity: Detect the presence or absence of DMA request activities.

PCI Master Activity: Detect the presence or absence of PCI Master device activities.

Parallel IO Activity: Detect the presence or absence of Parallel IO activities.

Serial IO Activity: Detect the presence or absence of Serial IO activities.

Keyboard Activity: This option allows you to enable event monitoring on the keyboard. If set to *Monitor* and the computer is in a power saving state, AMIBIOS watches for keyboard activity. The computer enters the Full On state if any activity occurs.

Floppy Disk Activity: Detect the presence or absence of Floppy Disk activities.

Hard Disk Activity: Detect the presence or absence of Hard Disk activities.

IRQ1-15 Interrupt: This option allows you to set the different protocol for the IrDA device.

System Timer Interrupt: Detect the presence or absence of system timer.

3.7 PCI Plug and Play Setup

Both the ISA and PCI buses on the CPU card use system IRQs & DMAs. You must set up the IRQ and DMA assignments correctly through the PCI / Plug and Play Setup utility, otherwise the SBC will not work properly.

When you select the "PCI / PLUG AND PLAY SETUP" on the main program, the screen display will appear as:

PCI / Plug and Play Setup Screen

AMIBIOS SETUP – PCI / PLUG AND PLAY SETUP		
© 2001 American Megatrends, Inc. All Rights Reserved		
Plug and Play Aware O/S	No	Available Options:
PCI Latency Timer (PCI Clocks)	32	▶ No
Allocate IRQ to PCI VGA	Yes	Yes
DMA Channel 0	PnP	
DMA Channel 1	PnP	
DMA Channel 3	PnP	
DMA Channel 5	PnP	
DMA Channel 6	PnP	
DMA Channel 7	PnP	
IRQ3	ISA / EISA	
IRQ4	ISA / EISA	
IRQ5	PCI / PnP	
IRQ7	ISA / EISA	
IRQ9	PCI / PnP	
IRQ10	PCI / PnP	
IRQ11	PCI / PnP	
IRQ14	PCI / PnP	ESC : Exit ↑↓ : Sel
IRQ15	PCI / PnP	PgUp/PgDn : Modify
		F1: Help F2/F3 : Color

PCI/PnP Setup options are displayed by choosing the PCI/PnP Setup icon from the AMI BIOS Setup main menu. All PCI/PnP Setup options are described in this section.

Plug and Play Aware O/S: Set this option to " Yes" if the operation system installed in the computer is Plug and Play-aware. BIOS only detects and enables PnP ISA adapter cards that are required for system boot. The Windows 95 operating system detects and enables all other PnP-aware adapter cards. Windows 95 is PnP-aware. Set this option to " No" if the operating system (such as DOS, OS/2, Windows 3.x) does not use PnP.

PCI Latency Timer (PCI Clocks): This option is used to control PCI latency timer period (follow PCI clocks). Based on PCI specification 2.1 or later and PCI bus frequency in system, user can select different timer to meet their PCI bus environment.

Allocate IRQ to PCI VGA: This option will be used to allocate IRQ for PCI VGA card. In general, some of PCI VGA cards needs IRQ support.

DMA Channel 0/1/3/5/6/7: These items specify the bus that the system DMA(Direct Memory Access) channel is used. The settings determine if AMIBIOS should remove a DMA from the available DMAs passed to devices that are configurable by the system BIOS. The available DMA pool is determined by reading the ESCD NVRAM. If more DMAs must be removed from the pool, the end user can reserve the DMA by assigning an ISA/EISA setting to it.

IRQ3/4/5/7/9/10/11/14/15: These items specify the bus where the specified IRQ line is used. The settings determine if AMIBIOS should remove an IRQ from the pool of available IRQs passed to devices that are configurable by the system BIOS. The available IRQ pool is determined by reading the ESCD NVRAM. If more IRQs must be removed from the IRQ pool, the end user can use these settings to reserve the IRQ by assigning an ISA/EISA setting to it. Onboard I/O is configured by AMIBIOS. All IRQs used by onboard I/O are configured as PCI/PnP. If all IRQs are set to ISA/EISA, and IRQ14/15 are allocated to the onboard PCI IDE, IRQ9 will still be available for PCI and PnP devices. Settings: ISA/EISA and PCI/PnP.

3.8 Peripheral Setup

When you select the "PERIPHERAL SETUP" on the main program, the screen display will appear as:

Peripheral Setup Screen

AMIBIOS SETUP – PERIPHERAL SETUP		
© 2001 American Megatrends, Inc. All Rights Reserved		
OnBoard FDC	Enabled	Available Options: Auto Disabled ► Enabled ESC : Exit ↑↓ : Sel PgUp/PgDn : Modify F1:Help F2/F3 : Color
OnBoard Serial Port 1	3F8h/COM1	
OnBoard Serial Port 2	2F8h/COM2	
Serial Port 2 Mode	Normal	
IR Duplex Mode	N/A	
IrDA Protocol	N/A	
OnBoard Parallel Port	378h	
Parallel Port Mode	Normal	
EPP Version	N/A	
Parallel Port IRQ	7	
Parallel Port DMA Channel	N/A	
OnBoard IDE	Both	

Peripheral Setup options are displayed by choosing the Peripheral Setup icon from the AMI BIOS Setup main menu. All Peripheral Setup options are described in this section.

Onboard FDC: This option enables the floppy drive controller on the motherboard. The settings are Enabled, Disabled, or Auto. The Optimal default setting is Enabled.

Onboard Serial Port 1: This option enables serial port 1 on the motherboard and specifies the base I/O port address for serial port 1. The settings are Auto, Disable, 3F8/COM1, 2F8/COM2, 3E8/COM3, or 2E8/COM4. The optimal default setting is 3F8/COM1.

Onboard Serial Port 2: This option enables serial port 2 on the motherboard and specifies the base I/O port address for serial port 2. The settings are Auto, Disable, 3F8/COM1, 2F8/COM2, 3E8/COM3, or 2E8/COM4. The optimal default setting is 2F8/COM2.

Serial Port 2 Mode: This item sets the operation mode for Serial Port 2. Settings: Normal, IrDA and ASKIR.

IR Duplex Mode: This option specifies the Infrared transfer used when any infrared option is enabled on serial port2. The Optimal settings hides this option completely.

IrDA Protocol: This option allows you to set the different protocol for the IrDA device.

Onboard Parallel Port: This option enables the parallel port on the motherboard and specifies the parallel port base I/O port address. The settings are 378h, 278h, 3BC, Auto or Disabled. The Optimal default setting is 378.

Parallel Port Mode : This option specifies the parallel port mode. ECP and EPP are both bidirectional data transfer schemes that adhere to the IEEE P1284 specifications. The default setting is *Normal*. The other settings are:

Setting	Description
Normal	Normal The normal parallel port mode is used. This is the default setting.
Bi-Dir	Bi-Dir Use this setting to support bidirectional transfers on the parallel port.
EPP	The parallel port can be used with devices that adhere to the Enhanced Parallel Port (EPP) specification. EPP uses the existing parallel port signals to provide asymmetric bidirectional data transfer driven by the host device.
ECP	The parallel port can be used with devices that adhere to the Extended Capabilities Port (ECP) specification. ECP uses the DMA protocol to Achieve transfer rates of approximately 2.5 Mbs. ECP provides symmetric Bidirectional communications.

EPP Version: This option is only valid if the Parallel Port Mode option is set to EPP. This option specifies the version of the Enhanced Parallel Port specification will be used by AMIBIOS.

Parallel Port IRQ: This option specifies the IRQ used by the parallel port. The Optimal default setting is 7.

Option	Description
5	This option allows the parallel port to use Interrupt 5.
7	This option allows the parallel port to use Interrupt 7. This is the default setting. The majority of parallel ports on computer systems use IRQ7 and I/O Port 378H as the standard setting.

Parallel Port DMA Channel: This option is only available if the setting for the **Parallel Port Mode** option is ECP. The other settings are setting N/A only.

OnBoard IDE: This option specifies the onboard IDE controller channels that will be used. The settings are Disabled, Primary, Secondary, or Both.

3.9 Auto-Defect Hard Disks

Standard CMOS Setup Screen

AMIBIOS SETUP – STANDARD CMOS SETUP											
© 2001 American Megatrends, Inc. All Rights Reserved											
Date (mm/dd/yyyy)	: Tue Apr 04, 2002					Base Memory	: 639KB				
Time (hh/mm/ss)	: 00:06:52					Extd Memory	: 123MB				
Floppy Drive A :	1.44 MB 3 ¹ / ₂										
Floppy Drive B :	Not Installed										
	Type	Size	Cyln	Head	WPcom	Sec	LBA Mode	Blk Mode	PIO Mode	32 Bit Mode	
Pri Master :	Not Installed										On
Pri Slave :	Not Installed										On
Pri Master :	Not Installed										On
Pri Slave :	Not Installed										On
Boot Sector Virus Protection	Disabled										
Month :	Jan	- Dec						ESC:Exit	↑↓ : Sel		
Day :	01	- 31						PgUp/PgDn: Modify			
Year :	1980	- 2099						F1: Help F2/F3:Color			

Primary Master/ Primary Slave/ Secondary Master/ Secondary Slave: Hard Disk Drive Setting.

Cyln: This field configures the number of cylinders. Refer to the drive documentation to determine the correct value. To make changes to this field, set the Type field to [User Type HDD] and the Translation Method field to [Manual].

Head: This field configures the number of read/write heads. Refer to the drive documentation to determine the correct value. To make changes to this field, set the Type field to [User Type HDD] and the Translation Method field to [Manual].

WPcom: Write Precompensation Cylinder. Older hard drives have the same number of sectors per track at the innermost tracks as at the outermost tracks. This means that the data density at the innermost tracks is higher and thus the bits are lying closer together. Starting with this Cyl# until the end of Cyl#s the writing starts earlier on the disk. In modern Hard Devices such as SCSI this entry is useless. For IDE hard drives it is not necessary to enter a WP cylinder. The IDE HDD will ignore it for it has its own parameters inboard.

Sec: This field configures the number of sectors per track. Refer to the drive documentation to determine the correct value. To make changes to this field, set the Type field to [User Type HDD] and the Translation Method field to [Manual].

LBA: Select the hard disk drive type in this field. When Logical Block Addressing (LBA) is enabled, the 28-bit addressing of the hard drive is used without regard for cylinders, heads, or sectors. Note that LBA Mode is necessary for drives with more than 504MB storage capacity.

Blk: This option allows you to enable or disable the Block Mode that is a performance enhancement that allows the grouping of multiple read or write commands over the IDE/ATA interface. The settings are Enable or Disable.

PIO: This option lets you set a PIO (Programmed Input/Output) mode for the IDE device. Modes 0 through 4 provide successive increase in performance.

3.10 Change User/ Supervisor Password

When you select this function, a message as below will appear on the screen:

<p style="text-align: center;">AMIBIOS HIFLEX SETUP UTILITY - VERSION 1.38 © 2001 American Megatrends, Inc. All Rights Reserved</p>
<p style="text-align: center;">Standard CMOS Setup Advanced CMOS Setup Advanced Chipset Setup Power Management Setup PCI / Plug and Play Setup</p>
<p style="text-align: center;">Enter new user password:</p>
<p style="text-align: center;">Save Settings and Exit Exit Without Saving</p>
<p style="text-align: center;">Change the user password ESC : Exit ↑↓ : Sel F2/F3 : Color F10 : Save & Exit</p>

<p style="text-align: center;">AMIBIOS HIFLEX SETUP UTILITY – VERSION 1.54 © 2001 American Megatrends, Inc. All Rights Reserved</p>
<p style="text-align: center;">Standard CMOS Setup Advanced CMOS Setup Advanced Chipset Setup Power Management Setup PCI / Plug and Play Setup</p>
<p style="text-align: center;">Enter new supervisor password:</p>
<p style="text-align: center;">Save Settings and Exit Exit Without Saving</p>
<p style="text-align: center;">Change the supervisor password ESC : Exit ↑↓ : Sel F2/F3 : Color F10 : Save & Exit</p>

Type the password, up to six characters in length, and press<Enter>. The password typed now will replace any previously set password from CMOS memory. You will be prompted to confirm the password. Retype the password and press<Enter>. You may also press<Esc> to abort the selection and not enter a password.

To clear a set password, just press<Enter> when you are prompted to enter the password. A message will show up confirming the password will be disabled. Once the password is disabled, the system will boot and you can enter Setup without entering any password.

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

Additionally, when a password is enabled, you can also have AMIBIOS to request a password each time the system is booted. This would prevent unauthorized use of your computer. The setting to determine when the password prompt is required is the PASSWORD CHECK option of the ADVANCED BIOS FEATURES menu. If the PASSWORD CHECK option is set to Always, the password is required both at boot and at entry to Setup. If set to Setup, password prompt only occurs when you try to enter Setup.

Note: About Supervisor Password & User Password

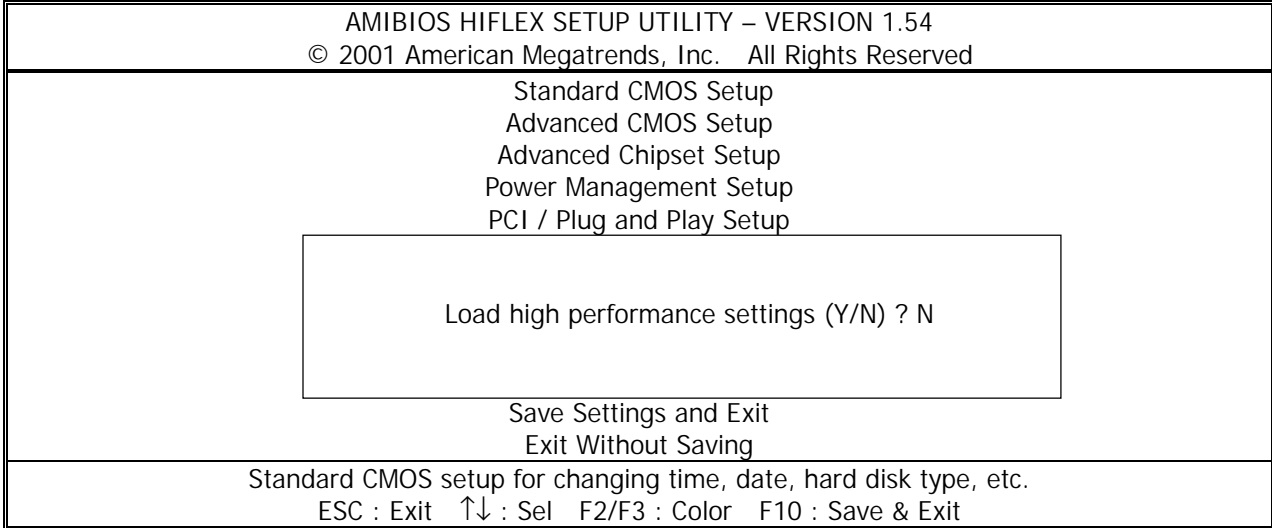
Supervisor Password : Can enter and change the settings of the setup menu.

User Password : Can only enter but do not have the right to change the settings of the setup menu.

3.11 Auto Configuration with Optimal Settings

The options on the main menu allow users to restore all of the BIOS settings to optimal defaults. The Optimal Defaults are the default values set by the manufacturer.

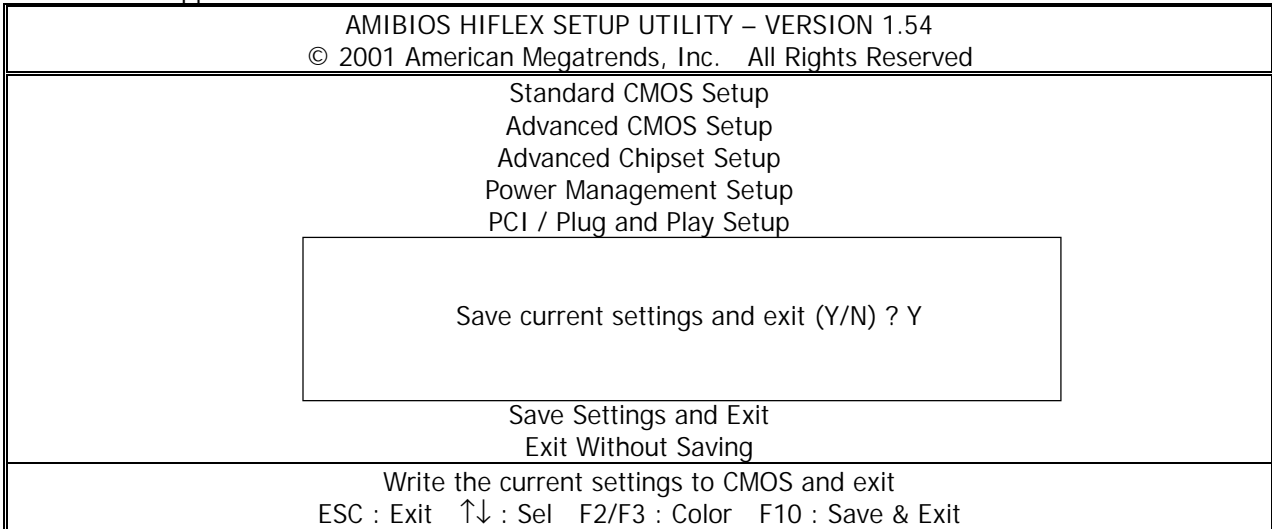
When you select High Optimal Defaults, a message as below appears:



Pressing "Y" loads the defaults BIOS values.

3.12 Save & Exit Setup

When you want to quit the Setup menu, you can select this option to save the changes and quit. A message as below will appear on the screen.



Typing Y will allow you to quit the Setup Utility and save the user setup changes to RTC CMOS. Typing N will return to Setup Utility.

3.13 Exit Without Saving

When you want to quit the Setup menu, you can select this option to abandon the changes. A message as below will appear on the screen.

AMIBIOS HIFLEX SETUP UTILITY – VERSION 1.54 © 2001 American Megatrends, Inc. All Rights Reserved
Standard CMOS Setup Advanced CMOS Setup Advanced Chipset Setup Power Management Setup PCI / Plug and Play Setup
Quit without saving (Y/N) ? N
Save Settings and Exit Exit Without Saving
Exit without saving the current settings ESC : Exit ↑↓ : Sel F2/F3 : Color F10 : Save & Exit

Typing Y will allow you to quit the Setup Utility without saving any changes to RTC CMOS.
Typing N will return to the Setup Utility.

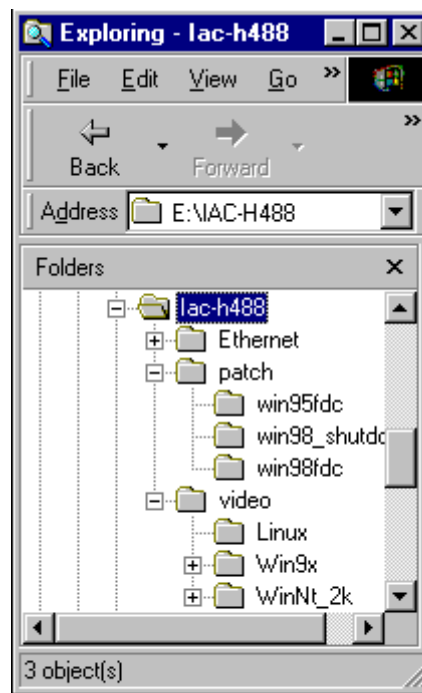
Chapter 4 . Drivers Support

4.1 Use Your Driver CD-ROM

This chapter provides information on how to install the drivers in generally and related directory that come with the CD-ROM in the package. Please follow the instructions set forth on the screen carefully.

1. Find the directory for your O/S accordingly.
2. Always read the README.TXT. before installation.
3. Run the *.EXE., and follow the installation prompt step by step.

4.2 File Directory



APPENDIXA. Watch-Dog Timer

You can enable the watch-dog when your application software monitors an unexpected or not respond, then the timer generates a reset to reboot your system. During the period of enable to reset, you could still cancel reset by disabling the watch-dog. Decide the way you want to set the period for reset by selecting hardware or software watch-dog (if both of them are available). Software setting period, normally setting watch-dog timer period to 16 level.

Software watch-dog using example

EX.1: For DOS

Enable	Disable
C:\DOS> DEBUG -o443 D	C:\DOS>DEBUG -o441 F

EX.2: For assemble Language

Enable :	Disable :
MOV DX, 443H	MOV DX, 441H
MOV AL, 0FH	MOV AL, 0FH
OUT DX, AL	OUT DX, AL

Note: "F" is the period of software watch-dog timer (normally "F" indicated 0 sec.). 0 to 9 and A to F are used for represent different period. Normally, the step is 2 sec. That means "E" is 2, "D" is 4, "2" is 26, "1" is 28 and "0" is 30 seconds.

Terms and Conditions

Date:2002.11.1

Warranty Policy

1. All products are warranted against defects in materials and workmanship for a period of two years from the date of purchase by the customer.
2. The buyer will bear the return freight charges for goods that are returned for repair within the warranty period whereas manufacturer will bear the return to user freight charges after repair.
3. The buyer will pay for repair (for the replaced materials plus service time) and transportation charges (both ways) for items after the expiration of the warranty period.
4. If the RMA Service Request Form does not meet the stated requirement as listed on "RMA Service " , RMA goods will be returned at the customer expense.
5. The following conditions are excluded from this warranty :
 - A. Improper or inadequate maintenance by the customer.
 - B. Unauthorized modification or misuse.
 - C. Operation outside of the environmental specifications for the product.

RMA Service

1. Request a RMA#:

Complete and fax to Supplier the "RMA Request Form" to obtain a RMA number.

2. Shipping:

- A. The customer is requested to fill up the problem code as listed. If none of the code is selected, please write the symptom description on the remark.
- B. Ship the defective units with freight prepaid.
- C. Mark the RMA # clearly on the box.
- D. Shipping damage as a result of inadequate packing is the customer's responsibility.
- E. Use the original packing materials whenever possible.

3. All RMA# are valid for 30 days only:

When RMA goods are received after valid RMA# period, the goods will be rejected.

When requesting RMA service, please fill out this "RMA Service Request Form".
Without this form your RMA will be REJECTED!!!

RMA No:	Reasons to Return: <input type="checkbox"/> Repair(Please include failure details) <input type="checkbox"/> Testing Purpose
Company: Phone No. Fax No.:	Contact Person: Purchased Date: Applied Date:
Return Shipping Address: _____	
Shipping by: <input type="checkbox"/> Air Freight <input type="checkbox"/> Sea <input type="checkbox"/> Express: _____ <input type="checkbox"/> Others: _____	

Item	Model Name	Serial Number	Configuration

Item	Problem Code	Failure Status

***Problem Code:**

- | | | | |
|------------------------|------------------------------|--------------------|--------------------------|
| 01: D.O.A. | 07: BIOS Problem | 13: SCSI | 19: DIO |
| 02: Second Time R.M.A. | 08: Keyboard Controller Fail | 14: LPT Port | 20: Buzzer |
| 03: CMOS Data Lost | 09: Cache RMA Problem | 15: PS2 | 21: Shut Down |
| 04: FDC Fail | 10: Memory Socket Bad | 16: LAN | 22: Panel Fail |
| 05: HDC Fail | 11: Hang Up Software | 17: COM Port | 23: CRT Fail |
| 06: Bad Slot | 12: Out Look Damage | 18: Watchdog Timer | 24: Others (Pls specify) |

Request Party

Confirmed By Supplier

 Authorized Signatures / Date

 Authorized Signatures / Date