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CHAPTER 1 INTRODUCTION

1-1 SYSTEM FEATURES

- ☐ Supports all of 5V and 3.3V 486 CPUs, includes AmDX4-100/120, Am5x86-P75, and Cyrix 5x86.
- ☐ Flexible architecture to support 128/256/512KB Direct mapped cache scheme.
- ☐ Supports 4 stage power saving: On/Doze/Standby/Suspend.
- ☐ Supports L1/L2 Write back/Write through cache feature.
- ☐ Supports 72-pin dual type SIM modules.
- ☐ Memory configurations from 1MB up to 256MB by using 256KB/1MB/4MB/8MB/16MB/32MB/64MB SIM module.
- ☐ Supports SMI/SMM/PMU/APM power controllers.
- ☐ Dual IDE connectors support up to four devices in two channels.
- ☐ On-board high speed I/O includes 2 serial (16550 fast UART compatible), 1 parallel (EPP/ECP), and 1 FDC.

REMARKS

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IBM[®] ,IBM PC[®] ,IBM AT[®] and IBM XT[®] are registered trademark of International Business Machines Corporations
SIS[®] a is trademark of Silicon Integrated Systems.
UMC[®] a is trademark of United Microelectronics corporation.

1-2 CHECK LIST OF THE PACKING

The mainboard comes securely packed in a durable box and shipping carton. Inside the box, the mainboard is sandwiched between two sheets of sponge and packed in an anti-static bag.

Each mainboard containing:

<u>Q'TY</u>	<u>Description</u>
1	Mainboard : ATC-1425B
1	Diskette : Enhanced IDE driver (3.5").
1	Cable : Enhanced IDE connector.
1	Cable : F.D.D connector.
1	Cable : Serial port.
1	Cable : Serial/Parallel.
1	Manual : User`s manual.

If any of the above items is missing or damaged, please contact the dealer from whom you purchased.

NOTE : Leave the mainboard in its original packing until you are ready to install it.

CHEAPTER 2 INSTALLATION

2-1 CPU INSTALLATION

The following table listed Jumpers related locations areshown in page 1.

2-1-1 CPU type setting

A. Gernal setting

CPU type	JP18	JP19	JP20	JP21	JP22	JP23	JP24
486DX(5V)	open	open	1-2	2-3	2-3	open	open
486SX	open	open	1-2	2-3	2-3	open	open

CPU type	JP25	JP26	JP27	JP28	JP29	JP30	JP31
486DX(5V)	open	open	1-2,3-4	open	open	open	3-4
486SX	open	open	2-3	open	open	open	open

B. INTEL CPU setting

CPU type	JP18	JP19	JP20	JP21	JP22	JP23	JP24
P24T	open	1-2	1-2	open	1-2	open	1-2
P24D	open	1-2	open	1-2	1-2	1-2	1-2
S-SERIES	open	1-2	1-2	2-3	2-3	open	open

CPU type	JP25	JP26	JP27	JP28	JP29	JP30	JP31
P24T	3-4	1-2	1-2,3-4	2-3	open	1-2	2-3
P24D	1-2,3-4	open	1-2,3-4	2-3	2-3	4-5	3-4
S-SERIES	3-4	open	1-2,3-4	2-3	1-2	4-5	3-4

※ A80486DX4-100 &EW is "WRITE-BACK" type, set "**P24D**" type.

A80486DX4-100 &E is "WRITE-THROUGH" type, set "**S-SERIES**" type.

C. AMD CPU setting

CPU type	JP18	JP19	JP20	JP21	JP22	JP23	JP24
Am5x86-P75	close	1-2	1-2	1-2	1-2	1-2	1-2
Enhanced Am486	open	1-2	1-2	1-2	1-2	1-2	1-2
Am486DXL(3.45V)	open	2-3	※1-2/2-3	open	2-3	open	open

CPU type	JP25	JP26	JP27	JP28	JP29	JP30	JP31
Am5x86-P75	1-2,3-4	open	1-2,3-4	2-3	2-3	4-5	3-4
Enhanced Am486	1-2,3-4	open	1-2,3-4	2-3	2-3	4-5	3-4
Am486DXL(3.45V)	open	3-4	1-2,3-4	4-5	open	open	1-2,3-4

(※1-2 486DX4; 2-3 486DX2)

※ A80486DX4-100SV8B and A80486DX4-120SV8B are "WRITE-BACK" type, set "**Enhanced Am486**" type.

A80486DX4-100NV8T and A80486DX4-120NV8T are "WRITE-THROUGH" type, set "**Am486DXL(3.45V)**" type, **JP20 set "1-2"**.

D. CYRIX CPU setting

CPU type	JP18	JP19	JP20	JP21	JP22	JP23	JP24
CYRIX CX486	open	1-2	1-2	1-2	2-3	open	2-3
CYRIX 5x86	open	1-2	1-2	1-2	2-3	1-2	1-2

CPU type	JP25	JP26	JP27	JP28	JP29	JP30	JP31
CYRIX CX486	2-3	2-3	1-2,3-4	1-2	open	2-3	3-4
CYRIX 5x86	1-2,3-4	open	1-2,3-4	2-3	2-3	4-5	3-4

2-1-2 CPU speed setting

CPU SPEED	JP14	JP13	JP12
DX25/DX2-50/DX4-75	OPEN	OPEN	OPEN
DX33/DX2-66/DX4-100	OPEN	CLOSE	CLOSE
DX40/DX2-80/DX4-120	OPEN	OPEN	CLOSE
DX50	OPEN	CLOSE	OPEN

2-1-3 CPU voltage setting

CPU Voltage	JP34	JP35
5V	1-2	open
3.45V	2-3	1-3,2-4
4V	2-3	3-5,4-6

※**NOTE:** **Am5x86-P75+** please follow the setting as 'Enhanced Am486',
'DX50', and '3.45V'; JP10 set '2-3'.
Am5x86-P90 please follow the setting as 'Am5x86-P75', 'DX40',
and '3.45V'; JP10 set '2-3'.

2-2 SIM MODULES INSTALLATION

The SiS 486 PCI/ISA mainboard can be expanded from 1MB to 256MB by using 256K, 1MB, 2MB, 4MB, 8MB, 16MB, 32MB, and 64MB of 72-pin SIM module.

※ **"Free Table"** feature is offered for main memory configuration. The product works with one SIMM plugs into any SIMM sockets.

2-3 SRAM INSTALLATION

This mainboard can support cache memory from 128K to 512K bytes with the types of 32KX8, 64KX8, or 128KX8 SRAM.

Cache Configuration Size

Cache Size	TAG SRAM (U21)	DATA SRAM (U17-20)	JP16	JP32	JP33	JP36
128K	8KX8	32KX8	1-2	1-2	1-2	1-2,3-4
256K	32KX8	64KX8	2-3	1-2	2-3	1-2,3-4
512K	32KX8	128KX8	1-2	2-3	2-3	1-2,3-4

2-4 OTHER JUMPERS SETTING

2-4-1 Other jumpers setting

	JP10
Synchronous clock	1-2
Asynchronous clock	2-3

	JP38※
Flash ROM	1-2, 5-6
EPROM	2-3, 5-6

※ The pin-5 and pin-6 is fixed by factory default setting.

	J11
External Battery	1-2
Internal Battery	2-3
Clear CMOS	3-4

2-4-2 Connectors description

Connector	Description
J12	Reset
J13	HDD LED
J14	Turbo LED
J15	Turbo Switch
J16	Speaker Connector
J17	Keylock

CHAPTER 3 BIOS SETUP

AWARD BIOS SYSTEM CONFIGURATION SETUP

This chapter explains how to set up system configuration (CMOS) under the AWARD BIOS. The SETUP program is stored in the ROM on the mainboard. To do the SETUP procedure, press key when the system is booting up. The following main menu will appear. Please select "STANDARD CMOS SETUP" to enter the next screen.

ROM PCI/ISA BIOS (2A4IBA2H)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	PASSWORD SETTING
BIOS FEATURES SETUP	IDE HDD AUTO DETECTION
CHIPSET FEATURES SETUP	SAVE & EXIT SETUP
POWER MANAGEMENT SETUP	EXIT WITHOUT SAVING
PCI CONFIGULATION SETUP	
LOAD BIOS DEFAULTS	
LOAD SETUP DEFAULTS	
Esc: Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift)F2: Change Color
Virus protection, Boot sequence ...	

The section at the bottom of the main menu explains how to control this screen.
Another one section displays the items highlighted in the list.

This screen records, some basic hardware information, set the system clock and error handling. These records can be lost or corrupted if the on-board battery is fail or weakness.

ROM PCI/ISA BIOS (2A4IBA2H)
 CMOS SETUP UTILITY
 AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	PASSWORD SETTING
BIOS FEATURES SETUP	IDE HDD AUTO DETECTION
CHIPSET FEATURES SETUP	SAVE & EXIT SETUP
POWER MANAGEMENT SETUP	EXIT WITHOUT SAVING
PCI CONFIGULATION SETUP	
LOAD BIOS DEFAULTS	
LOAD SETUP DEFAULTS	
Esc: Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift)F2: Change Color
Virus protection, Boot sequence ...	

ROM PCI/ISA BIOS (2A4IBA2H)
 CMOS SETUP UTILITY
 AWARD SOFTWARE, INC.

Date (mm:dd:yy) : Mon, Oct. 2 1995						
Time(hh:mm:ss) : 3 : 17 : 1						
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ
SECTOR	MODE					
Primary Master	: AUTO	0	0	0	0	0
0	-----					
Primary Slave	: AUTO	0	0	0	0	0
0	-----					
Primary Slave	: AUTO	0	0	0	0	0
0	-----					
Primary Slave	: AUTO	0	0	0	0	0
0	-----					
Drive A : 1.2M, 5.25 in.				Base Memory	:	640K
Drive B : None				Extended memory	:	11264K
				Other Memory	:	384K
Video : EGA/VGA				-----		
Halt On: All Errors				Total Memory	:	12288K
ESC : Quit		↑↓→←:Select Item		PU/PD/+/- :		
Modify						
F1 : Help		(Shift) F2 : Change Color				

This screen is a list of system configuration options. Some of them are defaults required by the mainboard's design, others will be depended on the features of your system.

ROM PCI/ISA BIOS (2A4IBA2H)
 CMOS SETUP UTILITY
 AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	PASSWORD SETTING
BIOS FEATURES SETUP	IDE HDD AUTO DETECTION
CHIPSET FEATURES SETUP	SAVE & EXIT SETUP
POWER MANAGEMENT SETUP	EXIT WITHOUT SAVING
PCI CONFIGULATION SETUP	
LOAD BIOS DEFAULTS	
LOAD SETUP DEFAULTS	
Esc: Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift)F2: Change Color
Virus protection, Boot sequence ...	

ROM PCI/ISA BIOS (2A4IBA2H)
 BIOS FEATURES SETUP
 AWARD SOFTWARE , INC.

Virus Warning	: Disabled	Video BIOS Shadow	:	Enabled
CPU Internal Cache	: Enabled	C8000-CFFFF Shadow	:	Disabled
External Cache	: Enabled	D0000-D7FFF Shadow	:	Disabled
Quick Power On Self Test	: Disabled	D8000-DFFFF Shadow	:	Disabled
Boot Sequence	: A, C			
Swap Floppy Drive	: Disabled			
Boot Up Floppy Seek	: Enabled			
Boot Up NumLock Status	: On			
Boot Up System Speed	: High			
Gate A20 Option	: Fast			
Typematic Rate Setting	: Disabled			
Typematic Rate (Chars/Sec)	: 6			
Typematic Delay (Msec)	: 250			
Security Option	: Setup	Esc : Quit		
		↑↓→←:Select Item		
		F1 : Help		
		U/PD/+/- : Modify		
		F5 : Old Values		
		(Shift)F2:Color		
		F6 : Load BIOS Defaults		
		F7 : Load Setup Defaults		

This screen controls the setting for the chipset on the mainboard.

ROM PCI/ISA BIOS (2A4IBA2H)
 CMOS SETUP UTILITY
 AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	PASSWORD SETTING
BIOS FEATURES SETUP	IDE HDD AUTO DETECTION
CHIPSET FEATURES SETUP	SAVE & EXIT SETUP
POWER MANAGEMENT SETUP	EXIT WITHOUT SAVING
PCI CONFIGURATION SETUP	
LOAD BIOS DEFAULTS	
LOAD SETUP DEFAULTS	
Esc: Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift)F2:Change Color
At clock, DRAM timings	

ROM PCI/ISA BIOS (2A4IBA2H)
 CHIPSET FEATURES SETUP
 AWARD SOFTWARE, INC.

Auto Configuration	: Enabled	Onboard 496B IDE	: Both Port
ISA Bus Clock	: 7.159MHz	IDE 0 Master Mode	: Auto
LBD# Sample Point	: End of T2	IDE 0 Slave Mode	: Auto
Cache Write Cycle	: 2 CCLK	IDE 1 Master Mode	: Auto
Cache Burst Read Cycle	: 1 CCLK	IDE 1 Slave Mode	: Auto
L2 Cache/DRAM Cycle	: 2 CCLK	IDE Prefetch Read Buffer	: Disable
WS		IDE HDD Block Mode	: Enable
DRAM RAS to CAS Delay	: 3 CCLK	Onboard FDC Control	: Enable
DRAM Write Cycle	: 1 WS	Onboard Serial Port 1	: COM1
DRAM Write CAS Pulse	: 2 CCLK	Onboard Serial Port 2	: COM2
DRAM CAS Precharge Time	: 1 CCLK	Onboard Parallel Port	: 378H
DRAM RAS to MA Delay	: 1 CCLK	Onboard Printer Mode	: Compatible
DRAM Speed	: Faster		
DRAM Slow Refresh	: Disable	Esc: Quit	↑↓→←:Select Item
		F1 : Help	PU/PD/

CPU Burst Write	: Disabled	F5 : Old Values	+/- :Modify (SHIFT)F2: Color
L2 Cache Policy	: Write Back	F6 : Load BIOS Defaults	
L2 Cache Tag Bits	: 8 bits	F7 : Load Setup Defaults	

This screen controls the 'green' features of the mainboard.

ROM PCI/ISA BIOS (2A4IBA2H)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	PASSWORD SETTING
BIOS FEATURES SETUP	IDE HDD AUTO DETECTION
CHIPSET FEATURES SETUP	SAVE & EXIT SETUP
POWER MANAGEMENT SETUP	EXIT WITHOUT SAVING
PCI CONFIGURATION SETUP	
LOAD BIOS DEFAULTS	
LOAD SETUP DEFAULTS	
Esc : Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift)F2:Change Color
Sleep Timer, Suspend Timer	

ROM PCI/ISA BIOS (2A4IBA2H)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

Power Management	: Disabled	IRQ 4 (COM1)	:Enable
PM Control by APM	: Yes	IRQ 5 (LPT 2)	:Enable
Video Off Option	: Susp,Stby -> Off	IRQ 6 (Floppy Disk)	:Enable
Video Off Method	: V/H SYNC+Blank	IRQ 7 (LPT 1)	:Enable
Suspend Switch	: Disable	IRQ 8 (RTC Alarm)	:Disable
	** **	IRQ 9 (IRQ2 Redir)	:Enable
PM Timers		IRQ10(Reserved)	:Enable
HDD Off After	: Disable	IRQ11(Reserved)	:Enable
Doze Mode	: Disable	IRQ12(PS/2 Mouse)	:Enable
Standby Mode	: Disable	IRQ13(Coprocess or)	:Enable
Suspend Mode	: Disable	IRQ14(Hard Disk)	:Enable
	** **	IRQ15(Reserved)	:Enable
PM Events			
PCI Master Activity	: Disable		
COM Ports Activity	: Enable		
LPT Ports Activity	: Enable		
HDD Ports Activity	: Enable		
DMA Ports Activity	: Disable		
VGA Activity	: Disable		
		Esc : Quit	↑↓→←:Select Item
		F1 : Help	PU/PD/ +/-:Modify
		F5 : Old Values	(Shift) F2 : Color
		F6 : Load BIOS Defaults	

IRQ3 (COM 2) : Enabled	F7 : Load Setup Defaults
------------------------	-----------------------------

This screen configures the PCI Bus slots.

ROM PCI/ISA BIOS (2A4IBA2H)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	PASSWORD SETTING
BIOS FEATURES SETUP	IDE HDD AUTO DETECTION
CHIPSET FEATURES SETUP	SAVE & EXIT SETUP
POWER MANAGEMENT SETUP	
PCI CONFIGURATION SETUP	
LOAD BIOS DEFAULTS	
LOAD SETUP DEFAULTS	
Esc : Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift)F2:Change Color
Sleep Timer, Suspend Timer	

ROM PCI/ISA BIOS (2A4IBA2H)
PCI CONFIGURATION SETUP
AWARD SOFTWARE, INC.

PnP BIOS Auto-Config : Enable	PCI Master Burst Read/Write : Disable
Slot 1 Using INT# : AUTO	
Slot 2 Using INT# : AUTO	
Slot 3 Using INT# : AUTO	
PCI IRQ Actived By : Edge	
PCI IDE 2nd Channel : Enable	
PCI IDE IRQ Map To : PCI -	
AUTO	
Primary IDE : A	Esc: Quit ↑↓→←:Select
INT#	Item
Secondary IDE INT# : B	F1 : Help PU/PD/+/-:Modify
Master Arbitration : Weak	F5 : Old Values (Shift)F2:Color
Protocol	
CPU->PCI Mem Post : Enable	F6 : Load BIOS Defaults
Write Buf	
CPU->PCI Memory : Disable	F7 : Load Setup Defaults
Burst Write	

The last step is 'save and exit'. If you select this item and press 'Y', then these records will be save in the CMOS memory on the mainboard. It will be chected every time when you turn your computer on.

ROM PCI/ISA BIOS (2A4IBA2H)
 CMOS SETUP UTILITY
 AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	PASSWORD SETTING
BIOS FEATURES SETUP	IDE HDD AUTO DETECTION
CHIPSET FEATURES SETUP	SAVE & EXIT SETUP
POWER MANAGEMENT SETUP	EXIT WITHOUT SAVING
PCI/GREEN FUNCTION SETUP	
LOAD BIOS DEFAULTS	
LOAD SETUP DEFAULTS	
Esc : Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(SHIFT)F2:Change Color
Save data to CMOS & Exit setup	

ROM PCI/ISA BIOS (2A4IBA2H)
 CMOS SETUP UTILITY
 AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	PASSWORD SETTING
BIOS FEATURES SETUP	IDE HDD AUTO DETECTION
CHIPSET FEATURES SETUP	SAVE & EXIT SETUP
POWER MANAGEMENT SETUP	EXIT WITHOUT SAVING
PCI/GREEN FUNCTION SETUPLoad	
LOAD BIOS DEFAULTS	SAVE to CMOS and EXIT (Y/N):Y
LOAD SETUP DEFAULTS	
Esc : Quit	
F10: Save & Exit Setup	(SHIFT)F2:Change Color
Save data to CMOS & Exit setup	

APPENDIX A

※※TECHNICAL SUPPROT REQUEST FORM※※

If the mainboard doesn't function properly, please complete the following information and return it to your supplier. If further information is needed, please attach separate sheets.

Model No : ATC-1425B **Date of Purchase :** _____

Serial No : _____

HARDWARE :

	BRAN D	MODE L	SPEED	Q'TY
CPU				
Co-processor				
SIM Module				
Cache				
Memory				
TAG SRAM				

Chipset Brand : _____ Model : _____
 Cache Memory : _____KB SIMM : _____MB
 Bus Interface : PCI x _____, ISA x _____
 Hard Disk Interface Controller : _____ IDE, _____ SCSI
 Hard Disk Brand : _____, Model : _____, Capacity : _____
 Display Controller Brand : _____, Model : _____
 Controller Chip Brand : _____, Model : _____

SOFTWARE:

SYSTEM BIOS: _____ <A>AMI, <W>AWARD
 Version _____ Date Code _____
 Keyboard BIOS: Brand _____

Other Add-on Cards Information:

Add-on Card	Bus Interface	Model	Remark