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CHAPTER 1 INTRODUCTION

1-1 SYSTEM FEATURES

- 🖥 Supports all Intel, AMD, UMC, CYRIX, and IBM 486 CPU, including 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 256M by using 256K/1M/4M/8M/16M/32M/64MB SIM module supported.
- 🖥 Supports SMI/SMM/PMU/APM power controllers.
- 🖥 Supports 2 x Enhanced 32-bit local bus IDE Mode 3,4 up to 4 IDE devices.
- 🖥 Supports 1 FDC port, 2 serial ports(16550 fast UART compatible), 1 parallel port(EPP/ECP mode).
The on-board I/O can be "disable or enable" from the "BIOS SET UP", please refer to page 10 (CHIPSET FEATURES SET UP).

REMARKS

Intel™ is a registered trademark of intel corporation.

AMD™ is a registered trademark of Advanced Micro Device, inc

CYRIX™ is a registered trademark of CYRIX,inc.

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).

Each mainboard containing:

<u>Q'TY</u>	<u>Description</u>
1	Mainboard : ATC-1425A.
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 damage, please contact the dealer from whom you purchased this mainboard.

Inside the box, the mainboard is sandwiched between two sheets of sponge and packed in an anti-static bag.

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

CHAPTER 2 INSTALLATION

2-1 INTEL/AMD/CYRIX CPU JUMPER

2-1.1 CPU Type settings

CPU TYPE	JP22	JP24	JP25	JP26	JP27	JP28
P24T	1-2	open	1-2	open	1-2	3-4
P24D	1-2	1-2	1-2	1-2	1-2	1-2,3-4
S-SERIES	1-2	2-3	2-3	open	open	3-4
Enhanced Am486	1-2	1-2	1-2	1-2	1-2	1-2,3-4
AMD486DXL(3.45V)	2-3	open	2-3	open	open	open
486DX(5V)	open	2-3	2-3	open	open	open
486SX	open	2-3	2-3	open	open	open
CYRIX CX486	1-2	1-2	2-3	open	2-3	2-3
CYRIX M1SC	1-2	1-2	2-3	1-2	1-2	1-2,3-4
CPU TYPE	JP29	JP30	JP31	JP32	JP33	JP34
P24T	1-2	1-2,3-4	2-3	open	1-2	2-3

P24D	open	1-2,3-4	2-3	2-3	4-5	3-4
S-SERIES	open	1-2,3-4	2-3	1-2	4-5	open
Enhanced Am486	open	1-2,3-4	2-3	2-3	4-5	3-4
AMD486DXL(3.45V)	3-4	1-2,3-4	4-5	open	open	1-2,3-4
486DX(5V)	open	1-2,3-4	open	open	open	3-4
486SX	open	2-3	open	open	open	open
CYRIX CX486	2-3	1-2,3-4	1-2	open	2-3	3-4
CYRIX M1SC	open	1-2,3-4	2-3	2-3	4-5	3-4

■ The jumper setting for Am5x86-P75 (X5-133) is same as **P24D**, and set **J21 to "close"**.

■ The JP23 setting for **AMD486DXL(3.45V)** CPU please see following table; for other CPUs please set **JP23 to "1-2"**.

JP23	
486DX4	1-2
486DX2	2-3

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

■ **Setting of CPU Voltage:**

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

2-1.3 Other jumper setting

JP10		JP38	
Synchronous clock	1-2	Flash ROM	1-2,5-6
Asynchronous clock	2-3	EPROM	2-3,4-5

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

2-2 SIM MODULES INSTALLATION

The SIS 486 PCI/ISA motherboard can be expanded from 1MB Up 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 CACHE RAM INSTALLATION

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

Cache Configuration Size

Cache Size	TAG RAM (U22)	Cache RAM (U18-21)	JP17	JP18	JP19	JP37
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 CONNECTORS

Connector	Description
J40	Reset.
J41	HDD LED.
J42	Turbo LED.
J43	Turbo Switch.
J44	Speaker Connector.
J45	Keylock.

CHAPTER 3 BIOS SETUP

3-1 AWARD BIOS SYSTEM CONFIGURATION SETUP

To enter SETUP, by pressing the key when the system is booting up. The following menu appears:

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 CONFIGURATION SETUP	
LOAD BIOS DEFAULTS	
LOAD SETUP DEFAULTS	
Esc: Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift)F2: Change Color
Virus protection, Boot sequence ...	

Date (mm:dd:yy) : Mon, Jul 3 1995									
Time(hh:mm:ss) : 14 : 16 : 1									
HARD DISK	TYPE	SIZE	CYLS.	HEADS	PRECOMP	LANDZONE	SECTORS	MODE	
Primary Master	:None	0	0	0	0	0	0	-----	
Primary Slave	:None	0	0	0	0	0	0	-----	
Secondary Master	:None	0	0	0	0	0	0	-----	
Secondary Slave	:None	0	0	0	0	0	0	-----	
Drive A: 1.2M, 5.25 in									
Drive B: None									
Video : EGA/VGA									
Halt On: All Errors									
					Base Memory : 640K				
					Extended memory : 11264K				
					Other Memory : 384K				

		Total Memory	: 12288K
Esc	: Quit	↑↓→←	:Select Item
		PU/PD/+/-	: Modify
F1	: Help	(Shift) F2	: Change Color

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	

ROM PCI/ISA BIOS (2A4X5UXZ4)
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
At clock, DRAM timings	

ROM PCI/ISA BIOS (2A4IBA2H)
CHIPSET FEATURES SETUP

AWARD SOFTWARE, INC.

Auto Configuration	: Enabled	Onboard 496B IDE Port	: Both
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 WS	: 2 CCLK	IDE Prefetch Read Buffer	: Disable
DRAM RAS to CAS Delay	: 3 CCLK	IDE HDD Block Mode	: Enable
DRAM Write Cycle	: 1 WS	Onboard FDC Control	: Enable
DRAM Write CAS Pulse	: 2 CCLK	Onboard Serial Port 1	: COM1/3F8H
DRAM CAS Precharge Time	: 1 CCLK	Onboard Serial Port 2	: COM2/2F8H
DRAM RAS to MA Delay	: 1 CCLK	Onboard Parallel Port	: 378H/IRQ7
DRAM Speed	: Faster	Onboard Printer Mode	: Compatible
DRAM Slow Refresh	: Disable	Esc: Quit	↑↓→←:Select Item
CPU Burst Write	: Disabled	F1 : Help	PU/PD/+/- :Modify (SHIFT)F2: Color
L2 Cache Policy	: Write Back	F5 : Old Values	
L2 Cache Tag Bits	: 8 bits	F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

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
** PM Timers	**	IRQ 9 (IRQ2 Redir)	:Enable
HDD Off After	: Disable	IRQ10(Reserved)	:Enable
Doze Mode	: Disable	IRQ11(Reserved)	:Enable
Standby Mode	: Disable	IRQ12(PS/2 Mouse)	:Enable
Suspend Mode	: Disable	IRQ13(Coprocessor)	:Enable
** PM Events	**	IRQ14(Hard Disk)	:Enable
PCI Master Activity	: Disable	IRQ15(Reserved)	:Enable
COM Ports Activity	: Enable		
LPT Ports Activity	: Enable	Esc : Quit	↑↓→←:Seect Item
HDD Ports Activity	: Enable	F1 : Help	PU/PD/+/-:Modify
DMA Ports Activity	: Disable	F5 : Old Values	(Shift) F2 : Color

VGA Activity	: Disable	F6 : Load BIOS Defaults
IRQ3 (COM 2)	: Enabled	F7 : Load Setup Defaults

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

ROM PCI/ISA BIOS (2A4X5UZ4)
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 (2A4X5UZ4)
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 COME 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 motherboard 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 : _____ **Serial No. :** _____

Date of Purchase : _____

Hardware :

	Brand	Model	Speed	Q'ty
CPU				
SIM Module				
Cache Memory				
TAG RAM				

SOFTWARE:

SYSTEM BIOS: ____ <A>AMI, <W>AWARD, <P>PHOENIX.

SYSTEM BIOS:Version _____ Date Code _____

Keyboard BIOS:Brand _____ Version _____

Hard Disk Interface Controller: ____ IDE, ____ SCSI, ____ Other: _____

Brand Name : _____ Cache Size(if any) : _____

Bus Interface: _____ ISA, _____ VESA, _____ PCI

Hard Disk Brand Name: _____, Model: _____, Capacity: _____

Display Chip Brand Name: _____, Model: _____

Other Add-On Cards Information:

Add-on Card	Bus Interface	Model	Remark
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