

Table of Contents

JUMPER LOCATION DIAGRAM.....	A
CONNECTOR LOCATION DIAGRAM.....	B
CHAPTER 1 INTRODUCTION	1
1-1 SYSTEM FEATURES	1
1-2 CHECK LIST OF THE PACKING	2
CHAPTER 2 INSTALLATION.....	3
2-1 SRAM INSTALLATION	3
2-2 BURST SRAM INSTALLATION.....	3
2-3 CPU INSTALLATION	4
2-4 OTHER JUMPERS SETTING.....	5
2-5 EDO RAM CONFIGURATION	5
CHAPTER 3 BIOS SETUP.....	6
APPENDIX A	14

CHAPTER 1 INTRODUCTION

1-1 SYSTEM FEATURES

- Supports INTEL Pentium processor.
- Supports synchronous SRAM module.
- Write-back/through, direct-mapped cache with size of 256KB/512KB/1MB.
- Provides 4-banks of 64-bit wide DRAMs up to 256MB with 4MB/8MB/16MB addressing page mode DRAMs.
- Supports EDO DRAM and mixing of EDO SIMMs with fast page mode DRAM SIMMs among different banks.
- Offers three PCI master slots, four 16-bit ISA slots.
- Dual IDE connectors support up to four devices in two channels.
- On-board high-speed I/O function (software configurable):
 - one F.D.C. port supports two devices
 - two 16550A fast UART compatible serial ports
 - one EPP/ECP mode parallel port.
 - provides selections of all primary and secondary ISA addressing of COM1-4, LPT1-3 and FDC disable or enable from "BIOS SETUP" configuration.
- "True" GREEN power management for CPU stop clock state.
- Board dimension: 220mm x 280mm (8.66" x 11.02").

REMARK

Intel™ is a registered trademark of Intel Corporation.

MS-DOS® is a registered trademark of Microsoft Corporation.

IBM™, IBM PC™, IBM AT™ and IBM XT™ are registered trademark of International Business Machines Corporations.

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-1545A.
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 are 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.

CHAPTER 2 INSTALLATION

2-1 SRAM INSTALLATION

ATC-1545A can support cache memory with the types of 32K x 8, 64K x 8, and 128K x 8 SRAM. Regarding the related locations of DATA SRAM, TAG SRAM, and jumpers, please refer to mainboard diagram.

2-1-1 CACHE CONFIGURATION SIZE

Cache Size	TAG SRAM	DATA SRAM	JP22	JP23
256K	16Kx8 8K x 8	32K x 8	open	open
512K	32K x 8	64K x 8	open	close
1MB	32K x 8	128K x 8	close	close

2-1-2 TYPE SELECTION OF CACHE SRAM

Cache Type	JP20
3.3V / BURST	1-2
Mixed Mode	2-3

2-2 PIPELINE BURST SRAM INSTALLATION

Plug the Pipeline BURST SRAM module into the COAST slot located besides CPU socket, then **set JP20 to "1-2"** .

The "BIOS SETUP" should be revised as follows : (refer to page 10 "CHIPSET FEATURES SETUP" screen)

SRAM Type : Sync.

SYNC SRAM Support : Pipeline

Cache Read Burst : 5 - 4 - 4 - 4

Cache Write Burst : 4 - 3 - 3 - 3

2-3 CPU INSTALLATION

ATC-1545A can support INTEL Pentium 75 - 200Mhz CPUs. Please notice CPU pin 1 must align with the ZIF socket 7 Pin 1 location.

2-3-1 CPU TYPE SELECTION

CPU TYPE	JP16	JP27	JP28	JP29	JP30
INTEL P54C	close	close	close	open	open

Int. CPU Clock	JP14	JP15	JP25	JP26	Ext.x Fre.
75MHz	open	open	1-2	open	50x1.5
90MHz	close	open	1-2	open	60x1.5
100MHz	close	close	1-2	open	66x1.5
120MHz	close	open	2-3	open	60x2.0
133MHz	close	close	2-3	open	66x2.0
150MHz	close	open	2-3	2-3	60x2.5
166MHz	close	close	2-3	2-3	66x2.5
180MHz	close	open	1-2	2-3	60x3.0
200MHz	close	close	1-2	2-3	66x3.0

If you use higher internal CPU clock, please refer to 2-3-2.

2-3-2 CPU CLOCK SETTING

External CPU Clock	JP14	JP15
50(MHz)	open	open
60(MHz)	close	open
66(MHz)	close	close

INTERNAL CPU CLOCK	JP25	JP26
INTEL External Clock x 1.5	1-2	open
INTEL External Clock x 2.0	2-3	open
INTEL External Clock x 2.5	2-3	2-3
INTEL External Clock x 3.0	1-2	2-3

2-4 OTHER JUMPERS SETTING

	JP24
EPROM	1-2
FLASH PROM	2-3

	JP11
Clear CMOS	2-3
Internal Battery	1-2

J19
HDD LED

2-7 EDO RAM CONFIGURATION

If you would like to use EDO RAM Module, the "BIOS SETUP" should be revised as follows : (please refer to page 12 "PCI CONFIGURATION SETUP " screen)

BANK0 DRAM TYPE : EDO

BANK1 DRAM TYPE : EDO

CHAPTER 3 BIOS SETUP

3-1 UPDATE BIOS PROCEDURES

If the BIOS should be updated, you can get the new BIOS diskette from your system dealer. The BIOS diskette includes 3 files they are "awdflash.exe" an execution file, it's BIOS update utility; the new version BIOS file with a file name about its version number; and "readme.txt" a text readme file. The update procedures are as following:

1. Boot from hard disk drive C, then change to floppy A (or B).
2. Insert the updated diskette to drive A (or B), press "awdflash" to run the BIOS update utility.
3. Press new BIOS file name to install the new BIOS.
4. Press 'N' when the screen shows the message : " Do you want to save BIOS (Y/N) ?".
5. Press 'Y' when the screen shows the message : " Are you sure to program (Y/N) ?". Then the BIOS updated is finished.
6. Exit the utility and turn off the power, set JP8 to 'close' to clear the CMOS. After 10 seconds, set JP8 to 'open' (remove the jumper cap), become the normal status.
7. Turn the power on and test your system workable or not.
8. If your installation fail, re-install the new BIOS again as above procedures. Or call your system dealer for help.

3-2 AWARD SYSTEM BIOS CONFIGURATION SETUP

This chapter explains how to set up system configuration (CMOS) under the AWARD BIOS. The SETUP program is stored in the Read-Only-Memory (ROM) on the mainboard. To do the SETUP procedure, press the 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 (2A5UNA2J)
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
Time, Date, Hard Disk Type	

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 (2A5UNA2J)
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
Time, Date, Hard Disk Type	

ROM PCI/ISA BIOS (2A5UNA2J)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Date (mm:dd:yy) : Fri, May 03, 1996								
Time(hh:mm:ss) : 3 : 37 : 17								
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	: Auto	0	0	0	0	0	0	Auto
Primary Slave	: Auto	0	0	0	0	0	0	Auto
Secondary Master	: Auto	0	0	0	0	0	0	Auto
Secondary Slave	: Auto	0	0	0	0	0	0	Auto
Drive A : 1.44M, 3.5 in.				Base Memory : 640K				
Drive B : None				Extended memory : 7168K				
Video : EGA/VGA				Other Memory : 384K				
Halt On: All Errors				-----				
				Total Memory : 8192K				
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 (2A5UNA2J)
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	

ROM PCI/ISA BIOS(2A5UNA2J)
BIOS FEATURES SETUP
AWARD SOFTWARE , INC.

Virus Warning	: Disabled	Video BIOS Shadow	: Enabled
CPU Internal Cache	: Enabled	C8000-CBFFF Shadow	: Disabled
External Cache	: Enabled	CC000-CFFFF Shadow	: Disabled
Quick Power On Self Test	: Disabled	D0000-D3FFF Shadow	: Disabled
Boot Sequence	: A, C	D4000-D7FFF Shadow	: Disabled
Swap Floppy Drive	: Disabled	D8000-DBFFF Shadow	: Disabled
Boot Up Floppy Seek	: Enabled	DC000-DFFFF Shadow	: Disabled
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	Esc : Quit	↑↓→←:Select Item
Security Option	: Setup	F1 : Help	PU/PD/+/- : Modify
IDE SecondChannel Control	: Enabled	F5 : Old Values (SHIFT)	F2:Change Color
PS/2 mouse function control	: Enabled	F6 : Load BIOS Defaults	
PCI/VGA Palette Snoop	: Disabled	F7 : Load Setup Defaults	

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

ROM PCI/ISA BIOS (2A5UNA2J)
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 (2A5UNA2J)
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.

Auto Configuration	: Enabled	Cache Read Burst	: 5-4-4-4
		Cache Write Burst	: 4-3-3-3
AT Bus Clock	: LCLK/4	Video BIOS Cacheable	: Disabled
Hidden Refresh	: Enabled	SystemBIOSCacheable	: Disabled
RAS Pulse Width	: 6 CLKs	1st Fast DMA Channel	: NONE
Read CAS Pulse Width	: 2 CLKs	2st Fast DMA Channel	: NONE
Write CAS Pulse Width	: 2 CLKs		
RAS Precharge Time	: 5 CLKs	Onboard FDC Control	: Enable
CAS Precharge Time	: 1 CLKs	Onboard Serial Port 1	: COM1/3F8
DRAM Posted Write	: Disabled	Onboard Serial Port 2	: COM2/2F8
DRAM Slow Refresh	: Disabled	Onboard Parallel Port	: 378/IRQ7
CPU Addr. Pipelining	: Disabled	Parallel Port Mode	: Normal
Byte Merge Support	: Disabled		
SRAM Type	: Async		
SYNC SRAM Support	: Standard		
Tag RAM Size	: 7 bit	Esc: Quit	:Select Item
Tag/Dirty implement	: Combine	F1 : Help	PU/PD/+/-:Modify
Dirty pin selection	: I/O	F5 : Old Values	(Shift)F2 :Color
L1 Cache Policy	: Write Back	F6 :Load BIOS Defaults	
L2 Cache Write Policy	: Write Back	F7 :Load Setup Defaults	

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

ROM PCI/ISA BIOS (2A5UNA2J)
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
Sleep Timer, Suspend Timer	

ROM PCI/ISA BIOS (2A5UNA2J)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

Power Management : Disable	Local Devices : Disable
PM Control by APM : Yes	IRQ3 (COM 2) : Enable
Video Off Option : Susp,Stby->Off	IRQ4 (COM 1) : Enable
Video Off Method : V/H SYNC+Blank	IRQ5 (LPT 2) : Enable
DREQ6 PIN as :Suspend SW	IRQ6 (Floppy Disk) : Enable
** PM Timers **	IRQ7 (LPT 1) : Enable
HDD Off After : Disable	IRQ9 (IRQ2 Redir) : Disable
Doze Mode : Disable	IRQ10 (Reserved) : Enable
Standby Mode : Disable	IRQ11 (Reserved) : Enable
Suspend Mode : Disable	IRQ12 (PS/2 Mouse) : Enable
	IRQ13 (Coprocessor) : Enable
** PM Events **	IRQ14 (Hard Disk) : Disable
DMA Request : Disable	IRQ15 (Reserved) : Enable
Video Activity : Disable	
HDDPort (1F0,170) : Enable	Esc: Quit ↑↓→← :Select Item
FDD Port (3F5) : Enable	F1 : Help PU/PD/+/- : Modify
LPT (3BC,378,278) : Enable	F5 : Old Values (Shift)F2: Color
COM Port(3F8,3E8) : Enable	F6 : Load BIOS Defaults
COM Port(2F8,2E8) : Enable	F7 : Load Setup Defaults
PCI Masters : Disable	

This screen configures the PCI Bus slots.

ROM PCI/ISA BIOS (2A5UNA2J)

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
IRQ Settings, Latency Timers	

ROM PCI/ISA BIOS (2A5UNA2J)

PCI CONFIGURATION SETUP

AWARD SOFTWARE, INC.

PnP BIOS Auto-Config	: Enabled	PCI Preempt Timer	: Disabled
Slot 1 Using INT#	: AUTO	Bank 0 DRAM Type	: Paged
Slot 2 Using INT#	: AUTO	Bank 1 DRAM Type	: Paged
Slot 3 Using INT#	: AUTO	CPU to PCI POST/BURST	: NONE/NONE
		PCI CLK	: Sync
		On-Chip PCI/IDE	: Enabled
		IDE HDD Block Mode	: Enabled
		IDE Primary Master PIO	: Auto
		IDE Primary Slave PIO	: Auto
PCI IRQ Activated By	: Level	IDE Secondary Master PIO	: Auto
PCI IDE IRQ Map To	: PCI-AUTO	IDE Secondary Slave PIO	: Auto
Primary IDE INT#	: A		
Secondary IDE INT#	: B		
PCI Read burst WS	: 4 Cycles	Esc: Quit	↑↓→← :Select Item
PCI Write burst WS	: 4 Cycles	F1 : Help	PU/PD/+/- : Modify
Master Retry Timer	: 34 PCICLKs	F5 : Old Values	(Shift)F2: Color
PCI Pre-Snoop	: Disabled	F6 : Load BIOS Defaults	
CPU/PCI Write Phase	: 1 LCLK	F7 : Load Setup Defaults	

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 checked every time when you trun your computer on.

ROM PCI/ISA BIOS(2A5UNA2J)
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
Time, Date, Hard Disk Type	

ROM PCI/ISA BIOS (2A5UNA2J)
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	SAVE to CMOS and EXIT (Y/N):Y
LOAD BIOS DEFAULTS	
LOAD SETUP DEFAULTS	
ESC: Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift) F2 : Change Color
Time, Date, Hard Disk Type	

TECHNICAL SUPPORT REQUEST FORM

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

Model No : ATC-1545A **Date of Purchase :** _____

Serial No : _____

HARDWARE :

	BRAND	MODEL	SPEED	Q'TY
CPU				
SIM Module				
Asyn.Cache				
TAG SRAM				
Sync. Cache				

Cache Memory : _____KB SIMM : _____MB (___ EDO)

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:

AWARD SYSTEM BIOS: Version _____ Date Code _____

Keyboard BIOS: Brand _____

Other Add-on Cards Information:

Add-on Card	Bus Interface	Model	Remark