486EI

VL/EISA System Board

USER'S MANUAL

Revision 1.2
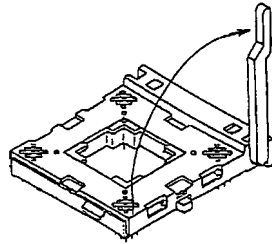
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CPU Installation Instruction

AIR486EI uses a Single Lever ZIF (Zero Insertion Force) PGA (Pin Grid Array) socket for your CPU. To install your CPU, follow the steps below:

1. Rotate the actuator arm 90 degree to its fully up right position.

2. To insert the CPU, make sure the notched corner of the CPU is placed adjacent to the Pin one on the socket. The pins of CPU must be aligned with the holes of the sockets. **No force should be required to insert the CPU into the socket.**
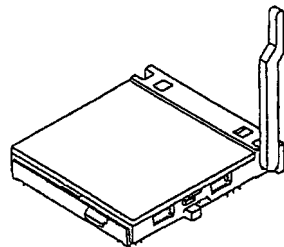
3. Rotate the actuator to a horizontal position, making sure it locks under the detent.
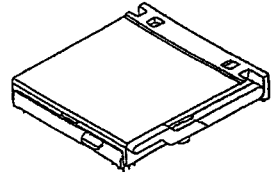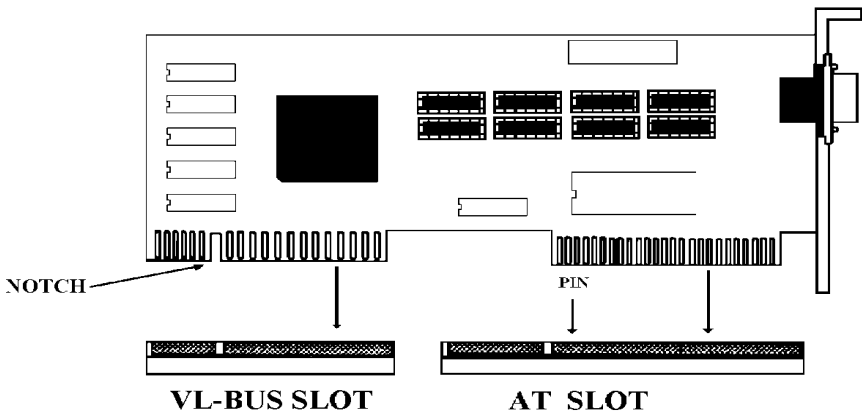

Your CPU is now installed!

To remove the CPU, simply follow the same procedure and gently lift the CPU out of the socket.

VL-Bus Card Installation Instruction

Be careful while installing VESA Local Bus cards onto your system board. Keep the following tips in mind to properly install and to remove a VESA Local Bus card.

1. Always install/remove the card vertically straight down/up. **Never at an angle!** Inserting the card at an angle may damage the pins in both the AT and VESA Local Bus slots.

2. To install the board vertically, hold the card in the middle. Make sure that the card is even with both slots. Then gently fit the card into the slots with equal pressure at both ends.

> **Manufacturer warranty does not cover damage caused to the system board by improper installation or removal of VESA Local Bus cards.**

NOTCH

PIN

VL-BUS SLOT   **AT SLOT**

Board Layout Quick Reference

Holes for Plastic Mounting or Screws

Keyboard

Power Connectors

Eight 16 bit ISA Slots

Four 72-pin SIMM Sockets Supporting up to 256 MB

S I M M 4

S I M M 2

S I M M 3

S I M M 1

Three 32-bit VESA Standard Local Bus Mastering Slots

Keyboard Controller

BIOS

RTC CMOS

SIS 65C405

SIS 65C405

SIS 65C405

SIS 85C406

SIS 85C411

SIS 85C421

JL2

CPU

Bank 1

Bank 0

Turbo

Reset

SPKR

J02

J1 J2

JP12

J3

JC9

JC5

TB/LED

KLOCK

2

1

3

Remark: **The Numbers above Correspond to the Jumper Setting on the following Page.**

Jumper Setting Quick Reference

1) CPU Type Jumpers

CPU Type	J1	J2	J3	J12
486SX	OPEN	OPEN	2-3	1-3, 2-4
487SX	SHORT	2-3	1-2	1-3, 2-4
486DX, 486DX2 (default)	*SHORT*	*1-2*	*1-2*	*1-3, 2-4*
DX4	SHORT	1-2	1-2	3-5, 4-6

2) CPU Clock Jumpers

External CPU Speed	CPU	JO1	JO2	JL2
25-MHz	586SX-25, 487SX-25, 486DX-25. 486DX2-50, 486DX4-75	SHORT	SHORT	OPEN
33-Mhz (default)	*486SX-33, 487SX-33, 486DX-33, 486DX2-66, 486DX4-100*	*OPEN*	*SHORT*	*OPEN*
40-MHz	486/DX-40, 486/DX2-80	SHORT	OPEN	SHORT
50-MHz	486DX-50	OPEN	OPEN	SHORT

3) Cache Size Jumpers

Cache Size	JC4	JC5	JC9
256K (default)	**1-2**	**1-2**	**4-5**
512K	2-3	2-3	1-2

REMARK: Refer to chapter 2 "System Board Jumpers" Section for more detail information.

CMOS Setup Quick Reference

I. STANDARD SETUP

Date	**Current date**
Time:	**Current time**
Hard Disk C type:	**Hard disk parameters**
Hard Disk D type:	**Hard disk parameters**
Floppy Drive A:	**Type of floppy drive installed**
Floppy Drive B:	**Type of floppy drive installed**
Primary Display:	**Type of display card installed**
Keyboard:	**Installed**

II. ADVANCED CMOS SETUP

Above 1 MB Memory Test:	**Disabled**
System Boot-Up Num Lock:	**On**
System Boot-Up Sequence:	**A:, C:**
External Cache Memory:	**Enabled**
Internal Cache Memory:	**Enabled**
Password Checking Option:	**Setup**
Video Shadow C000, 32K	**Enabled**
Adapter ROM Shadow C800, 32K	**Disabled**
Adapter ROM Shadow D000, 32K	**Disabled**
Adapter ROM Shadow D800, 32K	**Disabled**
Adapter ROM Shadow E000, 32K	**Disabled**
Adapter ROM Shadow E800, 32K	**Disabled**
System ROM Shadow F000, 64K	**Enabled**
Boot Sector Virus Protection	**Disabled**

III. ADVANCED CHIPSET SETUP

	DX-25 DX2-50	DX-33 DX/2-66 DX/4-100	DX-40	DX-50
System DRAM Speed	**Fastest**	**Slower**	**Slower**	**Slowest**
Cache Write Cycle	**2T**	**2T**	**3T**	**3T**
Cache Read Cycle	**1T**	**1T**	**2T**	**2T**
System Bus Speed	**CLK/3**	**CLK/4**	**CLK/5**	**CLK/6**
Non-Cacheable Area:	**DRAM**			
Non-Cacheable Area Size:	**0K**			
Non-Cacheable Area Start:	**Disabled**			
Video ROM (C0000) Cacheable:	**Disabled**			
System BIOS ROM Cacheable:	**Disabled**			
I/0 Recovery Select:	**5 for 33MHz or less;**			

11 for more than 33MHz

Memory Configuration Quick Reference

The 486EI's on-board DRAM memory subsystem supports 256Kx36, 512Kx36, 1Mx36, 2Mx36, 4Mx36, 8Mx36, and 16Mx36 DRAM Modules. Dram speed must be 70ns or faster.

BANK 1	BANK 2	BANK 3	BANK 4	TOTAL
1Mx 36	None	None	None	4 Mbyte
1Mx 36	1Mx 36	None	None	8 Mbyte
1Mx 36	1Mx 36	1Mx 36	None	12 Mbyte
1Mx 36	1Mx 36	1Mx 36	1Mx 36	16 Mbyte
1Mx 36	4Mx 36	None	None	20 Mbyte
1Mx 36	1Mx 36	4Mx 36	None	24 Mbyte
1Mx 36	4Mx 36	4Mx 36	None	36 Mbyte
1Mx 36	1Mx 36	4Mx 36	4Mx 36	40 Mbyte
2Mx 36	None	None	None	8 Mbyte
2Mx 36	None	2Mx 36	None	16 Mbyte
2Mx 36	None	8Mx 36	None	40 Mbyte
8Mx 36	None	None	None	32 Mbyte
8Mx36	None	8Mx 36	None	64 Mbyte
4Mx 36	None	None	None	16 Mbyte
4Mx 36	4Mx 36	None	None	32 Mbyte
4Mx 36	4Mx 36	4Mx 36	None	48 Mbyte
4Mx 36	4Mx 36	4Mx 36	4Mx 36	64 Mbyte
16Mx 36	None	None	None	64 Mbyte
16Mx 36	16Mx 36	None	None	128 Mbyte
16Mx 36	16Mx 36	16Mx 36	None	172 Mbyte
16Mx 36	16Mx 36	16Mx 36	16Mx 36	256 Mbyte

Remark: You can configure the memory of the 486EI in a variety ways. Please see chapter 3 Hardware Installation for more detail information.

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