

7.4.1. JP2 Function & Defination

The main board have three VESA Master devices, JP2 is the VESA devices selection jumper.

JP2 (1-2)	JP2 (2-3)
3 VESA DEVICES	ONLY ONE VESA DEVICE (MCAI)

Appendix 7.3 AMD DX2/66 CPU

7.3.1 AMD DX2/66 CPU SELECTION :

JP14	JP15	JP23	JP24	JP26
1-2	1-2,3-4	2-3	1-2	CLOSE

7.3.2 CLOCK CHIP (AV9107-03) FREQUENCY SELECTION:

FREQ.	JP4	JP5	JP6
33MHZ	CLOSE	CLOSE	CLOSE

7.3.3 VESA LOCAL BUS (JP16)

FREQ.	JP16
33MHZ	OPEN

7.3.4 NOTE:

IF MOTHER BOARD USE AMD DX2/66 CPU ,
YOU SHOULD ADD CPU COOLING FAN !!

Quick Setup Guide

Below is a quick and easy way to setup your UL486P3 system. Check the default jumper settings of your system as follows :

JUMPER	FUNCTION	STATUS
JP1	POWER GOOD SOURCE	1-2
JP2	VESA MASTER SELECTION	1-2
JP3	VIPER 9000 SUPPORT	1-2
JP7	U491 ADS# DELAY SELECTION	1-2
JP8	U491 RDY# DELAY SELECTION	2-3
JP17	RESERVE	OPEN
J1	INTERNAL BATTERY SELECTION	CLOSE

(A) CPU Selection (JP14, JP15, JP23-JP24, JP26)

CPU	JP14	JP15	JP23	JP24	JP26
486DX-25 /33 /50 & 486DX2-50 /66	1-2	1-2, 3-4	1-2	2-3	OPEN
486DX-40	1-2	1-2, 3-4	2-3	1-2	CLOSE
486SX-25/33	OPEN	2-3	1-2	2-3	OPEN

(B) Cache RAM & TAG RAM Selection

CACHE SIZE	CACHE RAM	TAG RAM	JP9	JP10	JP11	JP12	JP13
32K	8Kx8*4 U(17-20)	8Kx8 U21	2-3	OPEN	OPEN	OPEN	OPEN
64K	8Kx8*8 U(17-20), U(23-26)	8Kx8 U21	1-2	OPEN	OPEN	OPEN	CLOSE
128K	32Kx8*4 U(17-20)	8Kx8 U21	2-3	2-3	OPEN	CLOSE	CLOSE
256K	32Kx8*8 U(17-20), U(23-26)	32Kx8 U21	1-2	1-2	CLOSE	CLOSE	CLOSE

(C) Clock chip (AV9107-03) Frequency Selection (JP4, JP5, JP6)

Freq. (MHz)	JP4	JP5	JP6
25	CLOSE	OPEN	OPEN
33	CLOSE	CLOSE	CLOSE
40	CLOSE	CLOSE	OPEN
50	OPEN	OPEN	CLOSE

(D) VESA Local Bus (JP16)

Freq. (MHz)	JP16
<= 33M	OPEN
> 33M	CLOSE

(E) Memory configuration

OPTION	BANK0 (SIMM1 TO SIMM4)	BANK1 (SIMM5 TO SIMM8)	TOTAL MEMORY
1	256KB	---	1MB
2	256KB	256KB	2MB
3	1MB	---	4MB
4	1MB	256KB	5MB
5	1MB	1MB	8MB
6	4MB	---	16MB
7	4MB	256KB	17MB
8	4MB	1MB	20MB
9	4MB	4MB	32MB

(F) Advanced Chipset setup for configuring different CPUs.

AMIBIOS SETUP PROGRAM - ADVANCED CHIPSET SETUP			
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Auto Config Function	:Disabled	E Segment Shadow RAM	:Disabled
Cache Read Option	:3-2-2-2	C000-C3FF Shadow RAM	:Enabled
Cache Write Option	:1WS	C400-C7FF Shadow RAM	:Enabled
DRAM Type	:Page mode	C800-CBFF Shadow RAM	:Disabled
DRAM Wait State(s)	:2WS	CC00-CFFF Shadow RAM	:Disabled
Keyboard Clock Select	:7.2MHz	D000-D3FFF Shadow RAM	:Disabled
AT Clock Select	:CPUCLK/6	D000-D3FFF Shadow RAM	:Disabled
IO Recovery Time	:3/3 Bclk	D400-D7FF Shadow RAM	:Disabled
Refresh Cycle	:Slow	D800-DBFF Shadow RAM	:Disabled
Coprocessor Ready	:Delay IT	DC00-DFFF Shadow RAM	:Disabled
Non-Cacheable Block-1 Enable	:Disabled	Refresh Divider	: 1
Non-Cacheable Block-1 Size	:2MB		
Non-Cacheable Block-1 Base	:4096KB		
Non-Cacheable Block-2 Enable	:Disabled		
Non-Cacheable Block-2 Size	:4MB		
Non-Cacheable Block-2 Base	:4096KB		
Memory Remapping	:Disabled		
F Segment Shadow RAM	:Enabled		

ESC:Exit ↓→↑← :Sel (Ctrl) Pu/Pd:Modify F1:Help F2/F3:Color
F5:Old Values F6:BIOS Setup Defaults F7:Power-On Defaults

AT clock select in difference system speeds.

486DX/33, 486DX2/66, 486SX/33 -- AT CLOCK SELECT CPUCLK/4

486DX/25, 486DX2/50, 486SX/25 -- AT CLOCK SELECT CPUCLK/3

486DX/40 -- AT CLOCK SELECT CPUCLK/5

486DX/50 -- AT CLOCK SELECT CPUCLK/6

INTRODUCTION

This manual has been written for two purposes. Firstly, to help the users to be more familiar with the system board. Secondly, to serve as a guide to both procedures and specifications for future system upgrading.

1. Introduction

The UL486 P3 main board can use with either a 486DX/25/33/40/50MHz, 486DX2/50/66MHz, 486SX/25/33MHz, 486DX4/75/83/100MHz microprocessor. It is fully compatible with the IBM PC/AT. In other words, the board allows the microprocessor to operate with all the advantages of a 486 system with multi-tasking and multi-user capabilities. In addition, with the usage of the selected peripheral on VESA Local Bus slots, the performance of your system cache can be increased by 50-300%.

1.1. General specification on UL486 P3 main board

- Support light green PC and UMB function.
- Two-third of the baby AT size board (220mm x 250mm).
- Support 486DX/25/33/40/50MHz, 486DX2/50/66MHz, 486SX/25/33MHz, DX4/75/83/100MHz, provide P24T, P24D upgradeability.
- Use UMC 82C491 & UMC 82C493 chipset.
- Support 1MB to 32MB of main memory.
- Support 32KB, 64KB, 128KB, 256KB of cache memory.
- Support 256K, 1MB and 4MB SIMM RAMs in memory configurations.
- Support shadow RAM for system, adaptor and video BIOS.
- Three VESA Local bus standard slots (three bus masters).
- Six 16-bit AT bus slots and one 8-bit XT bus slot.
- On board rechargeable battery and external battery connector on board.
- Standard reset, keylock, speaker & turbo LED connectors.
- Support DOS, UNIX, XENIX & OS/2.

2. Jumper Settings and Connectors Pin Assignment

The settings of various jumpers are shown as follows:

* Default setting

2.1. CPU selection (JP14-15, JP23-24 and JP26)

See quick setup (A)

2.2. VESA Local Bus jumper setting (JP2, JP16)

JP2	FUNCTION
1-2	3 VESA MASTER
2-3	MCAI is MASTER

JP16	FUNCTION
OPEN	CPU CLK \leq 33MHz
CLOSE	CPU CLK $>$ 33MHz

Note : When using with QDI TD9400 VGA Card, JX7 on the card should be always open.

2.3. Turbo switch connector (J6)

TURBO SWITCH	SPEED	TURBO LED
OPEN *	HIGH	ON
CLOSE	LOW	OFF

2.4. Turbo LED connector (J5)

PIN NUMBER	FUNCTION
1	LED Anode
2	LED Cathode

2.5. External battery connector (J1, J2)

J2	PIN DEFINATION	FUNCTION	
1	Positive polarity +V	EXTERNAL BATTERY CONNECTOR	
2			KEY
3			GND
4			GND

JUMPER	J1
External battery	Open
Internal battery	Close

2.6. Keyboard connector (KB1)

PIN NUMBER	FUNCTION
1	Clock
2	Data
3	NC
4	GND

3	+12V
4	-12V
5	GND
6	GND
7	GND
8	GND
9	-5V
10	+5V
11	+5V
12	+5V

2.11. Software turbo

HOT - KEY	SPEED	LED
<CTRL>.<ALT>.<+>	HIGH	ON
<CTRL>.<ALT>.<.>	LOW	OFF
<CTRL>.<ALT>.<SHIFT>.<+>	HIGH	ON
<CTRL>.<ALT>.<SHIFT>.<.>	LOW	OFF

2.12. Clock chip frequency selection (JP4, JP5, JP6)

See quick setup (C)

2.13. Cache memory configuration (JP9-13)

See quick setup (B)

2.14. Support Viper 9000 (JP3)

JP3	FUNCTION
1-2	DEFAULT
2-3	SUPPORT VIPER 9000 VGA Card

2.15. Power good source (JP1)

JP1	FUNCTION
1-2 *	EXTERNAL POWER GOOD
2-3	INTERNAL POWER GOOD