

## Chapter 2 FEATURES

### 2.1 Specifications .

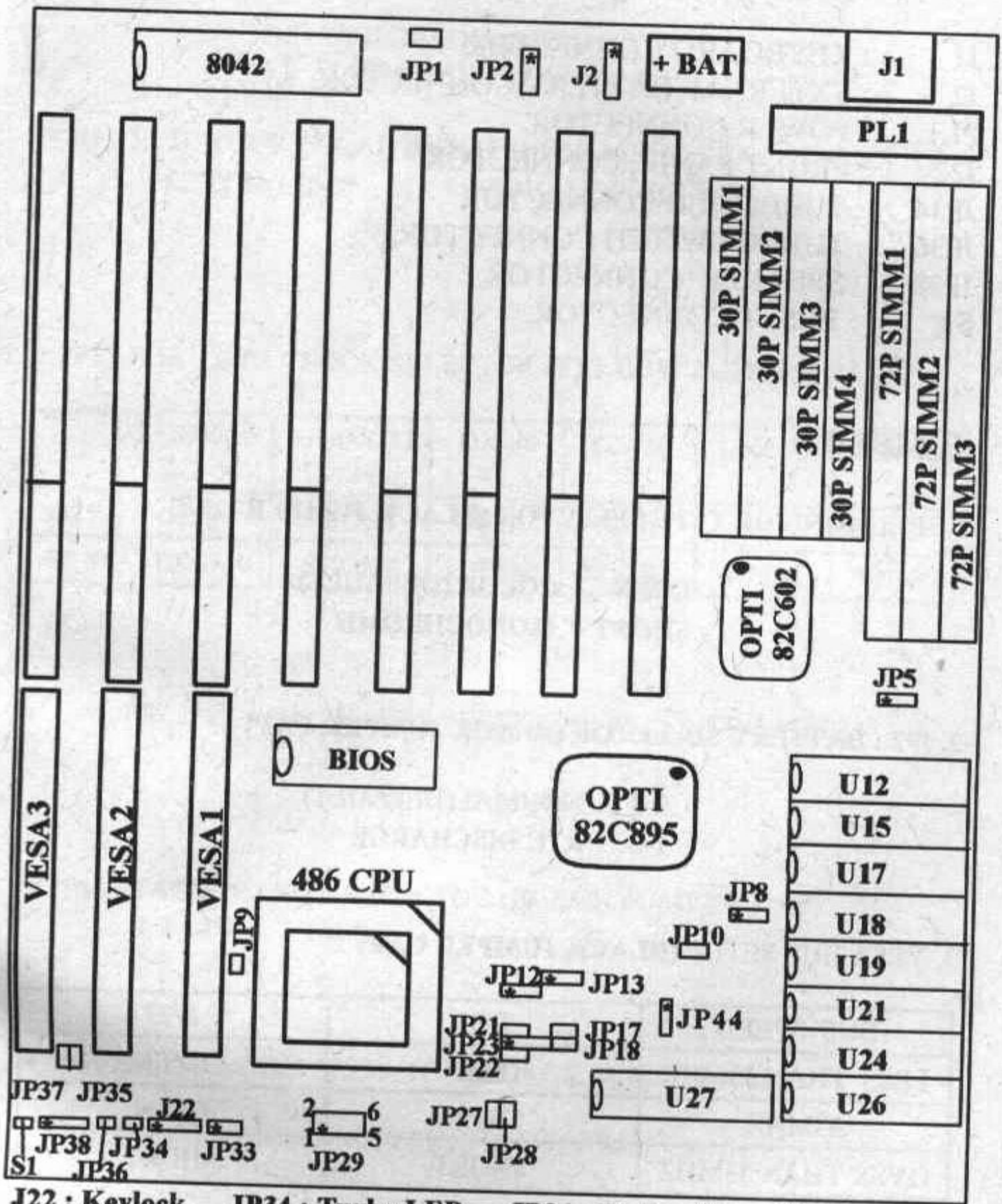
<b>CPU</b>	: 25-66 MHZ INTEL/AMD/CYRIX 486SX/DX/DX2, 75/100 MHZ INTEL 486DX4 is optional
<b>MEMORY</b>	: 3 X 72-pin SIMM and 4 X 30-pin SIMM sockets.
<b>EXP. SLOT</b>	: 3 X VESA, 8 X ISA
<b>CHIPSET</b>	: OPTI 895 GREEN PC CHIP OPTI 602 BUFFERS CHIP
<b>CACHE RAM</b>	: 64K/128K/256K
<b>BIOS</b>	: AMI WINDOWS BIOS
<b>SIZE</b>	: 25.5 CM X 22.5 CM

#### GREEN FUNCTION:

1. Supports NON-SMI CPU speed down
2. VGA card like CIRRUS LOGIC 542X will enter sleep mode.
3. Supports SMI CPU speed stop to 0 MHZ.

# CHAPTER 3. INSTALLATION

## 3.1 Layout reference



**J22 : Keylock**    **JP34 : Turbo LED**    **JP36 : Turbo SW**    **S1: Reset**  
**JP38 : Speaker**

### 3.1.1 OPTI VL486 Jumper Settings

- J1 : KEYBOARD CONNECTOR.  
 J2 : EXTERNAL BATTERY CONNECTOR.  
 PL1 : POWER CONNECTOR.  
 J22 : FRONT PANEL CONNECTOR.  
 JP34 : TURBO LED CONNECTOR.  
 JP36 : TURBO SWITCH CONNECTOR.  
 JP38 : SPEAKER CONNECTOR.  
 S1 : RESET CONNECTOR.

## JUMPER

### 1. JP1 : MONITOR TYPE SELECTOR (BLACK JUMPER CAP)

- OPEN : COLOR (DEFAULT)  
 SHORT : MONOCHROME

### 2. JP2 : BATTERY SELECTOR (BLACK JUMPER CAP)

- 2-3 : NORMAL (DEFAULT)  
 1-2 : RTC DISCHARGE

### 3. VESA BUS SETUP (BLACK JUMPER CAP)

BUS SPEED	JP35	JP37
LESS THAN 33MHZ	OPEN	OPEN
33MHZ	OPEN	OPEN
OVER THAN 33MHZ	SHORT	SHORT

**4. JP33 : CPU READY SELECTOR (BLACK JUMPER CAP)**

2-3 : CPU READY (DEFAULT)

1-2 : LOCAL BUS READY

NOTE : IF YOUR LOCAL BUS ADD-ON CARDS CAN NOT RUN BY SETTING "2-3" , PLEASE CHANGE TO "1-2"

**5. JP17,JP18 : CPU CLOCK SELECTOR (YELLOW JUMPER CAP)**

	SX/DX-25 DX2-50	SX/DX-33 DX2-66	DX-40	DX-50	DX4-75	DX4-100
JP17	OPEN	SHORT	SHORT	OPEN	OPEN	SHORT
JP18	OPEN	SHORT	OPEN	SHORT	OPEN	SHORT

**6. JP8,JP27,JP28 : CACHE SIZE SELECTOR, REFER TO PAGE 11.****7. JP44 : TAG RAM SIZE SELECTOR (BLACK JUMPER CAP)**

1-2 : 32K x 8/ 8K x 8

2-3 : 16K x 8

**8. JP5 : DRAM BANK0 SELECTOR (BLACK JUMPER CAP)**

1-2 : ONLY 72-PIN SIMM TYPE IS AVAILABLE, CANNOT USE 30-PIN TYPE , 72-PIN SIMM1 IS BANK0.

2-3 : BOTH 72-PIN AND 30-PIN ARE AVAILABLE, BUT ONLY 30-PIN SIMM1 IS BANK0 , 72-PIN SIMM1 IS BANK1.(DEFAULT)

## 9. JP9-JP13,JP21-JP23 : CPU TYPE SELECTOR (RED JUMPER CAP)

	486SX	486DX	486DX-SLE	486DX4	Cyrix/DX2	Cyrix/DX
JP9	OPEN	OPEN	OPEN	OPEN	SHORT	SHORT
JP10	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN
JP12	OPEN	OPEN	1-2	1-2	2-3	2-3
JP13	OPEN	1-2	1-2	1-2	1-2	1-2
JP21	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN
JP22	OPEN	OPEN	OPEN	OPEN	SHORT	OPEN
JP23	2-3	1-2, 3-4	1-2, 3-4	1-2, 3-4	1-2, 3-4	1-2, 3-4

NOTE : " UMC CPU" IS NOT RECOMMENDED !

## 10. JP29 : 3.3V/5V CPU SELECTOR (RED JUMPER CAP)

JP29 : 1-3, 2-4 5V

JP29 : 3-5, 4-6 3.3V (Intel 486DX4)

**⚠ WARNING:**

SINCE THE 486DX4 CPU (3.3V) CONSTRUCTION IS DIFFERENT FROM NORMAL 486SX/DX/DX2 CPU'S 5.0V, IT NEEDS A SPECIAL REQUEST TO THE DEALER TO SUPPORT 486DX4 SYSTEM BOARDS. PLEASE ADJUST JUMPER SETTINGS AT PROPER LOCATIONS FOR VARIOUS CPU'S TO AVOID DAMAGING THE SYSTEM BOARD OR CPU.

**S1 : Reset Connector**

S1 is used to connect to the reset button on the front panel of the system's case. Pushing the button will cause the system to restart. The pin assignments are as follows:

Pin	Assignments
1	Ground
2	Reset input

**J2 : External Battery Connector**

J2 is a 4-pin, Berg strip. The pin assignments are as follows:

Pin	Assignments
1	+6V DC
2	KEY
3	Ground
4	Ground

**J1 : Keyboard Connector**

The keyboard connector is a 5-pin 90-degree Printed Circuit Board mounting, DIN type connector. The pin assignments are as follows:

Pin	Assignments
1	Keyboard clock
2	Keyboard data
3	Spare
4	Ground
5	+5V DC

### 3.3 Memory Configuration

This section provides information on how to install the DRAM and Cache SRAM. Improper installation of DRAM or Cache RAM will cause the system to shutdown.

### 3.4 Installation of DRAM

There are no jumpers for the DRAM configuration. The BIOS will test the DRAM type and size automatically. All you need to do is just plug in the SIMM DRAM. There are four banks of Memory (Bank0 - Bank3) on the system board, [ Bank0 consists of 4pcs of 30 pin SIMM DRAM & Banks 1-3 consist of 1pc of 72 pin SIMM DRAM each]. The SIMM DRAM can be 256K x 9, 1M x 9 4M x 9, 1Mx36 or 4Mx36 modules. The possible combinations of the SIMM DRAM are as follows.

30P SIMM1-4	72P SIMM1	72P SIMM2	72P SIMM3	TOTAL
256KB	---	---	---	1MBytes
1MB	---	---	---	4MBytes
---	4MB	---	---	4MBytes
256KB	4MB	---	---	5MBytes
1MB	4MB	---	---	8MBytes
---	4MB	4MB	---	8MBytes
---	8MB	---	---	8MBytes
---	4MB	8MB	---	12MBytes
1MB	---	4MB	4MB	12MBytes
1MB	4MB	4MB	4MB	16MBytes
4MB	---	---	---	16MBytes
4MB	4MB	4MB	4MB (NO AVAILABLE)	
4MB	---	16MB	---	32MBytes
4MB	16MB	16MB	16MB	64MBytes
:	:	:	:	:
:	:	:	:	:

### 3.5 Cache RAM Configurations

The OPTI VL486 system is very flexible in its configuration of Cache SRAM. The Cache SRAM size can be 64KB, 128K or 256KB. The following tables are the jumper settings and Cache RAM locations for different Cache RAM sizes.

**(BLACK JUMPER CAP)**

JMP	64K	128K	256K
JP8	2-3	1-2	2-3
JP27	OFF	ON	ON
JP28	OFF	OFF	ON

**NOTE :** PLEASE DO NOT CHANGE OR REMOVE THE DEFAULT JUMPER SETTINGS BY YOURSELF, CONTACT YOUR DEALER FOR DETAILS FIRST.

#### (1) 64KB Cache RAM

Bank 0 ( U12,U17,U19,U24 ) : 8Kx8 SRAM 4pcs.

Bank 1 ( U15,U18,U21,U26 ) : 8Kx8 SRAM 4pcs.

Tag RAM ( U27 ) : 8Kx8 SRAM 1pc

#### (2) 128KB Cache RAM

Bank 0 ( U12,U17,U19,U24 ) : 32Kx8 SRAM 4pcs.

Bank 1 ( U15,U18,U21,U26 ) : EMPTY.

Tag RAM ( U27 ) : 32Kx8/8Kx8 SRAM 1pc

#### (3) 256KB Cache RAM

Bank 0 ( U12,U17,U19,U24 ) : 32Kx8 SRAM 4pcs.

Bank 1 ( U15,U18,U21,U26 ) : 32Kx8 SRAM 4pcs.

Tag RAM ( U27 ) : 32Kx8/16Kx8 SRAM 1pc