Chapter 1
Introduction

1.1 General Specifications and Features

The UC4913 is a cost-effective high performance mainboard based on IBM PC/AT compatible system. It uses the UM82C491 real single chip which provides high integration 486/AT based system design.

Processor: 80486 SX/DX PGA or 80486 SX/DX PQFP 25, 33, 50 MHz.
80486 DX2 50,66 MHz.
P23T 50,66 MHz.
CYRIX M6 40 MHz CPU.
AMD 40 MHz CPU.

Chipset: -UM82C491 real single chip.
-UM82C493A TTL integration.

System BIOS: AMI BIOS 64KB.

K/B BIOS: AMI-8042KF.

System Memory: Supports 2 banks system memory up to 64 MB.

Cache Memory: 64KB, 128KB or 256KB.

Slots: Six 16-bit, two 8-bit ISA slots and 3 VESA slots.

Motherboard: 4 Layers 2/3 baby AT size.

Connectors: -Power.
-AT Keyboard.
-Reset.
-Speaker.
-External battery.

Chapter 2

Memory Configuration

The UC4913 DRAM configurations are discussed, followed by DRAM module installation and removal. Users are recommended to read through this chapter before installing or removing memory.

2.1 System Memory

The total size of on-board memory depends on the combinations of different types of DRAM modules installed on the memory banks.

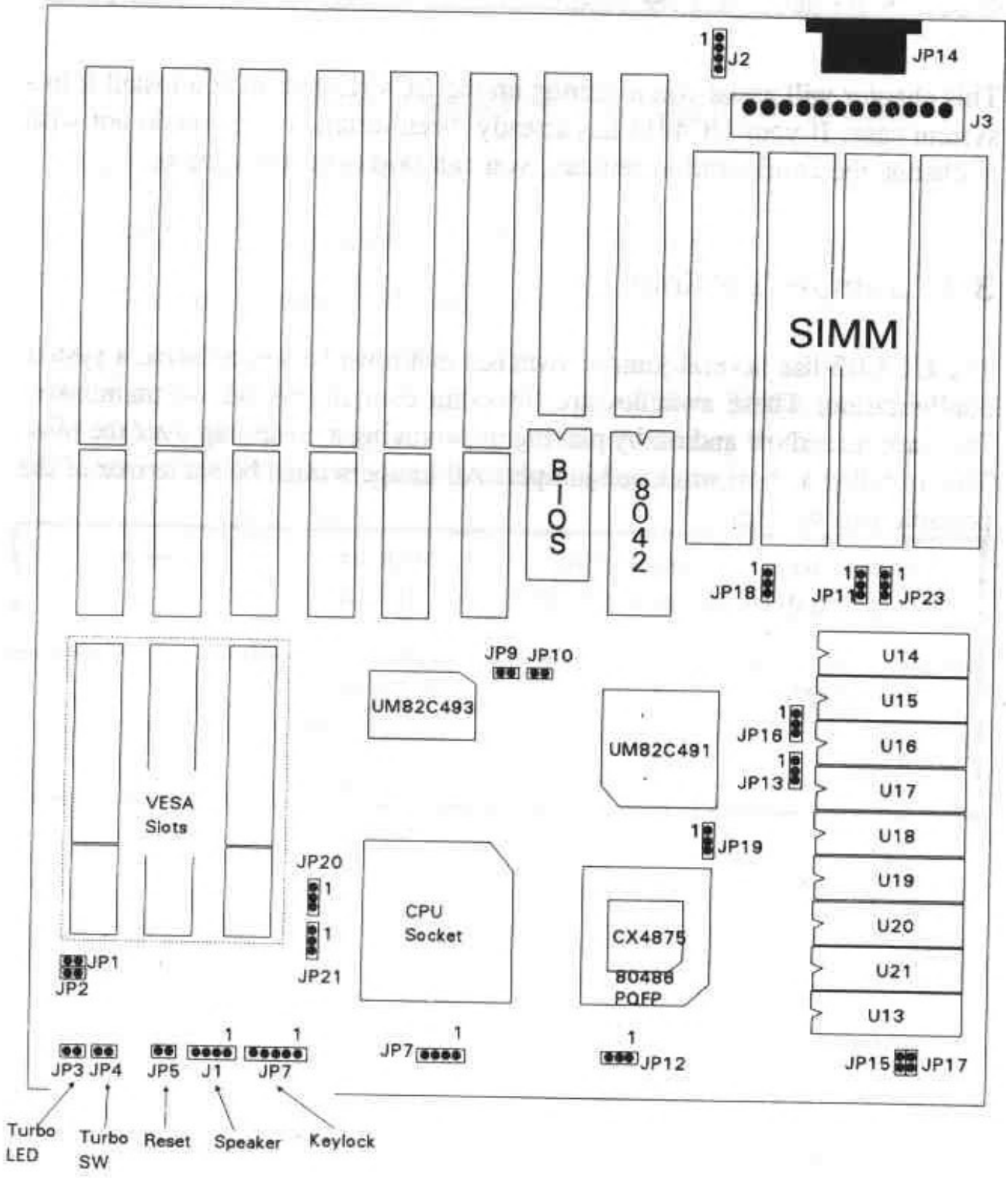
Option	Bank 0	Bank 1	Memory Amount
1	256 KB	None	1MB
2	256 KB	256 KB	2 MB
3	256 KB	1 MB	5 MB
4	1 MB	None	4 MB
5	1 MB	1 MB	8 MB
6	1 MB	4 MB	20 MB
7	4 MB	None	16 MB
8	4 MB	4 MB	32 MB
9	16MB	None	64MB

2.1.1 DRAM Module Insertion

The SIMMs must be seated on the sockets as firmly as possible, and because of the fragility of the slot, you must be careful when inserting or removing the module.

1. Align the module so the pin-1 marking and corner notch of the module correspond to the SIMM socket pin 1 marking at the rear of the board. The module can fit in the socket one way only. Do not force it!

2. Push the module against the clip arms with your thumbs until a "click" sound is heard; the little plastic tabs appear in the latching holes on the RAM module board, and the clip arms fully grab the module board.


1
J2
JP14
J3
SIMM
BIOS
8042
1
JP18
1
JP17
1
JP23
JP9
JP10
UM82C493
UM82C491
1
JP16
1
JP13
U14
U15
U16
U17
U18
U19
U20
U21
U13
VESA
Slots
JP20
1
1
JP21
1
JP19
CPU
Socket
CX4875
80486
PQFP
JP1
JP2
1
JP7
1
JP12
JP15
JP17
1
1
JP3
JP4
JP5
J1
JP7
Turbo
LED
Turbo
SW
Reset
Speaker
Keylock

The table below summarizes the function and settings of each jumper on the UC4913.

Function		Jumper Settings
On-board PQFP CPU	If on-board PQFP CPU is installed Enabled Disabled	 JP12 opened JP12 pin 2,3 closed
	(If on-board PQFP CPU is ot installed	JP12 opened
CPU Type	80486DX, DX2, P23T,M7 AMD486DX,M6/C6 module	JP7 pin 1,2 & 3,4 closed
	80486SX,M6,AMD486SX	JP7 pin 2,3 closed
	M7 DX2	JP7 pin 1,2 & 3,4 closed JP12 pin 1,2 closed
Clock Select	25 MHz	JP9 closed JP10 closed
	33 MHz	JP9 opened JP10 closed
	40 MHz	JP9 closed JP10 opened
	50MHz	JP9 opened JP10 opened
Monitor Type Select	Mono	JP11 pin 1,2 closed
	Color	JP11 pin 2,3 closed
Cache Memory Size Setting	64 K	JP13 opened JP15 opened JP16 pin 1,2 closed JP17 opened
	128 K	JP13 pin 2,3 closed JP15 opened JP16 pin 2,3 closed JP17 closed
	256 K	JP13 pin 1,2 closed JP15 closed JP16 pin 1,2 closed JP17 closed
Weitek Power 9000 VESA VGA Card	Installed	JP18 pin 2,3 closed
	Non-Installed	JP18 pin 1,2 closed
Local Bus Speed Select	< =33MHz	JP2 opened
	> 33MHz	JP2 closed

Local Bus Write Wait Select	0 Wait	JP1 opened
	1 Wait	JP1 closed
C6 Coprocessor (M6/C6 module or on board C6)	C6 present	JP21 pin 2,3 closed JP20 pin 2,3 closed JP19 pin 1,2 closed
	C6 absent	JP21 pin 1,2 closed JP20 pin 1,2 closed JP19 pin 2,3 closed
CPU Clock	=50MHz	JP23 pin 1,2 closed
	<=40MHz	JP23 pin 2,3 closed

Note: 1. If the on-board PQFP CPU is installed, you have to disable it, then the upgrade socket will be available.

2. Do not install the on-board PQFP CPU with M7 DX2 CPU together.

3.2 Connectors

There are several connectors located on the UC4913. They are used to connect with some peripheral devices to enhance the operating performance of the system.

Refer to Figure 3.1 for the positions of all the connectors on the mainboard. Their functions are listed below:

Connector	Function
J3	Power Connector
JP14	Keyboard Connector
J2	External Battery Connector
JP4	Turbo Switch Connector
JP6	Keylock Connector
JP3	Turbo LED Connector
JP5	Reset Connector
J1	Speaker Connector