



# Quick Setup Guide

## (A) Most Important Configuration

SiS471 main board supports 72-pin and 30-pin SIMM RAMs

### (i) Use 72-pin SIMM RAM only. JP84(1-2) JP85(Open)

OPTION	X SIMM 1	X SIMM 2	TOTAL MEMORY
1	1MB-S	1MB-S	2MB
2	2MB-D	2MB-D	4MB
3	4MB-S	4MB-S	8MB
4	4MB-S	8MB-D	12MB
5	8MB-D	8MB-D	16MB
6	8MB-D	16MB-S	24MB
7	16MB-S	16MB-S	32MB
8	32MB-D	32MB-D	64MB

“S” stands for single memory bank.

“D” stands for double memory bank.

If using one 72-pin SIMM RAM, (such as 1MB, 2MB, 4MB, 8MB, 16MB etc.), install the SIMM module using X SIMM1 .

### (ii) Use 30-pin SIMM RAM only. JP84(1-2) JP85(Open)

OPTION	SIMM1 to SIMM4	TOTAL MEMORY
1	256KB	1MB
2	1MB	4MB
3	4MB	16MB
4	16MB	64MB (Not Tested)

### (iii) Use one 72-pin and 30-pin SIMM RAMs. JP84(1-2) JP85(Open)

OPTION	X SIMM 2	SIMM 1 to 4	TOTAL MEMORY
1	4MB	1MB	8MB
2	16MB	1MB	20MB
3	16MB	4MB	32MB

### (iv) Use two 72-pin and 30-pin SIMM RAMs. JP84(Open) JP85(Close)

OPTION	SIMM 1 to 4	X SIMM 1 to 2	TOTAL MEMORY
1	1MB	1MB-S	6MB
2	1MB	2MB-D	8MB
3	1MB	4MB-S	12MB
4	4MB	4MB-S	24MB
5	4MB	16MB-S	48MB

## (B) CPU Frequency Configuration ( JP6, JP7)

CPU	25MHz	33MHz	40MHz	50MHz
JP6	OPEN	CLOSE	CLOSE	OPEN
JP7	OPEN	CLOSE	OPEN	CLOSE

## (C) CPU Type Configuration ( J11, J13, J14, JP8, JP12, JP13, JP18, JP19, JP24, JP25, JP28, JP29, JP33, JP37, JP40 , JP78 )

**Warning:** Before setting jumpers for CPU selected, you must set CPU power supply voltage (U50) correctly as page 2-4.

CPU	JP8	JP12	JP13	JP18	JP19	JP24	JP25	JP28	JP29	JP33	JP37	JP40	J11	J13	J14	JP78
486SX	2-3	Open	Open	1-2	2-3	Open	Open	Open	Open	2-3	Open	2-3	Open	Close	Open	1-2
3.45V AMD 486 DX2/66/80	2-3	Open	Open	1-2	2-3	Open	Open	Open	Open	1-2 3-4	3-4	2-3	Open	Close	Close	1-2
486DX	2-3	Open	Open	1-2	2-3	Open	Open	Open	Open	1-2 3-4	3-4	2-3	Open	Close	Open	1-2
AMD40	2-3	Open	Open	1-2	2-3	Open	Open	Open	Open	1-2 3-4	3-4	2-3	Open	Close	Open	1-2
SL - 486SX	2-3	Open	Open	1-2	2-3	4-5	2-3	1-2	3-4	2-3	Open	2-3	Open	Close	Open	1-2
SL - 486DX	2-3	Open	Open	1-2	2-3	4-5	2-3	1-2	3-4	1-2 3-4	3-4	2-3	Open	Close	Open	1-2
SL - 486DX2	2-3	Open	Open	1-2	2-3	4-5	2-3	1-2	3-4	1-2 3-4	3-4	2-3	Open	Close	Open	1-2
Intel 486DX4 - 100	2-3	Open	Open	1-2	2-3	4-5	2-3	1-2	3-4	1-2 3-4	3-4	2-3	Open	Close	Open	1-2
AMD DX4-100	2-3	Open	Open	1-2	2-3	Open	Open	Open	Open	1-2 3-4	3-4	2-3	Open	Close	Open	1-2
Cyrix 486DX	2-3	2-3	2-3	2-3	1-2	2-3	1-2 3-4	Open	2-3	1-2 3-4	3-4	2-3	Open	Open	Open	1-2
UMC 486SX	2-3	Open	3-4	2-3	1-2	Open	Open	Open	Open	2-3	1-2	2-3	Open	Close	Open	2-3
AMD Enhanced DX4	1-2	1-2	Open	1-2	1-2	4-5	2-3	2-3	1-2, 3-4	1-2, 3-4	2-3	2-3	Close	Close	Open	1-2

**Note :** For AMD 486DX 40 Version C CPU, JP40 (1-2) is shorted.  
For all DX4-100 CPU, set JP10 open.

## (D) VESA Options (JP3, JP4)

JUMPER	SETTING	FUNCTION
JP4	1-2	0 Wait
	2-3	1 Wait
JP3	1-2	<= 33MHz
	2-3	> 33MHz

**Note:** This main board supports three VESA slots, VESA1 and VESA2 are master slots.

This manual has two purposes. First, help the user to get familiar with the system board. Second, serve as a procedure guide and specifications for future system upgrade.

# **1. Introduction**

SIS471 main board is a high performance, 100% PC/AT compatible board, which supports Intel's 80486DX4/DX2/DX/SX/SL enhanced CPU and normal CPU.

## **Features**

- Supports power management mode
- Supports SMI and Non-SMI CPU
- CPU stop clock function for SL-CPU and Cyrix 486DX
- Two power saving states ( Standby / Suspend )
- Long or short system timer
- Power saving on non-SMI CPU
- Supports two kinds of SIMM RAM : 72-pin SIMM RAM and 30-pin SIMM RAM
- Supports shadow RAM for system adapter and video BIOS
- Supports 32KB, 64KB, 128KB, 256KB, 512KB and 1MB cache memories
- Supports two VL-bus masters
- CPU operating frequency is 8~100MHz
- Six 16-bit AT bus slots and one 8-bit XT bus slot
- Standard reset, keylock, speaker and turbo LED connectors
- Supports DOS, Windows, WindowsNT, Novell Netware, OS/2, UNIX and XENIX operating systems
- Two-third of the baby AT size board (220mm x 250mm)

## 2. Jumper Settings and Connector Pin Assignment

The setting of various jumpers are shown as follows:

### 2.1. CPU Selection (J11, J13, J14, JP8, JP12, JP13, JP18, JP19, JP24, JP25, JP28, JP29, JP33, JP37, JP40, JP78)

**Warning:** Before setting jumpers for CPU selected, you must set CPU power supply voltage (U50) correctly as page 2-4.

CPU	JP8	JP12	JP13	JP18	JP19	JP24	JP25	JP28	JP29	JP33	JP37	JP40	J11	J13	J14	JP78
486SX	2-3	Open	Open	1-2	2-3	Open	Open	Open	Open	2-3	Open	2-3	Open	Close	Open	1-2
3 45V AMD 486 DX2/66/80	2-3	Open	Open	1-2	2-3	Open	Open	Open	Open	1-2 3-4	3-4	2-3	Open	Close	Close	1-2
486DX	2-3	Open	Open	1-2	2-3	Open	Open	Open	Open	1-2 3-4	3-4	2-3	Open	Close	Open	1-2
AMD40	2-3	Open	Open	1-2	2-3	Open	Open	Open	Open	1-2 3-4	3-4	2-3	Open	Close	Open	1-2
SL - 486SX	2-3	Open	Open	1-2	2-3	4-5	2-3	1-2	3-4	2-3	Open	2-3	Open	Close	Open	1-2
SL - 486DX	2-3	Open	Open	1-2	2-3	4-5	2-3	1-2	3-4	1-2 3-4	3-4	2-3	Open	Close	Open	1-2
SL - 486DX2	2-3	Open	Open	1-2	2-3	4-5	2-3	1-2	3-4	1-2 3-4	3-4	2-3	Open	Close	Open	1-2
Intel 486DX4 - 100	2-3	Open	Open	1-2	2-3	4-5	2-3	1-2	3-4	1-2 3-4	3-4	2-3	Open	Close	Open	1-2
AMD DX4 -100	2-3	Open	Open	1-2	2-3	Open	Open	Open	Open	1-2 3-4	3-4	2-3	Open	Close	Open	1-2
Cyrix 486DX	2-3	2-3	2-3	2-3	1-2	2-3	1-2 3-4	Open	2-3	1-2 3-4	3-4	2-3	Open	Open	Open	1-2
UMC 486SX	2-3	Open	3-4	2-3	1-2	Open	Open	Open	Open	2-3	1-2	2-3	Open	Close	Open	2-3
AMD Enhanced DX4	1-2	1-2	Open	1-2	1-2	4-5	2-3	2-3	1-2, 3-4	1-2, 3-4	2-3	2-3	Close	Close	Open	1-2

**Note :** For AMD486DX-40 Version C CPU, JP40 (1-2) is shorted.

For all DX4-100 CPU, set JP10 (open).

### 2.2. Turbo Switch Connector (S1)

SETTING	SPEED	TURBO LED
OPEN	HIGH	ON
CLOSE	LOW	OFF

### 2.3. Turbo LED Connector (J4)

PIN NUMBER	FUNCTION
1	LED ANODE
2	LED CATHODE

### 2.4. Reset Switch Connector (J5)

SETTING	FUNCTION
CLOSE ONCE	RESET THE SYSTEM
OPEN	NORMAL

## *Jumper Settings and Connector Pin Assignment*

### **2.5. Keyboard Connector (CN2)**

PIN NUMBER	FUNCTION
1	CLOCK
2	DATA
3	NC
4	GND
5	+5V

### **2.6. Keylock Connector (J1)**

PIN NUMBER	FUNCTION
1	+5V
2	NC
3	GND
4	KEYLOCK
5	GND

### **2.7. Power LED Connector (LED1)**

PIN NUMBER	FUNCTION
1	LED ANODE
2	LED CATHODE

### **2.8. Speaker Connector (J2)**

PIN NUMBER	FUNCTION
1	SPKDATA
2	GND
3	GND
4	VCC

### **2.9. Power Connector (CN1)**

PIN NUMBER	FUNCTION
1	Power good
2	+5V
3	+12V
4	-12V
5	GND
6	GND
7	GND
8	GND
9	-5V
10	+5V
11	+5V
12	+5V

## *Jumper Settings and Connector Pin Assignment*

### 2.10. Cache Memory Configuration (JP30, JP31, JP32, JP35, JP36, JP55, JP81)

CACHE SIZE	CACHE RAM	TAG RAM	JP30	JP31	JP32	JP35	JP36	JP81	JP55
128K	32Kx8 U(31-34)	8Kx8 U26	2-3	2-3	1-2	1-2	2-3	2-3	1-2
256K	32Kx8 U(27-34)	32Kx8 U26	2-3	2-3	2-3	2-3	2-3	2-3	2-3
256K	64Kx8 U(31-34)	32Kx8 U26	2-3	2-3	2-3	1-2	2-3	2-3	1-2, 3-4
512K	128Kx8 U(31-34)	32Kx8 U26	2-3	2-3	2-3	1-2	2-3	1-2	1-2, 3-4, 5-6
512K	64Kx8 U(27-34)	32Kx8 U26	2-3	2-3	2-3	2-3	2-3	1-2	2-3, 4-5
1MB	128Kx8 U(27-34)	64Kx8 U26	2-3	2-3	2-3	2-3	2-3	1-2	2-3, 4-5, 6-7

### 2.11. Jumper Introduction

JUMPER	SETTING	FUNCTION
JP39	1-2	Normal
	2-3	CMOS Discharge
JP38	SHORT	For CGA
	OPEN	For Mono, VGA/EGA
JP27	SHORT	For CX486 SX2 only
JP40	1-2	CLK IN and CPU CLK same phase
	2-3	CLK IN Delay for CPU CLK
JP10	1-2	CLK down by SMI control
	2-3	CLK down by STPCLK control

## *Jumper Settings and Connector Pin Assignment*

### **2.12. Default Jumper Settings**

<b>JUMPER</b>	<b>NORMAL SETTING</b>
J9	CLOSE
J11	OPEN
J12	OPEN
J13	CLOSE
JP8	2-3
JP10	1-2
JP12	OPEN
JP84	1-2
JP85	OPEN
JP43	2-3
JP17	1-2
JP18	1-2
JP19	2-3
JP78	1-2
JP79	2-3
JP20	2-3
J14	OPEN
JP86	CLOSE
TBSW	4-5

### **2.13. 3.45V CPU Support (U50)**

We have two kinds of SiS 471 main board to support 3.45V CPU.

1. If it is UMB on board and with voltage autodetect feature ( with VQ2 installed), there is no need to set any jumper settings.
2. If it is UMB on board and without voltage autodetect feature ( VQ2 not installed ), you should set jumpers as shown belows:

	<b>U50</b>
3.45V CPU	Open
5V CPU	Close ( 3-6, 4-5 )



## Extended Jumper Settings

CPU Type	AMD 3.3V Enhanced CPU	AMD 3.3V X5-133 (P5-133) CPU	CYRIX 486 DX CPU & TI 486 DX4 CPU	CYRIX 5x86 3.3V CPU
JP8	1-2	1-2	2-3	2-3
JP12	1-2	1-2	2-3	1-2
JP13	OPEN	OPEN	2-3	OPEN
JP18	1-2	1-2	2-3	2-3
JP19	1-2	1-2	1-2	1-2
JP24	4-5	4-5	2-3	4-5
JP25	2-3	2-3	1-2, 3-4	2-3
JP28	2-3	2-3	OPEN	2-3
JP29	1-2, 3-4	1-2, 3-4	2-3	1-2, 3-4
JP33	1-2, 3-4	1-2, 3-4	1-2, 3-4	1-2, 3-4
JP37	3-4	3-4	3-4	3-4
JP40	2-3	2-3	2-3	2-3
J11	CLOSE	CLOSE	OPEN	CLOSE
J13	CLOSE	CLOSE	OPEN	CLOSE
J14	OPEN	OPEN	OPEN	OPEN
JP78	1-2	1-2	1-2	1-2

*Note: 3.45V CPU, U50 must be open (3-6), (4-5)  
 3.45V AMD 486 DX2/66/80 CPU, J14 must be closed  
 DX4-100 CPU, JP10 must be OPEN, other CPU closed  
 AMD X5-133 CPU, JP44 close (1-2), other CPU open.*