SIS 486 PCI

MOTHER BOARD

(with Enhanced IDE)

USER'S MANUAL

INTRODUCTION

Overview

Developed from the SIS496/7 design, the SIS496/7 System Board is implemented by the SiS 85C496 and 85C497 chips. Besides the consideration of high performance and reliablity, the system board is designed to Deep Green function and PCI/ISA interface and fully compatible with IBM PC AT machine on both hardware and software level.

Three PCI bus slots were built in the board supports three master PCI bus devices to provide 32 bits I/O operation, which enhances the performance of the system even on the I/O perpherials.

The maximum on-board memory size is 64M bytes which satisfies the requirements of the latest operation system, like OS/2, Unix, Novell Netwate and Mircosoft Windows.

Features

- Processor support: 486SX, 486DX, P24T, SL486SX, SL486DX2, SL486DX, P24D, AMD486DXL, AMD486DXL PLUS, INTEL DX4(P24C), CYRIX 486DX, CYRIX 486DX2
- Up to 64MB of local high-speed, page-mode, DRAM memory space.
- Supports 1MB/4MB/8MB/16MB 72PINS SIMM RAM modules.
- Free-Table logic of SIMM RAM modules.
- Hidden refresh support to enhance system performance.
- Programmable AT bus clock.
- Programmable DRAM speed.
- Programmable Cache Ram speed.
- Programmable IRQ, DMA, Harddisk, Floppy and Video access for time counter of Green function.
- Programmable wait states to control the I/O recovery time on AT bus.
- Comprehensive PCI controller supports 3 master PCI Bus devices.
- Support Deep Green PC funtion.

JUMPER SETTINGS

CPU Type Selection:

	JP4	JP7	JP8	JP9	JP15	JP16	JP17	JP18	JP19	JP20	JP21	JP22
486SX	1~2,3~4	OPEN	OPEN	2~3	OPEN	2~3	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
486DX	1~2,3~4	OPEN	OPEN	1~2,3~4	3~4	2~3	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
SLE486SX	1~2,3~4	3~4	OPEN	2~3	OPEN	2~3	OPEN	1~2	OPEN	2~3	1~2	4~5
SLE486 DX/DX2	1~2,3~4	3~4	OPEN	1~2,3~4	3~4	2~3	OPEN	1~2	OPEN	2~3	1~2	4~5
P24D	1~2,3~4	1~2,3~4	OPEN	1~2,3~4	3~4	1~2	1~2	1~2	1~2	2~3	2~3	4~5
P24T	1~2,3~4	3~4	1~2	1~2,3~4	2~3	1~2	1~2	1~2	OPEN	2~3	OPEN	1~2
AMD 486DXL	1~2,3~4	OPEN	3~4	1~2,3~4	1~2,3~4	2~3	OPEN	2~3	OPEN	4~5	OPEN	OPEN
AMD 486DXL PLUS	1~2,3~4	3~4	OPEN	1~2,3~4	3~4	2~3	OPEN	1~2	2~3	2~3	4~5	4~5
INTEL DX4 (P24C)	OPEN	3~4	OPEN	1~2,3~4	3~4	2~3	OPEN	1~2	OPEN	2~3	1~2	4~5
CYRIX DX/DX2 (5V)	1~2,3~4	2~3	2~3	1~2,3~4	3~4	2~3	2~3	1~2	OPEN	1~2	OPEN	2~3
CYRIX DX2/DX4 (3.45V)	OPEN	2~3	2~3	1~2,3~4	3~4	2~3	2~3	1~2	OPEN	1~2	OPEN	2~3
CYRIX MISC (5x86)	OPEN	1~2,3~4	OPEN	1~2,3~4	3~4	2~3	1~2	1~2	1~2	2~3	2~3	4~5

JP1 : Short For Cyrix CX486S2 Only

JP2 : P24D WB/WT

1-2 Close : WB Default : Open
2-3 Close : WT

JP3 : P24T WB/WT

1-2 Close : WB Default : Open
2-3 Close : WT

WARNING : MAKE SURE JP4 IS CORRECT SETTING.

JP4

1-2, 3-4 Close : for 5V CPU
All Open : for 3.3V CPU

JP35 1-2 : Normal
2-3 : Discharge RTC CMOS

Note: If you are power up the system for the first time or you have turn off the system for more than one month, you should leave your system on for 10 to 15 hours to completely recharge the battery.

Cache Ram Installation:

20ns SRAM is recommended to use as external cache in the system board, and various size of external cache size can be installed:

Cache Size	JP23	JP24	JP25	JP36	JP37	BANK 0	BANK 1
128K	1-2	1-2	1-2	1-2	1-2,3-4	32K x 8	
256K	2-3	1-2	2-3	1-2	2-3,4-5	32K x 8	32K x 8
256K	2-3	1-2	1-2	2-3	1-2,3-4	64K x 8	
512K	2-3	2-3	1-2	1-2	1-2,3-4	128K x 8	
512K	2-3	2-3	2-3	1-2	2-3,4-5	64K x 8	64K x 8

The jumper of JP23, JP24, JP25, JP36 and JP37 should be set correctly according to the cache ram size installed.

JP30, JP31, JP32 : Clock Generator Output Selection:

CPU Speed	JP30	JP31	JP32
33MHz (DX2-66)	Open	Close	Close
√ 40MHz	Open	Open	Close
50MHz	Open	Close	Open
25MHz (DX2-50)	Open	Open	Open

JP33 1-2 : SYSTEM <= 33MHz
2-3 : √SYSTEM > 33mhz

JP34 1-2 : ACLK and CPUCLK same phase
2-3* : ACLK delay for CPUCLK

JP38 **SMOUT CONNECTOR**

JP39 **CLK down controll selection**

1-2* : SMOUT 1

2-3 : -STPCLK (Not include AMD486DXL)

Note: **JP14, JP26, JP27, JP43** : 2-3 Close (Default)

JP29 : Open (Default)

JP40 : 1-2 Close (Default)

JP41, JP42 : Reserved

CONNECTOR DESCRIPTION

J2 : Power Connector

J3 : External Battery Connector

Pin Number	J3
1	Battery+
2	N.C.
3	Ground
4	Ground

J6 : Break Switch For SMI

Close : for Break

Open* : Normal

J7 : Turbo LED Connector

Pin Number	TB LED
1	LED+
2	LED-

Note: Please notice that the LED indicate the external turbo switch status only.

* Default Settings

J8 : Reset Switch Connector Close : Reset

Open : Normal

(10) JP41 DREQ signal control

Pin #	Assignment
1 - 2	DREQ pull-up
2 - 3	DREQ pull-down

(11) JP44 MONITOR Type selection

Pin#	Assignment
SHORT	COLOR Monitor
OPEN	MONO Monitor