GCT-8STB Main Board

This motherboard was made by **Hsing Tech** for **Global Circuit Technology**

Users Manual V1.1

Key Features

SiS 5577 BGA Chipset

Support P54C/P55C Pentium (MMX) CPUs with 321-pin (Socket 7) ZIF socket and Cyrex/IBM 6x86/6x86L/M2, AMD K5/K6, IDT C6 Processors

Support External Clock Speed at 75/66/60/55/50 MHz

Supports 2 banks of FP/EDO SIMM/DIMM, SRAM DIMM

Expandable Memory up to 256MB

Four 72-pin SIMM socket support FP/EDO DRAM

Two 168-pin DIMM sockets support FP/EDO DRAM

On-Board 64-Bit 512 KB L2 Cache

4 PCI Local Bus slots, and 4x16 bits ISA Bus Slots

All 4 PCI slots support Master Module.

System BIOS support 4 IDE harddisk drives that do not need driver for S/W application, the capacity of each harddisk can be up to 8.4 GB

PCI Bus Master IDE interface on board with 2 conectors supporting 4 IDE devices in 2 channel, the PCI IDE Controllers supports PIO Mode 0 to Mode 4 at a maximum trasnfer rate of 16.67 MB/s and Bus Master IDE DMA mode 2.

On board super Multi O/I chip thatt support 2 serial ports with 16650 Fast UART compatable, ! parallel opet with EPP and ECP capabilities, and a floppy disk drive interface.

DIMM Module 3.3V&5V jumper select support 3V/5V FP/EDO/SD DRAM.

System BIOS supports Green feature funtions & Plug and Play Flash ROM.

Support PS/2 Mouse Connection

Support the U.S.B. (option)

Support Ir connection (option)

Physical Dimentions: Length:220 mm / Width:280 mm

Jumper Settings

JP8 **CPU Core Voltage Selectors**

	3.5	3.3	3.2	2.9	2.8	2.5

A	OO	OO	OO	OO	OO	OO
B	OO	OO	OO	OO	OO	OO
C	OO	OO	OO	OO	OO	OO
D	OO	OO	OO	OO	OO	OO
E	OO	OO	OO	OO	OO	OO

JP2 CMOS RAM

```
                              1
Internal Battery Mode      OOOO

Discharge CMOS             OOOO

Extternal Battery Mode     OOOO
```

JP4 CPU Type Selector

P54C (Single Voltage) Intel P54C, AMD K5, IBM/Cyrex 6x86

```
        1
A    OOO
B    OOO
```

P55C (Dual Voltage) Intel P55C, AMD K6, IBM/Cyrex 6x86L

```
        1
A    OOO
B    OOO
```

JP3 CPU External Clock Selectors

50MHz	55MHz	60MHz	66MHz	75MHz
1 A OOO B OOO C OOO	1 A OOO B OOO C OOO	1 A OOO B OOO C OOO	1 A OOO B OOO C OOO	1 A OOO B OOO C OOO

JP7 CPU Internal Clock Speed Selectors

IDT	INTEL	CYREX	AMD	JP7
	1.5/3.5X		K5 -1.5X K6 - 3.5X	1 A OOO B OOO
	2.0X	2.0X		1 A OOO B OOO
	2.5X	M2 - 2.5X	2.5X	1 A OOO B OOO

	3.0X	M2 - 3.0X	K6 - 3.0X	1 A ○○○ B ○○○

JP5 DIMM Socket Voltage Selectors

3.3V

```
      1
A OO○
B OO○
```

5V

```
      1
A ○OO
B ○OO
```

Set for 3.3V for SDRAM DIMM

Set for 5V for 72-pin SIMM or DIMM DRAM

JP6 Chipset Voltage Selectors

3.3V

```
      1
A OO○
B OO○
```

5V

```
      1
A ○OO
B ○OO
```

Connectors

J3 AT Power Supply Connector

The power supply connector are 2 six-pin male header connections. Plug the dual connectors from the power directly into the board connectors. Most AT style power supplies have 2 leads. Each lead has six wires. Two of which are black, orient the connectors, so the black wires are in the middle.

J1 AT Keyboard Connector

A standard 5-pin AT keybard connector is located at the rear of the board.

J2 PS/2 Mouse Connector

A standard 8-pin mini DID PS/2 Mouse connector can be connected to J2

```
2 OOOO 8
1 O OO 7
```

1 - Mouse CLK
2 - Ground

3 - NC
4 - Mouse Data
5,6,7 - NC
8 - +5VDC

USB1 2 sets of Universial Serial Bus Connector

```
2 OOOOO 10
1 OOOOO 9
```

1, 2 - 5V-DC
3, 4 - DATA-
5, 6 - DATA+
7, 8 - Ground
9, 10 - Ground

The USB is optional. (I'd like to know what is needed to use this option.)

IR1 (Ir) Compliant Infrared Module Connector

```
1 OOOO 4
```

1 - Ir In
2 - Ground
3 - Ir Out
4 - + 5V

The Ir is optional. (I'd like to know what is needed to use this option.)

COM1 : Serial Port - BIOS Selectable

COM2 : Serial Port - BIOS Selectable

PRN1 : Parallel Printer Connector - Bios Selectable

FDC1 : Floppy Drive Connector
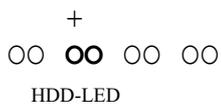
IDE1 : Primary IDE Connector

IDE2 : Secondary IDE Connector

J6 (FAN-POW) CPU Cooling Fan Connector

```
1 OOOO 4
```

1 - +12V
2 - Ground
3 - Ground
4 - +5V

J5 (HDD-LED) HDD LED Connector

```
     +
OO  OO  OO  OO
   HDD-LED
```

+ - 5V
Active Low

J5 (RST) Reset Switch Connector

The RESET switch on panel provides users with HARDWARE RESET function which is almost the same as power-on/off. The system will do a cold start after the RESET switch is pushed and released by user. The RESET switch is a 2 PIN connector and should be installed to **RST** on mainboard.

OO OO OO OO
RST

Open - Normal
Short - Reset

J5 (TB-LED) Turbo LED Connector

The TURBO LED on panel can indicate the current speed status of system. The TURBO LED connector should be installed to **TD** in correct direction.

```
          +
OO  OO  OO  OO
        TB-LED
```

+ - Vcc
Turbo Out

J4 (SPK) Speaker Connector

There is always a speaker in AT system for sound purpose. The 4 - Pins connector **SPK** is used to connect speaker. The speaker can work well in both direction of connector when it is installed to the connector **SPK** on mainboard.

```
         1    4
OOOOO  OOOO
          SPK
```

1 - Data
2 - NC
3 - Ground
4 - +5V

J4 (KEY LOCK) Keylock & Power LED Connector

There is a system power LED light on the panel of case. The power LED will light on when system is powered-on. The connector should be installed in correct direction. to pins 1 and 2.

```
1      5
OOOOO  OOOO
KeyLock
```

1 - LED output
2 - Ground
3 - Ground
4 - Keylock
5 - Ground

Component Location

```
_____
|                                        J1    J2      |
|                                                      |
|                              COM1  COM2              |
```

```
|                                        PRN1         J3        | |
PCI1 PCI2 PCI3 PCI4                        |
|                                                              |
|   USB12                    IR1                               |
|                            JP2           FDC1                |
|                                                              |
|                                                              |
|                                                              |
|                                                              |
|                            JP3                               |
|                                                              |
|                                                              |
|                                                              |
|J5 J6                                                         |
|                                                              |
|                                                              |
|                                               JP5            |
|                                               JP6            |
|                                                              |
|                                                              |
|                            JP8   JP7                         |
|IDE1 IDE2     STANDBY LED                                     |

 _____
```
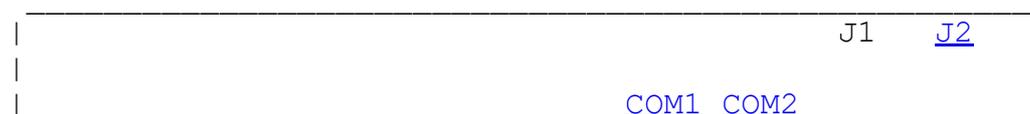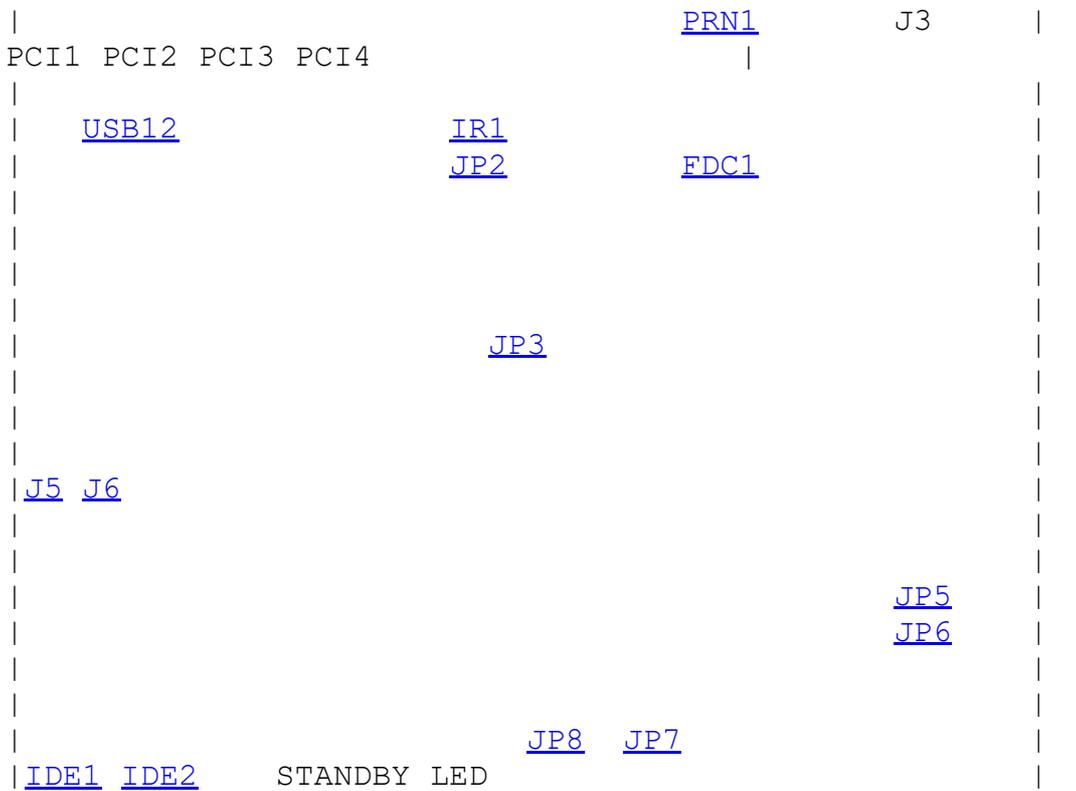
72-pin SIMMs and 168-pin DIMMs DRAM Table :

Total DRAM Size	BANK A		BANK B		DIMM	
	SIM 1	SIM 2	SIM 3	SIM 4	M1	M 2
8 MB	4 MB	4 MB	-	-	-	-
16 MB	4 MB	4 MB	4 MB	4 MB	-	-
24 MB	4 MB	4 MB	8 MB	8 MB	-	-
40 MB	4 MB	4 MB	16 MB	16 MB	-	-
72 MB	4 MB	4 MB	32 MB	32 MB	-	-
16 MB	8 MB	8 MB	-	-	-	-
24 MB	8 MB	8 MB	4 MB	4 MB	-	-
32 MB	8 MB	8 MB	8 MB	8 MB	-	-
48 MB	8 MB	8 MB	16 MB	16 MB	-	-
80 MB	8 MB	8 MB	32 MB	32 MB	-	-
32 MB	16 MB	16 MB	-	-	-	-
40 MB	16 MB	16 MB	4 MB	4 MB	-	-
48 MB	16 MB	16 MB	8 MB	8 MB	-	-
64 MB	16 MB	16 MB	16 MB	16 MB	-	-
96 MB	16 MB	16 MB	32 MB	32 MB	-	-
64 MB	32 MB	32 MB	-	-	-	-
72 MB	32 MB	32 MB	4 MB	4 MB	-	-
80 MB	32 MB	32 MB	8 MB	8 MB	-	-
96 MB	32 MB	32 MB	16 MB	16 MB	-	-
128 MB	32 MB	32 MB	32 MB	32 MB	-	-

16 MB	-	-	-	-	16 MB	-
32 MB	-	-	-	-	16 MB	16 MB
48 MB	-	-	-	-	16 MB	32 MB
32 MB	-	-	-	-	32 MB	-
64 MB	-	-	-	-	32 MB	32 MB
24 MB	4 MB	4 MB	-	-	16 MB	-
32 MB	8 MB	8 MB	-	-	16 MB	-
48 MB	16 MB	16 MB	-	-	16 MB	-
80 MB	32 MB	32 MB	-	-	16 MB	-
40 MB	4 MB	4 MB	-	-	32 MB	-
48 MB	8 MB	8 MB	-	-	32 MB	-
64 MB	16 MB	16 MB	-	-	32 MB	-
96 MB	32 MB	32 MB	-	-	32 MB	-
64 MB	-	-	-	-	64 MB	-
128 MB	-	-	-	-	64 MB	64 MB
128 MB	-	-	-	-	128 MB	-
256MB	-	-	-	-	128 MB	128 MB

Note :

1. The 168-pin DIMMs DRAM are +5V(Voltage), Please refer to 5V DIMM.
2. "-"=Empty.
3. If using 3.3 v SDRAM DIMMS do not use SIMMS.

Links to Other Sources of Information

GCT **Global Circuit Technology (Supertek)**

SiS website

Hsing Tech Chipsets
Hsing Tech Motherboards that use similar AMI/Award BIOS numbers.

Bus Master Drivers

BIOS Download

Unicore
Unicore has BIOS upgrades that support this board.

AMI BIOS Numbers

Driverzone.com

DriverGuide.com

Motherboard HomeWorld – motherboards.org

Miscellaneous

If you are trying to use a hard drive larger than 8 Gig with this board get a driver from your hard drive manufacture or purchase a BIOS upgrade from Unicore. I am using Max Blast Plus with my 16 Gig Maxtor

HD with this board. A Unicore BIOS will cost about $30. A better option might be to replace your motherboard for about $50 - $100.

The part number for the AMI BIOS on my GTC-8STB is:

51-0825-00**1437**-0010111-071595-SIS5577-001_10_SIS5577-H

1437 indicates the board was made by HSING TECH ENTERPRISE CO., LTD. or PC CHIPS

Super TX3

The TX3 chipset is a relabeled SiS 5571 chipset. You can use SiS Busmastering IDE drivers.

The following boards are all made by Hsing using the SiS 5571 or TX3 chipset.

> PC Chips Model: M557 **51-0224-001437-00111111-071595-571-007_66_571-H**
> GCT Model: ST-8STB   **51-0820-001437-00101111-071595-TXpro-001_10_TXpro-H**
> Amptron Model: PM9100
> RISE Model: Mustang-R534E
> GIGABYTE Model: GA-586S, PCI-ISA BUS
> AOPEN Model: AP57
> DFI Model: STC/STE
> PALIT Model: M111
> GLOBAL Model: GCT-8ST
> MSI Model: MS-5144, SiS PCI-Pentium Sl12 M/B and MS-5146, SiS PCI-Pentium Sl13 M/B
> ADVANTECH Model: PCA-5862 PCM-6153 POS-560

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