

MP039 User's Manual
OPTi Pentium 75/90/100 PCI/VLB Motherboard

WARNING

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To ensure the reliability of the Computer DO NOT reconfigure the board while the Power is ON. If you wish to reconfigure the board, make sure that the power to the system is OFF before changing any hardware setting such as Jumper setting or DIP switch.

CHECKLIST

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Your 586 VIP Cache package contain the following:

- * 586 VIP Cache Mother board.
- * User's manual.

ABOUT THIS MANUAL

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This manual is designed to provide the basic information necessary for the end user to understand and properly use of the 586 VIP Cache Motherboard. The mother board ensure superlative performance and complete compatibility with software written for IBM PC/AT 586 type of processor.

TRADEMARKS

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MOTHER BOARD FEATURES

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- * Opti chipset 82C546, 82C547 82C822 and 82C206
- * Fully support the Pentium Microprocessor
- * 1X clock source, supporting system running up to 90/100 MHz
- * Write Back, direct-mapped cache with size selection: 256K, 512K, 1M
- * DRAM configuration up to 128M
- * Programmable cache write policy: Write Back or Write Through

- * Fully programmable cache and DRAM read/write cycles
- * High performance 32 bit Local Bus support
- * Hidden refresh with CAS before RAS refresh supported
- * Asynchronous CPU VL Bus interface

- * Option for cacheable, write protected, system and video BIOS
- * Shadow RAM option

- * Provides central arbiter to arbitrate the bus request between host CPU, PCI master, DMA/ISA master and refresh

- * Five 16 bit slots, Two VESA slots, Four PCI slots
- * Dimension 22 x 33 CM with 4 layers

JUMPERS AND CONNECTORS REFERENCE

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Before installing the mother board, make sure the jumpers setting are set for your configuration. The Function of each jumpers are as follows:

CACHE OPTION	JP28,JP29
MICELLANEOUS JUMPERS	JP27,JP39
CPU CLOCK SOURCE SC468	JP20
CPU CLOCK SOURCE MXS315.....	JP40,JP41,JP42
CHARGE/DISCHARGE CMOS	J1
SPEAKER CONNECTOR	J17
KEYLOCK & POWER LED	J18
RESET CONNECTOR	S1
EXTERNAL BATTERY CONNECTOR	J1
POWER SUPPLY CONNECTOR	J3,J4
KEYBOARD CONNECTOR	J2

JUMPER SWITCHES

These switches consist of two or three pins set in a plastic base. Two of the pins are covered by a cap which connect or short each other. It is possible to change the switch setting by moving the cap between the first or last two pins.

JUMPERS OPEN & SHORT

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If you wish to change any of the jumper setting, make sure the board is disconnected from the power source. This is to protect the mother board from getting damage.

J1 CHARGE / DISCHARGE CMOS

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CMOS Charge/Discharge CMOS is used to Charge and Discharge CMOS. If you discharge the CMOS all datas in the CMOS will be erase. To discharge CMOS, place a jumper cap in pin 3 & 4 then turn on the Power supply for 1 to 2 seconds then turn off the power supply. In this procedure the CMOS is discharge, all the datas in the CMOS is erase. Place the jumper cap in pin 2 & 3 for CMOS charge, then run setup. J1 is also used as External Battery connector.

J1 2-3 CHARGE CMOS (INRTERNAL BATTERY USED)
J1 3-4 DISCHARGE CMOS

JP28,JP29 CACHE OPTION

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SIZE	JP28	JP29
256 KB	OPEN	OPEN
512 KB	OPEN	CLOSE
1 MB	CLOSE	CLOSE

SIZE	SRAM	TAG RAM U38
256 KB	32K x 8	8K x 8
512 KB	64K x 8	32K x 8
1 MB	128K x 8	32K x 8

JP27 OFF BOARD ACCESS SELECT

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1-2 128M DRAM ON BOARD
2-3 MEMORY MAPPED I/O AT THE TOP OF MEMORY
NOTE: JP27 IS FOR FACTORY USED ONLY

JP39 FLASH EPROM PROGRAM VOLTAGE SELECT (VPP)

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2-3 +12V (VPP)
1-2 + 5V (VPP)
NOTE: JP39 IS FOR FACTORY USED ONLY

JP20 CPU CLOCK SOURCE SC468 Clock Generator

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OPEN 90 MHz
CLOSE 100 MHz

JP40,JP41,JP42 CPU CLOCK SOURCE MX8315 Clock Generator

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JP40 JP41 JP42

OPEN CLOSE OPEN 90 MHz
CLOSE OPEN CLOSE 100 MHz

NOTE: The Clock Generator used in the mainboard

CONNECTORS

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The mother board have Six connectors. Four of them resemble jumper switch without caps. The Fifth is a large double connector for the power supply and the last is for the keyboard connector.

- J1 External Battery connector Is used for the external battery. This is use when internal battery is not conected.

- S1 Reset switch connector will be connected to the reset switch of yourcomputer case. Resetting the system, it will restart the computer from self-test without turning off the power supply. This connection is always in OFF position.

- J18 Keylock and Power LED connector will be connected to your computer case. Keylock is used to lock the keyboard.Power LED will light up when you turn on your power supply.

- J17 Speaker connector will be connected to the speaker of your computer case.

- J3 - J4 Power Supply connector is connected from the output of the power supply. Most of the power supply has two connectors which will be connected to the main board. Each connector has six wires, two of the wires are black. To connect to the main board, make sure that the black wires is in the middle. Wrong connection will cause damage of the main board.

- J2 Keyboard connector, This is used for inputting signal from the keyboard.

Memory Configuration

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The system board Memory can be expanded from 2MB to 128MB. Memory can be installed by using 256K, 512K, 1M, 2M, 4M and 8M SIMM RAM Module 72 pins.

MEMORY SIZE	BANK 0		BANK 1	
	SIMM 0	SIMM 1	SIMM 2	SIMM 3
2M	256Kx36	256Kx36	NONE	NONE
4M	512Kx36 256Kx36	512Kx36 256Kx36	NONE 256Kx36	NONE 256Kx36

8M	1Mx36 512Kx36	1Mx36 512Kx36	NONE 512Kx36	NONE 512Kx36
16M	2Mx36 1Mx36	2Mx36 1Mx36	NONE 1Mx36	NONE 1Mx36
32M	4Mx36 2Mx36	4Mx36 2Mx36	NONE 2Mx36	NONE 2Mx36
64M	8Mx36 4Mx36	8Mx36 4Mx36	NONE 4Mx36	NONE 4Mx36
128M	8Mx36	8Mx36	8Mx36	8Mx36

Installing Memory Modules

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There are four sockets of 72 pins on the system board that can accommodate up to a maximum of 128 megabytes of memory. There are 2 bank of SIMM modules socket for use with 256K, 512K, 1M, 2M, 4M and 8M size RAM Modules with the access time of 70ns or faster. Extreme use of caution should be exercise when installing or removing the SIMM memory module in order to avoid damaging the SIMM socket.

Steps for installing SIMM RAM Modules in the system board.

- | | | |
|--|---|---|
| (1).
Insert the SIMM
at an angle into
the socket's edge
connector slot | (2).
Press it forward
into the retaining
clips | (3).
The installed
SIMM should be
at 90 degree to
the board |
|--|---|---|

- 1 Carefully hold the SIMM. Insert the SIMM module's "GOLD EDGE" connector into the socket at a 70 degree angle and guide the component side of the module. (Note that the modules can only be fit into the socket one way.)
- 2 Gently press the SIMM module into the socket in downward position, then snap it into place in the vertical position. The module should clip into the locking tabs at each end of the socket. The SIMM is probably not inserted fully into the socket if the pegs do not fit into the hole.
- 3 To remove the module, gently push the edge of the sockets. Disengage one side of the modules first, then the other side, to avoid breaking the socket.

AWARD BIOS SETUP

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Award BIOS support plug and play function and has a built-in setup program that allows the users to modify the basic system configuration. This type of

information is stored in CMOS so that it retains the setup information when the power is turned off.

1. Turn on or reboot the system. when the below message appears at the bottom of the screen during the POST (Power On Self Test) press DEL key to enter setup.
2. Press the DEL key to enter the Award BIOS program and the main menu will appear on the screen. The main menu allows you to select from ten setup functions and two exit choices.
3. For the safe, please select "LOAD SETUP DEFAULTS" for BIOS setup.

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