

MA013 USER'S MANUAL  
OPTi 386DX 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 386DX Cache package contain the following:

- \* 386DX 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 80286 type, 80386 type and 80486 type of processor.

TRADEMARKS

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Mother Board Features

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- \* 495SLC 160 Pin Chipset
- \* Support 80386-33/40 MHz PGA or PQFP CPU (MODEL2 only PQFP)
- \* Optional 64KB ,128KB or 256KB external cache (MODEL2 only

128KB)

Memory expandable to 32MB on board

- + Co-processor socket option
- \* Dimension :22 x 22 CM with 4 layer (MODEL2 22 x 17 CM)
- \* Two 8bit slot , Six 16bit slots (MODEL:! One ilbit , Five 16bit)
- \* Clock generator for system clock
- \* Battery back-up for CMOS
- \* Hidden refresh support to enhance system performance
- \* Shadow RAM for System / Video BIOS

### 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:

MODEL1	MODEL2	Jumpers and Connectors
JP1	JP2	Reset / Charge CMOS
JP2	JP1	Mono / Color Monitor Selector
JP4-JP7	NONE	Cache Option
JP8,JP9	JP7,JP8	Clock Generator Frequency Selector
JP10	NONE	Enable / Disable 80386 PQFP CPU
JP11	JP6	Speaker connector
JP12	JP4	Turbo Switch connector
JP13	JP3	Turbo LED connector
J1	J1	External Battery Connector
J2	J2	Keyboard Connector
J3,J4	J9,J10	Power Supply Connector
J19	J16	Keylock/Power LED Connector
S1	S1	Reset Connector

### JUMPER SWITCHES

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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.

MODEL1 JP1 (MODEL2 JP2) Reset / Charge CMOS

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CMOS Reset/Charge is used to reset and charge CMOS. If you reset the CMOS all data in the CMOS will be erased. To reset CMOS, place a jumper cap in pin 1 & 2 then turn on the power supply for 1 to 2 seconds then turn off the power supply. In this procedure the CMOS is reset, all the data in the CMOS is erased. Place the jumper cap in pin 2 & 3 for CMOS charge, then run setup.

JP1 (JP2) 1-2 Reset CMOS  
 JP1 (JP2) 2-3 Charge CMOS

MODEL1 JP2 (MODEL2 JP1) Mono / Color Monitor selector  
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Mono / Color Monitor selector is used to select the type of video display you are using. The choice is between CGA and MONO. CGA is only for CGA display. MONO is for all other displays including EGA, VGA and MONO. The default is MONO.

JP2 (JP1) OPEN MONO  
 JP2 (JP1) CLOSE COLOR

JP4, JP5, JP6, JP7 Cache Option (MODEL1 only)  
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SIZE	JP4	JP5	JP6	JP7	BANK 0 (U43- U46)	BANK 1 (U34-U37)	TAG RAM U33
64 K	2-3	2-3	OPEN	OPEN	8K * 8	8K * 8	8K * 8
128 K	1-2	1-2	CLOSE	OPEN	32K * 8		8K * 8
256 K	2-3	2-3	CLOSE	CLOSE	32K * 8	32K * 8	32K * 8

MODEL1 JP8, JP9 (MODEL2 JP7, JP8) Clock Generator Frequency Selector  
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Clock Generator Frequency selector is used to select different frequencies of the clock generator. The frequency is dependent of the MHz of the CPU you are using.

FREQUENCY	JP8 (JP7)	JP9 (JP8)
50 MHz	CLOSE	OPEN
66 MHz	OPEN	CLOSE
80 MHz	OPEN	OPEN

JP10 Enable/Disable PQFP CPU (MODEL1 only)  
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If you mount a 80386 PQFP CPU in your main board, this function is used to disable the 80386 PQFP CPU without pulling out from the main board. If you are not using the 80386 PQFP CPU leave this jumper JP10 OPEN.

JP10 OPEN ENABLE 80386 PQFP CPU  
 JP10 CLOSE DISABLE 80386 PQFP CPU

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

External Battery connector	Turbo switch	Reset switch	Turbo LED	Keylock /Power LED	Speaker connector
J1	JP12	S1	JP13	J19	JP11
(J1)	(JP4)	(S1)	(JP3)	(J16)	(JP6)

Power Supply connector	Keyboard connector
J3-J4	J2
(J9-J10)	(J2)

J1 External Battery connector is used for the external battery.  
 (J1) This is used when internal battery is not connected.

JP12 Turbo switch connector will be connected to the turbo switch  
 (JP4) of YOU' Computer case. This is used to toggle the system speed between fast and slow processing speed.

S1 Reset switch connector will be connected to tile reset switch  
 (S1) of your computer case. Resetting the system, it will restart the computer from self-test without turning off the power supply. This connection is always in 0F1; position.

JP13 Turbo LED connector will be connected to the turbo LED of  
 (JP3) your computer case. The LED will light up when the system is running in high processing speed. (Note the positive and negative of the LED )

J19 Keylock and Power LED connector will be connected to your  
 (J16) computer case. Keylock is used to lock the keyboard. Power LED will light up when you turn on your power supply.

JP11 Speaker connector will be connected to the speaker of your  
 (JP6) computer case.

J3-J4 Power Supply connector is connected from the output of the  
 (J9,J10) 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 (J2) the keyboard.

### Memory Configuration

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The system board Memory can be expanded from 1MB to 32MB. Memory can be installed by using 256K, 1M and 4M SIMM RAM Module.

MEMORY SIZE	BANK 0	BANK 1
1M	256K	
2M	256K	256K
4M	1M	
8M	1M	1M
16M	4M	
32M	4M	4M

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