MP060 USER'S MANUAL
ALi 486DX PCI/ISA MOTHERBOARD

Foreword

This manual is designed to provide the basic necessarv information for the end user
to understand and properly use the MP060 mainboard. The mainboard ensures superlative performance and complete compatibility with industry standards, which incorporating many technical enhancements.

Trademarks

Checklist

Your MP060 Cache package contains the following:

* MP060 Cache mainboard
* User's Manual.
* HDD Cable
* FDD Cable
* Serial & Printer Cable

Precautions

Make sure you ground yourself before handling the mainboard or other system components. Electrostatic discharge will damage mainboard.Note that you must take special precaution when handling the mainboard in dry or air-conditioned environments.

The precaution below is to protect the mainboard from electrostatic discharge.
* Do not remove the anti-static packaging until you are ready to install the mainboard
 and other system components.
* Ground vourselfbefore removing any system component from its protective anti-
 static packaging. To ground yourself , grasp the expansion slot covers or other
 unpainted portion computer chassis.
* Frequently ground yourself while working , or use a grounding strap.
* Handle the mainboard by the edges and avoid touching its components.

Mainboard Features

* ALI chipset M1487 and M1489
* Support Intel, AMD, Cyrix CPU
+ Support EDO DRAM , Symmetrical and Asymmetrical DRAM
* Memory expandable upto 128MB
* External Cache option 128KB , 256KB and 512KB
* Onboard'FDC , Serial port and Normal / ECP / EPP Parallel port
* Support Four 16bit slot and Four PCI slot (3 Master and 1 Slave)
+ Support deep green SMM and SMI
+ Chipset built in keyboard controller
* Dimension : 22 x 22 cm with 4 layer PCB

Jumper and Connectors Reference

Before installing the mainboard, make sure that the jumper setting are properly set

for your configuration. The function of differentjumpers are respectively as follows:

CPU Type Configuration..... JP19, JP20, JP22, JP23, JP24, JP25, JP26, JP27,JP28,JP29
CPU Clock Configuration JP5, JP6
CPU Voltage Configuration..... JP13, JP14, JP16
Cache Conftguration JP15, JP17
CMOS Charge/ Discharge J1
UO Chip Configuration JP31
Flash ROM Voltage Configuration JP8

Matnboard Connectors
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Turbo Switch Connector J3
Turbo LED Connector J4
Reset Switch Connector..... J2
Speaker Connector J6
Keylock and Power LED Connector..... J5
Keyboard Connector KB1
Power Supply Connector P1/P2
External Battery Connector J1
SMI Switch Connector JP21

Jumper Caps reference :

Red	Jumper for	Voltage Selector
White	Jumper for	CPU Type
Yellow	Jumper for	Clock Selector
Blue	Jumper for	Cache Option
Black	Jumper for	Other

Before turning on your power supply, make sure that the following configuration are
set properly.

A. CPU TYPE CONFIGURATION
CPU type configuration will give you detailed information to install the jumper setting of different type of CPU. If the CPU type you are using is not listed in our
user's manual , please contact your dealer for the correct jumper setting.

B. CPU CI,OCK CONFIGURATION
CPU Clock configuration will give you detailed information to install the jumper
setting of different types of CPU Clock frequency.

C. CPU VOLTAGE CONFIGURATION
CPU Voltage Configuration will give you detailed information to install the jumper
setting of different types of CPU Voltage.

CPU JUMPER SETTING
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Graphic reference: ** with jumer cap (close)
OO without jumper cap (open)

INTEL CPU
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DX2/DX4:

JP22	JP19	JP24	JP20	JP26	JP27	JP28	JP29
OOO	O**	*O	OO	O*O	*O	OO	O**
OOO	**O	*O	**	O*O	*O	OO	
	JP23		JP25				

WRITE BACK CPU:

JP22	JP19	JP24	JP20	JP26	JP27	JP28	JP29
OO*	O**	*O	OO	O*O	*O	O*	O**
OO*	O**	*O	**	O*O	*O	O*	
	JP23		JP25				

CPU CLOKC: JP6 CLOSE
JP5 CLOSE

AMD CPU
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DX2-80:

JP22	JP19	JP24	JP20	JP26	JP27	JP28	JP29
O*O	O**	*O	**	O*O	*O	OO	O**
O*O	**O	*O	**	O*O	*O	OO	
	JP23		JP25				

NV8T DX4-100/120:

JP22	JP19	JP24	JP20	JP26	JP27	JP28	JP29
OO*	O**	*O	OO	O*O	*O	OO	O**
OO*	**O	*O	**	O*O	*O	OO	
	JP23		JP25				

SV8B DX4-100/120:

JP22	JP19	JP24	JP20	JP26	JP27	JP28	JP29
OO*	O**	*O	OO	O*O	*O	O*	O**
OO*	O**	*O	**	O*O	*O	O*	
	JP23		JP25				

5X86-P75:

JP22	JP19	JP24	JP20	JP26	JP27	JP28	JP29
O**	O**	*O	OO	O*O	*O	O*	O**
O**	O**	*O	**	O*O	*O	O*	
	JP23		JP25				

AMD CPU CLOCK:		JP5	JP6
	DX4-100	CLOSE	CLOSE
	5X86-P75	CLOSE	CLOSE
	DX2-80/DX4-120	OPEN	CLOSE

CYRIX CPU
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DX2-66/DX4-100:

JP22	JP19	JP24	JP20	JP26	JP27	JP28	JP29
*OO	O**	O*	OO	OO*	O*	*O	O**
*OO	**O	O*	**	OO*	O*	*O	
	JP23		JP25				

CX586-100:

JP22	JP19	JP24	JP20	JP26	JP27	JP28	JP29
OO*	O**	*O	OO	O*O	*O	O*	O**
OO*	**O	*O	**	O*O	*O	O*	
	JP23		JP25				

CYRIX CPU CLOCK:		JP5	JP6
	DX2-66/DX4-100	CLOSE	CLOSE
	CX586-100	CLOSE	CLOSE
	DX2-80	OPEN	CLOSE

CPU VOLTAGE

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	JP13	JP14	JP16
	OOO	O**	O**
5V	OOO		
3.3V	OO*	**O	**O
	OO*		
3.45V	O*O	**O	**O
	O*O		
4.0 V	*OO	**O	**O
	*OO		

SRAM Configuration
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Cache Configuration is used to configure the external cache of the mainboard.External cache can be configured by using 32K*8 , 64K*8 and 128K*8 SRAM Chip.The size of the external cache is configured by the SRAM chip being used and the jumper setting of the Cache Configuration.

	JP15	JP17	SRAM	TAG RAM
128K CACHE	OPEN	2-3	32K*8	8K*8
256K CACHE(1)	1-2	1-2	64K*8	16K*8
256K CACHE(2)	2-3	1-2	64K*8	16K*8
512K CACHE	1-2,3-4	1-2	128K*8	32K*8

Memory Configuration
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Mainboard memory composes four 72 pin SIMM sockets with only four banks and can be expandable upto 128MB. Memory can be installed by using EDO DRAM or Symmetrical and Asymmetrical DRAM SIMM RAM module.

MEMORY SIZE	SM1	SM2	SM3	SM4
4M	256K* 36 1M*36	256K* 36	256K* 36	256K* 36
8M	1M*36 2M*36	1M*36		
12M	2M*36	1M*36		
16M	2M*36 4M*36	2M* 36		
20M	4M* 36	1M*36		
32M	4M* 36 8M*36	4M*36		
36M	8M*36	1M*36		
48M	8M*36	4M* 36		
64M	16M* 36			

NOTE: SMI and SM3 or SM2 and SM4 can not use DOUBLE SIDED SIMM module at the same time , otherwise only one double sided SIMM module can be detected.

NOTE: The above memory configuration can also be configured by using SIM3 and SIM4 , as the memory configuration is an auto detect design.

Mainboard Connectors

J6 Speaker connector will be connected to the speaker ofyour computer case.

J2 Reset Switch connector will be connected in your computer case front panel. Resetting the system , it will restart the computer from self-test without turning off the power supply. This connection is always at "off" position.

J5 Keylock and Power LED connector will be connected in your computer case front panel. Keylock is used to lock the keyboard. Power LED will light up when you turn on your power supply.

J3 Turbo Switch Connector will be connected in your computer Case front pannel.

J4 Turbo LED Connector will be connected in your computer Case front pannel.

JP21 External SMI switch will be connected in your computer case front panel. This is used to activate the SMI function without waiting the setup time of the power managerment setup.
Note: some case does not include this switch.

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

KB1 Keyboard connector,this is used for inputting signal from the keyboard.

P1/P2 Power Supply connector is connected from the output of the powe supply. Most of the power supply has two connectors which will be connected tothe mainboard. Each connector has six wires ,two of the wires are black. To connect to the mainboard, make sure that the black wire is in the middle. Wrong connection will cause damage to the mainboard.

CMOS Charge / Discharge (Black jumper Cap)

CMOS Charge / Discharge is used to discharge and charge CMOS. If you discharge the CMOS all the data will be erased.

J1	
2-3	Charge CMOS
1-2	Reset(discharge) CMOS
1-4	External Battery Connector

Flash ROM Voltage Selector Red jumper Cap

JP8	EPROM	
1-2	Flash ROM 5 Volts	(SST Brand)
2-3	Flash ROM 12 Volts	(Intel, MX Brand)

Note: Wrong voltage setup will damage BIOS. Please call Edom for detail.

AWARD BIOS SETUP

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.