

MP076 USER'S MANUAL
INTEL TRITON VX MOTHERBOARD

Foreword

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This manual is designed to provide the basic necessary information for the end user to understand and properly use the MP076 mainboard. The mainboard ensures superlative performance and complete compatibility with industry standards, which incorporating many technical enhancements.

Trademarks

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Checklist

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Your MP076 package contains the following:

- + MP076 mainboard
- * User's manual
- * HDD/FDD Cable
- * Com1 & Com2 Cable
- + Printer Cable

Precautions

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Make sure you ground yourself before handling the mainboard or other system components. Electrostatic discharge will damage the 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 yourself before 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

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- * Intel 430VX PCI chipset: 82437(TVX)/ 82438(TDX)/ 82371 (PIIX3)
- * Supports Intel Pentium, Cyrix / IBM 6X86, AMD K5 / K6 microprocessor
- * Four high performance 32 bits PCI local bus master
- * Four 16 bits ISA system bus VO slots
- * 256K/ 512K synchronous cache onboard
- * Main memory (DRAM) from 4MB to 128MB, either Page mode / EDO mode
- + Supports SDRAM (Synchronous DRAM) , Two DIMM sockets
- * Supports two USB (Universal Serial Bus)ports
- * Enhanced IDE onboard
- * Supports PnP(Plug and Play) function
- * Enhanced fast I/O(Serial port, Parallel port (ECP/EPP/SPP), FDC) onboard
- * IR port Option

Jumpers and Connectors Reference

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Before installing the mainboard, make sure that the jumper settings are properly set for your configuration. The functions of the different

jumpers are respectively as follows:

CPU Clock Selector	JP7, JP8, JP9
CPU InternalClock & Voltage Selector	SWI
CPU Single & Dual Voltage Selector	JP15, JP16
Cache Size Selector	JP11
Flash ROM Voltage Selector	JP12
AT Bus Clock Speed Selector	JP6
CMOS Charge /Discharge	JP10
IR and COMM2 Selector	JP2 , JP3

Mainboard Connectors

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Hard disk Connector	IDE1 & IDE2
Printer Connector	PRN1
Floppy Connector	FDC 1
Serial Connector	COM1 & COM2
Universal Serial Bus Connector	USB
IR port Connector	IR1
SMI Connector	J6
Hard disk LED Connector	J5
Keylock and Power LED Connector	J3
Speaker Connector	J4
Reset Connector	J7
Turbo LED Connector	J9
Turbo Switch Connector	J8
Keyboard Connector	KBI
PS/2 Mouse Connector	MSI
Power Supply Connector	P1

Jumper Caps references

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Red cap for voltage selector
Yellow cap for Clock Selector
Blue cap for Cache option
DIP Switch for CPU Voltage and Internal Clock Selector
Black cap for Others

CPU JUMPER SETTING

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Before installing the CPU, make sure that the following jumpers are set properly.

CPU Clock Selector (Yellow Cap)	JP7, JP8, JP9
	50Mhz, 60Mhz, 66Mhz, 75Mhz
CPU Internal Clock Selector (SW1-1&2)	1.5x(3.5x), 2x, 2.5x, 3x
CPU Voltage Selector (SW1-4-8)	2.5V, 2.8V, 2.9V, 3.2V, 3.3V, 3.5V
CPU Type Voltage Selector (Red Cap)	JP15, JP16 Single or Dual Voltage CPU

SWI DIP SWITCH

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2	1	
OFF	OFF	x1.5(x3.5)
ON	OFF	x2
ON	ON	x2.5
OFF	ON	x3

8	7	6	5	4	3	
OFF	OFF	OFF	OFF	OFF	ON	3.5 VOLTS
OFF	OFF	OFF	OFF	ON	OFF	3.3 VOLTS
OFF	OFF	OFF	ON	OFF	OFF	3.2 VOLTS
OFF	OFF	ON	OFF	OFF	OFF	2.9 VOLTS

OFF ON OFF OFF OFF OFF 2.8 VOLTS
 ON OFF OFF OFF OFF OFF 2.5 VOLTS

Please refer to the type of CPU for correct jumper setting. If your CPU type is not listed in the CPU type jumper setting ,contact your dealer for further instruction.

NOTE: CPU has two different types of voltage (A) Single Voltage (B) Dual Voltage. Wrong jumper setting will damage the CPU.

CPU VOLTAGE SELECTOR
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JP15 and JP16 is used to select Single or Dual Voltage CPU.
 SW1 is used to select different voltage for CPU VO and CORE.

Single Voltage CPU

JP15 (Red Cap) ALL CLOSE
 JP16 (Red Cap) ALL OPEN
 SW1 - 3 & 4 3.3V or 3.5V. It depends on the voltage requirement of your CPU.

Dual Voltage CPU

JP15 (Red Cap) ALL OPEN
 JP16 (Red Cap) ALL CLOSE
 SW1 - from 5 to 8 2.5V ,2.8V , 2.9V , 3.2V. It depends on the voltage requirement of your CPU.

NOTE: Please refer to CPU JUMPER LOCATION LAYOUT for your reference.

INTEL CPU JUMPER SETTING
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(Single Voltage)				<----- SWITCH ----->									
	JP7	JP8	JP9	1	2	3	4	5	6	7	8	JP15	JP16
75 MHz	1-2	1-2	1-2	off	off	off	on	off	off	off	off	all close	all open
90 MHz	2-3	1-2	1-2	off	off	off	on	off	off	off	off	all close	all open
100 MHz	1-2	2-3	1-2	off	off	off	on	off	off	off	off	all close	all open
120 MHz	2-3	1-2	1-2	off	on	off	on	off	off	off	off	all close	all open
133 MHz	1-2	2-3	1-2	off	on	off	on	off	off	off	off	all close	all open
150 MHz	1-2	1-2	1-2	on	off	on	off	off	off	off	off	all close	all open
166 MHz	1-2	2-3	1-2	on	on	on	off	off	off	off	off	all close	all open
180 MHz	2-3	1-2	1-2	on	off	on	off	off	off	off	off	all close	all open
200 MHz	1-2	2-3	1-2	on	off	on	off	off	off	off	off	all close	all open

(Dual Voltage)				<----- SWITCH ----->									
	JP7	JP8	JP9	1	2	3	4	5	6	7	8	JP15	JP16
166 MHz	1-2	2-3	1-2	on	on	off	off	off	off	on	off	all open	all close
200 MHz	1-2	2-3	1-2	on	off	off	off	off	off	on	off	all open	all close
233 MHz	1-2	2-3	1-2	off	off	off	off	off	off	on	off	all open	all close

AMD CPU JUMPER SETTING
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(K5 Single Voltage)				<----- SWITCH ----->									
	JP7	JP8	JP9	1	2	3	4	5	6	7	8	JP15	JP16
PR-75	1-2	1-2	1-2	off	off	on	off	off	off	off	off	all close	all open
PR-90	2-3	1-2	1-2	off	off	on	off	off	off	off	off	all close	all open
PR-100	1-2	2-3	1-2	off	off	on	off	off	off	off	off	all close	all open
PR-120	2-3	1-2	1-2	off	off	on	off	off	off	off	off	all close	all open
PR-133	1-2	2-3	1-2	off	off	on	off	off	off	off	off	all close	all open
PR-150	2-3	1-2	1-2	off	on	on	off	off	off	off	off	all close	all open
PR-166	1-2	2-3	1-2	off	on	on	off	off	off	off	off	all close	all open

(K6 Dual Voltage) <----- SWITCH ----->

	JP7	JP8	JP9	1	2	3	4	5	6	7	8	JP15	JP16
PR-166	1-2	2-3	1-2	on	on	off	off	off	on	off	off	all open	all close
PR-200	1-2	2-3	1-2	on	off	off	off	off	on	off	off	all open	all close
PR-233	1-2	2-3	1-2	off	off	off	off	off	on	off	off	all open	all close

CYRIX / IBM CPU

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 (Single Voltage) <----- SWITCH ----->

	JP7	JP8	JP9	1	2	3	4	5	6	7	8	JP15	JP16
PR-120	1-2	1-2	1-2	off	on	on	off	off	off	off	off	all close	all open
PR-133	1-2	1-2	2-3	off	on	on	off	off	off	off	off	all close	all open
PR-150	2-3	1-2	1-2	off	on	on	off	off	off	off	off	all close	all open
PR-166	1-2	2-3	1-2	off	on	on	off	off	off	off	off	all close	all open
PR-200	1-2	2-3	1-2	off	on	on	off	off	off	off	off	all close	all open

(Dual Voltage) <----- SWITCH ----->

	JP7	JP8	JP9	1	2	3	4	5	6	7	8	JP15	JP16
PR-150	2-3	1-2	1-2	off	on	off	off	off	off	on	off	all open	all close
PR-166	1-2	2-3	1-2	off	on	off	off	off	off	on	off	all open	all close
PR-200	1-2	2-3	1-2	off	on	off	off	off	off	on	off	all open	all close

FLASH AWARD BIOS ROM VOLTAGE SELECTOR (RED Jumper Cap)

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 JP12
 1-2 5 VOLTS FLASH ROM (SST / Winbond brand)
 2-3 12 VOLTS FLASH ROM (Intel / MX brand)

NOTE: Please don't change this jumper because manufacturer should setup jumper for BIOS voltage already.

AT-BUS CLOCK SELECTOR (YELLOW Jumper Cap)

=====
 JP6
 OPEN PCI CLOCK/3 (will be faster but might not support old version devices)
 CLOSE PCI CLOCK/4 (DEFAULT but more stable)

CMOS RESET CONNECTOR

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 JP10
 OPEN CMOS CHARGE (DEFAULT)
 CLOSE CMOS DISCHARGE OR RESET

NOTE: USING DALLAS
 To reset Dallas 12887A set JP10 to close
 To reset Dallas 12887B set JP10 to close then turn on the power supply for 1 to 2 second then turn it off.

COMM2 AND IR PORT SELECTOR (BLACK Jumper Cap)

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 JP2 JP3
 1-2 1-2 IR PORT SELECTED
 2-3 2-3 COMM2 PORT SELECTED (DEFAULT)

NOTE: If IR port is selected, make sure the BIOS "INTEGRATED PERIPHERALS " setup IR port setting is set properly or will malfunction.

CACHE SIZE SELECTOR

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 Cache size selector is used to configure onboard external cache .External cache can be configured by using 32K*32 or 64K*32 SRAM synchronous cache. MP076 does not support cache module.

256K CACHE ONBOARD BLUE Jumper Cap
 SRAM (U23 ,U27) JP11 TAG RAM (U19)
 32K*32 1-2 8K*8

NOTE: 256K cache is not available on MP076.

512K CACHE ONBOARD BLUE Jumper Cap
 SRAM (U23 , U27) JP11 TAG RAM (U19)
 64K*32 2-3 32K*8

NOTE: All MP076 should be with 512K pipeline burst cache RAM. So, don't change the blue jumper.

MEMORY CONFIGURATION

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MP076 is designed to support Memory from 4MB up to 128MB by using standard, EDO and SDRAM mode. It only supports 4 banks of memory by using 4MB, 8MB, 16MB, 32MB or 64MB Single or Double-side Memory module in SIMM socket or DIMM socket.

- NOTE: 1. Do not mix the size of Single-side and Double-side memory module in SIMM 1 & 2, also the same with SIM 3 & 4.
 2. Do not mix the DRAM types in SIM1-4 or M1 & M2. Different types of DRAM have different speeds that will make unreliable operation to the system.
 3. If SIMM socket SIM 1- 4 is used then DIMM socket M1 & M2 can not be used and vice versa , to avoid memory Bank Conflict.
 4. Do not use 72-pin SIMM module with more than 24 chips. Module with more than 24 chips exceeds the design specification of the memory subsystem and will cause unreliable operation.

BANK 0		BANK 1	
I-----I		I-----I	
SIM1	SIM2	SIM3	SIM4
Single-Side	Single-Side	None	None
None	None	Single-Side	Single-Side
Single-Side	Single-Side	Single-Side	Single-Side
Single-Side	Single-Side	Double-Side	Double-Side
Double-Side	Double-Side	None	None
None	None	Double-Side	Double-Side
Double-Side	Double-Side	Double-Side	Double-Side
Double-Side	Double-Side	Single-Side	Single-Side

M1 (DIMM slot 1)	M2 (DIMM slot 2)
Single-Side	None
None	Single-Side
Single-Side	Single-Side
Single-Side	Double-Side
Double-Side	None
None	Double-Side
Double-Side	Double-Side
Double-Side	Single-Side

NOTE: To avoid memory bank conflict, SIMM memory and DIMM memory can not be used on same BANK number at same time but can be used at different BANK. For example, you can use SIMM memory on BANK 0 of SIMM slots and DIMM memory on BANK 1 of DIMM slots.

(SIM1 + SIM2) + (NONE + NONE) = TOTAL MEMORY SIZE
 (NONE + NONE) + (SIM3 + SIM4) = TOTAL MEMORY SIZE
 (SIM1 + SIM2) + (SIM3 + SIM4) = TOTAL MEMORY SIZE (if you use this combination, you can't use DIMM slot)

M1	+	NONE	= TOTAL MEMORY SIZE
NONE	+	M2	= TOTAL MEMORY SIZE
M1	+	M2	= TOTAL MEMORY SIZE (if you use this combination, you can't use SIMM slot)

CONNECTORS

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IDE 1 & 2	HARD DISK CONNECTOR
FDC 1	FLOPPY CONNECTOR
PRN 1	PRINTER PORT CONNECTOR
COM 1 & 2	SERIAL PORT CONNECTOR
USB	UNIVERSAL SERIAL BUS CONNECTOR
IR1	IR PORT CONNECTOR
MSI	PS/2 MOUSE CONNECTOR
J6	SMI SWITCH CONNECTOR
J5	HARD DISK LED CONNECTOR
J3	KEYLOCK & POWER LED
J4	SPEAKER CONNECTOR
J7	RESET CONNECTOR
J9	TURBO LED CONNECTOR
J8	TURBO SWITCH CONNECTOR

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.

--- end of manual ---