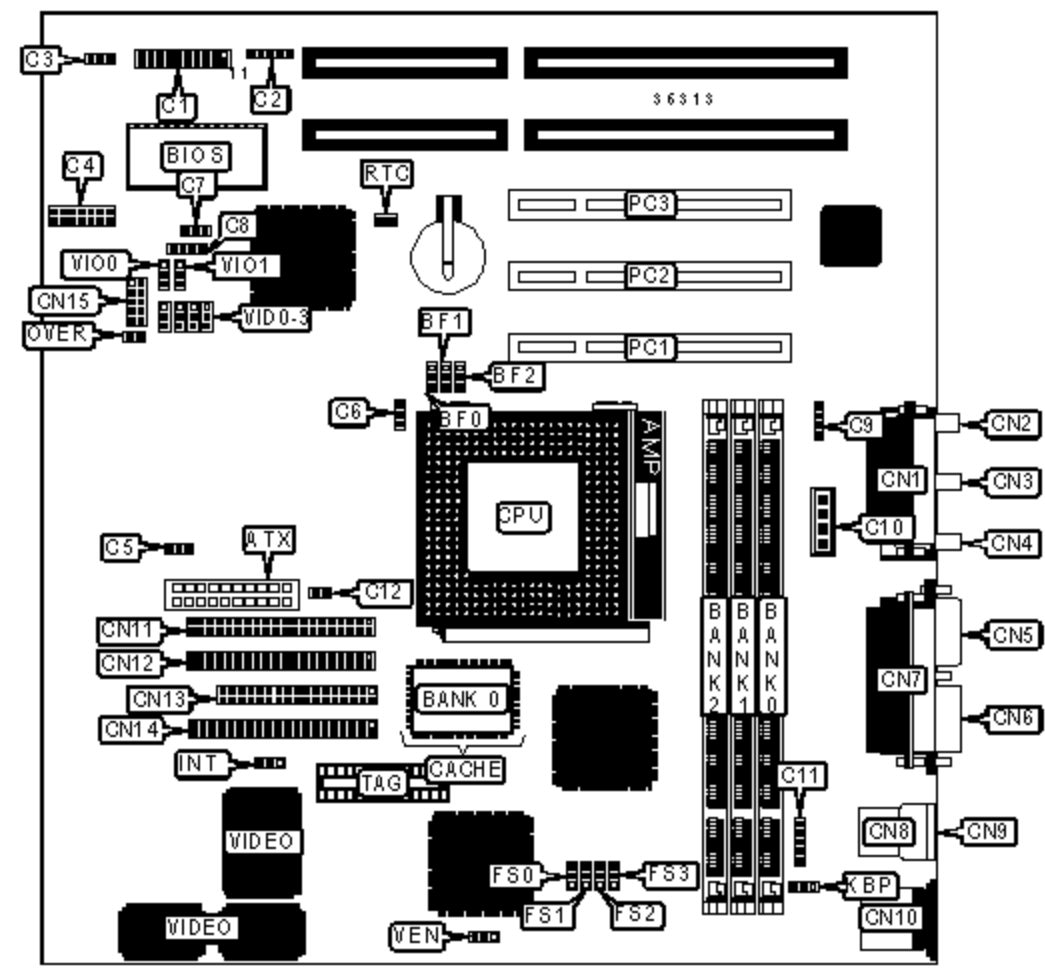


# ASUS COMPUTER INTERNATIONAL

## P5A-VM (REV. 1.02) (SOUND)

<b>Device Type</b>	Mainboard
<b>Processor</b>	CX 6X86/IBM 6X86/CX 6X86L/IBM 6X86L/CX 686MX/IBM 6X86MX/
	CX MII/IBM MII/AM K5/AM K6/AM K6-2/IDT/Pentium/Pentium MMX
<b>Processor Speed</b>	100/133/166/200/233/266/300/333/350/366/380/400/450MHz
<b>Chip Set</b>	SIS 530
<b>Video Chip Set</b>	SIS
<b>Maximum Onboard Memory</b>	768MB (SDRAM & PC100 supported)
<b>Maximum Video Memory</b>	8MB
<b>Audio Chip Set</b>	Creative
<b>Cache</b>	512/1024KB
<b>BIOS</b>	Unidentified
<b>Dimensions</b>	305mm x 244mm
<b>I/O Options</b>	32-bit PCI slots (3), floppy drive interface, game/MIDI port, green PC connector, IDE interfaces (2), parallel port, PS/2 mouse port, serial ports (2), VGA port, IR connector, USB connectors (2), ATX power connector, line in, line out, microphone in, audio in - CD-ROM, wake on LAN connector



### CONNECTIONS

Purpose	Location	Purpose	Location
ATX power connector	ATX	Thermal sensor connector	C12
Turbo LED	C1/pins 2 & 3	Game/MIDI port	CN1

Green PC connector	C1/pins 4 & 5	Microphone in	CN2
Soft off power supply	C1/pins 6 & 7	Line in	CN3
Reset switch	C1/pins 9 & 10	Line out	CN4
Power LED & keylock	C1/pins 11 - 15	VGA port	CN5
Speaker	C1/pins 17 - 20	Serial port 1	CN6
IR connector	C2	Parallel port	CN7
Chassis fan power	C3	USB connector 1	CN8
V panel connector	C4	USB connector 2	CN9
Power fan power	C5	PS/2 mouse port	CN10
CPU fan power	C6	Floppy drive interface	CN11
Wake on LAN connector	C7	IDE interface 2	CN12
Chassis intrusion connector	C8	IDE interface 1	CN13
Modem connector	C9	AMC connector	CN14
Audio in - CD-ROM	C10	Serial port 2	CN15
SMB connector	C11	32-bit PCI slots	PC1 - PC3

### USER CONFIGURABLE SETTINGS

Function		Label	Position
»	VGA IRQ enabled	INT	Pins 2 & 3 closed
	VGA IRQ disabled	INT	Pins 1 & 2 closed
»	Keyboard power on disabled	KBP	Pins 1 & 2 closed
	Keyboard power on enabled	KBP	Pins 2 & 3 closed
	Voltage increased by .2v disabled	OVER	Open
	Voltage increased by .2v enabled	OVER	Closed
»	CMOS memory normal operation	RTC	Open
	CMOS memory clear	RTC	Closed
»	On board video enabled	VEN	Pins 2 & 3 closed
	On board video disabled	VEN	Pins 1 & 2 closed

	Voltage select 3.5	VIO0	Pins 1 & 2 closed
	Voltage select 3.6	VIO0	Pins 2 & 3 closed
	Voltage select 3.8	VIO1	Pins 1 & 2 closed
	Voltage select 4.0	VIO1	Pins 2 & 3 closed

### DIMM CONFIGURATION

Size	Bank 0	Bank 1	Bank 2
8MB	(1) 1M x 64	None	None
16MB	(1) 2M x 64	None	None
16MB	(1) 1M x 64	(1) 1M x 64	None
24MB	(1) 2M x 64	(1) 1M x 64	None
24MB	(1) 1M x 64	(1) 1M x 64	(1) 1M x 64

### DIMM CONFIGURATION (CON'T)

Size	Bank 0	Bank 1	Bank 2
32MB	(1) 4M x 64	None	None
32MB	(1) 2M x 64	(1) 1M x 64	(1) 1M x 64
32MB	(1) 2M x 64	(1) 2M x 64	None
40MB	(1) 4M x 64	(1) 1M x 64	None
40MB	(1) 2M x 64	(1) 2M x 64	(1) 1M x 64
48MB	(1) 4M x 64	(1) 1M x 64	(1) 1M x 64
48MB	(1) 4M x 64	(1) 2M x 64	None
48MB	(1) 2M x 64	(1) 2M x 64	(1) 2M x 64
56MB	(1) 4M x 64	(1) 2M x 64	(1) 1M x 64
64MB	(1) 8M x 64	None	None
64MB	(1) 4M x 64	(1) 2M x 64	(1) 2M x 64
64MB	(1) 4M x 64	(1) 4M x 64	None

64MB	(1) 4M x 64	(1) 4M x 64	None
72MB	(1) 8M x 64	(1) 1M x 64	None
80MB	(1) 4M x 64	(1) 4M x 64	(1) 2M x 64
128MB	(1) 16M x 64	None	None
128MB	(1) 8M x 64	(1) 4M x 64	(1) 4M x 64
128MB	(1) 8M x 64	(1) 8M x 64	None
136MB	(1) 16M x 64	(1) 1M x 64	None
136MB	(1) 8M x 64	(1) 8M x 64	(1) 1M x 64
144MB	(1) 16M x 64	(1) 1M x 64	(1) 1M x 64
144MB	(1) 16M x 64	(1) 2M x 64	None
144MB	(1) 8M x 64	(1) 8M x 64	(1) 2M x 64
152MB	(1) 16M x 64	(1) 2M x 64	(1) 1M x 64
160MB	(1) 16M x 64	(1) 2M x 64	(1) 2M x 64
160MB	(1) 16M x 64	(1) 4M x 64	None
160MB	(1) 8M x 64	(1) 8M x 64	(1) 4M x 64
168MB	(1) 16M x 64	(1) 4M x 64	(1) 1M x 64
176MB	(1) 16M x 64	(1) 4M x 64	(1) 2M x 64
192MB	(1) 16M x 64	(1) 4M x 64	(1) 4M x 64
192MB	(1) 16M x 64	(1) 8M x 64	None
256MB	(1) 32M x 64	None	None
256MB	(1) 16M x 64	(1) 8M x 64	(1) 8M x 64
264MB	(1) 32M x 64	(1) 1M x 64	None
320MB	(1) 32M x 64	(1) 4M x 64	(1) 4M x 64
320MB	(1) 32M x 64	(1) 8M x 64	None
384MB	(1) 32M x 64	(1) 8M x 64	(1) 8M x 64
384MB	(1) 32M x 64	(1) 16M x 64	None
384MB	(1) 16M x 64	(1) 16M x 64	(1) 16M x 64
512MB	(1) 32M x 64	(1) 16M x 64	(1) 16M x 64
512MB	(1) 32M x 64	(1) 32M x 64	None

768MB	(1) 32M x 64	(1) 32M x 64	(1) 32M x 64
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Note: Board accepts SDRAM & PC100 memory.

**CACHE CONFIGURATION**

Size	Bank 0	TAG
512KB	(1) 64K x 64	Unidentified
1MB	(1) 128K x 64	Unidentified

**VIDEO MEMORY CONFIGURATION**

Note: Video memory is factory installed and is not configurable.

**CPU SPEED SELECTION (CX 6X86)**

CPU speed	Clock speed	Multiplier	BF0	BF1	BF2
166MHz	66MHz	2x	2 & 3	1 & 2	Open

Note: Pins designated should be in the closed position.

**CPU SPEED SELECTION (CX 6X86, CON'T)**

CPU speed	Clock speed	Multiplier	FS0	FS1	FS2	FS3
166MHz	66MHz	2x	1 & 2	2 & 3	2 & 3	2 & 3

Note: Pins designated should be in the closed position.

**CPU SPEED SELECTION (IBM 6X86)**

CPU speed	Clock speed	Multiplier	BF0	BF1	BF2
166MHz	66MHz	2x	2 & 3	1 & 2	Open

Note: Pins designated should be in the closed position.

**CPU SPEED SELECTION (IBM 6X86, CON'T)**

CPU speed	Clock speed	Multiplier	FS0	FS1	FS2	FS3
166MHz	66MHz	2x	1 & 2	2 & 3	2 & 3	2 & 3

Note: Pins designated should be in the closed position.

**CPU SPEED SELECTION (CX 6X86L)**

CPU speed	Clock speed	Multiplier	BF0	BF1	BF2
166MHz	66MHz	2x	2 & 3	1 & 2	Open

Note: Pins designated should be in the closed position.

**CPU SPEED SELECTION (CX 6X86L, CON'T)**

CPU speed	Clock speed	Multiplier	FS0	FS1	FS2	FS3
166MHz	66MHz	2x	1 & 2	2 & 3	2 & 3	2 & 3

Note: Pins designated should be in the closed position.

**CPU SPEED SELECTION (IBM 6X86L)**

CPU speed	Clock speed	Multiplier	BF0	BF1	BF2
166MHz	66MHz	2x	2 & 3	1 & 2	Open

Note: Pins designated should be in the closed position.

**CPU SPEED SELECTION (IBM 6X86L, CON'T)**

CPU speed	Clock speed	Multiplier	FS0	FS1	FS2	FS3
166MHz	66MHz	2x	1 & 2	2 & 3	2 & 3	2 & 3

Note: Pins designated should be in the closed position.

**CPU SPEED SELECTION (CX 6X86MX)**

CPU speed	Clock speed	Multiplier	BF0	BF1	BF2
200MHz	66MHz	2.5x	2 & 3	2 & 3	Open
233MHz	66MHz	3x	1 & 2	2 & 3	Open

Note: Pins designated should be in the closed position.

CPU SPEED SELECTION (CX 6X86MX, CON'T)						
CPU speed	Clock speed	Multiplier	FS0	FS1	FS2	FS3
200MHz	66MHz	2.5x	1 & 2	2 & 3	2 & 3	2 & 3
233MHz	66MHz	3x	1 & 2	2 & 3	2 & 3	2 & 3

Note: Pins designated should be in the closed position.

CPU SPEED SELECTION (IBM 6X86MX)					
CPU speed	Clock speed	Multiplier	BF0	BF1	BF2
200MHz	66MHz	2.5x	2 & 3	2 & 3	Open
233MHz	66MHz	3x	1 & 2	2 & 3	Open

Note: Pins designated should be in the closed position.

CPU SPEED SELECTION (IBM 6X86MX, CON'T)						
CPU speed	Clock speed	Multiplier	FS0	FS1	FS2	FS3
200MHz	66MHz	2.5x	1 & 2	2 & 3	2 & 3	2 & 3
233MHz	66MHz	3x	1 & 2	2 & 3	2 & 3	2 & 3

Note: Pins designated should be in the closed position.

CPU SPEED SELECTION (CX MII)					
CPU speed	Clock speed	Multiplier	BF0	BF1	BF2
300MHz	66MHz	3.5x	1 & 2	1 & 2	Open
300MHz	75MHz	3x	1 & 2	2 & 3	Open

333MHz	83MHz	3x	1 & 2	2 & 3	Open
Note: Pins designated should be in the closed position.					

CPU SPEED SELECTION (CX MII, CON'T)						
CPU speed	Clock speed	Multiplier	FS0	FS1	FS2	FS3
300MHz	66MHz	3.5x	1 & 2	2 & 3	2 & 3	2 & 3
300MHz	75MHz	3x	1 & 2	1 & 2	2 & 3	2 & 3
333MHz	83MHz	3x	1 & 2	2 & 3	1 & 2	2 & 3
Note: Pins designated should be in the closed position.						

CPU SPEED SELECTION (IBM MII)					
CPU speed	Clock speed	Multiplier	BF0	BF1	BF2
300MHz	66MHz	3.5x	1 & 2	1 & 2	Open
300MHz	75MHz	3x	1 & 2	2 & 3	Open
333MHz	83MHz	3x	1 & 2	2 & 3	Open
Note: Pins designated should be in the closed position.					

CPU SPEED SELECTION (IBM MII, CON'T)						
CPU speed	Clock speed	Multiplier	FS0	FS1	FS2	FS3
300MHz	66MHz	3.5x	1 & 2	2 & 3	2 & 3	2 & 3
300MHz	75MHz	3x	1 & 2	1 & 2	2 & 3	2 & 3
333MHz	83MHz	3x	1 & 2	2 & 3	1 & 2	2 & 3
Note: Pins designated should be in the closed position.						

CPU SPEED SELECTION (AM K5)					
CPU speed	Clock speed	Multiplier	BF0	BF1	BF2
100MHz	66MHz	1.5x	1 & 2	1 & 2	Open



133MHz	66MHz	1.5x	1 & 2	1 & 2	Open
Note: Pins designated should be in the closed position.					

CPU SPEED SELECTION (AM K5, CON'T)						
CPU speed	Clock speed	Multiplier	FS0	FS1	FS2	FS3
100MHz	66MHz	1.5x	1 & 2	2 & 3	2 & 3	2 & 3
133MHz	66MHz	1.5x	1 & 2	2 & 3	2 & 3	2 & 3
Note: Pins designated should be in the closed position.						

CPU SPEED SELECTION (AM K6)					
CPU speed	Clock speed	Multiplier	BF0	BF1	BF2
166MHz	66MHz	2.5x	2 & 3	2 & 3	Open
200MHz	66MHz	3x	1 & 2	2 & 3	Open
233MHz	66MHz	3.5x	1 & 2	1 & 2	Open
266MHz	66MHz	4x	2 & 3	1 & 2	2 & 3
300MHz	66MHz	4.5x	2 & 3	2 & 3	2 & 3
Note: Pins designated should be in the closed position.					

CPU SPEED SELECTION (AM K6, CON'T)						
CPU speed	Clock speed	Multiplier	FS0	FS1	FS2	FS3
166MHz	66MHz	2.5x	1 & 2	2 & 3	2 & 3	2 & 3
200MHz	66MHz	3x	1 & 2	2 & 3	2 & 3	2 & 3
233MHz	66MHz	3.5x	1 & 2	2 & 3	2 & 3	2 & 3
266MHz	66MHz	4x	1 & 2	2 & 3	2 & 3	2 & 3
300MHz	66MHz	4.5x	1 & 2	2 & 3	2 & 3	2 & 3
Note: Pins designated should be in the closed position.						

**CPU SPEED SELECTION (AM K6-2)**

CPU speed	Clock speed	Multiplier	BF0	BF1	BF2
266MHz	66MHz	4x	2 & 3	1 & 2	2 & 3
300MHz	100MHz	3x	1 & 2	2 & 3	Open
333MHz	95MHz	3.5x	1 & 2	1 & 2	Open
350MHz	100MHz	3.5x	1 & 2	1 & 2	Open
366MHz	66MHz	5.5x	1 & 2	1 & 2	2 & 3
380MHz	100MHz	4x	2 & 3	1 & 2	2 & 3
400MHz	100MHz	4x	2 & 3	1 & 2	2 & 3
450MHz	100MHz	4.5x	2 & 3	2 & 3	2 & 3

Note: Pins designated should be in the closed position.

**CPU SPEED SELECTION (AM K6-2, CON'T)**

CPU speed	Clock speed	Multiplier	FS0	FS1	FS2	FS3
266MHz	66MHz	4x	1 & 2	2 & 3	2 & 3	2 & 3
300MHz	100MHz	3x	1 & 2	2 & 3	2 & 3	1 & 2
333MHz	95MHz	3.5x	1 & 2	1 & 2	1 & 2	2 & 3
350MHz	100MHz	3.5x	1 & 2	2 & 3	2 & 3	1 & 2
366MHz	66MHz	5.5x	1 & 2	2 & 3	2 & 3	2 & 3
380MHz	100MHz	4x	1 & 2	1 & 2	1 & 2	2 & 3
400MHz	100MHz	4x	1 & 2	2 & 3	2 & 3	1 & 2
450MHz	100MHz	4.5x	1 & 2	2 & 3	2 & 3	1 & 2

Note: Pins designated should be in the closed position.

**CPU SPEED SELECTION (IDT WIN CHIP)**

CPU speed	Clock speed	Multiplier	BF0	BF1	BF2
200MHz	66MHz	3x	1 & 2	2 & 3	Open

225MHz	75MHz	3x	1 & 2	2 & 3	Open
240MHz	60MHz	4x	2 & 3	1 & 2	2 & 3
Note: Pins designated should be in the closed position.					

CPU SPEED SELECTION (IDT WIN CHIP, CON'T)						
CPU speed	Clock speed	Multiplier	FS0	FS1	FS2	FS3
200MHz	66MHz	3x	1 & 2	2 & 3	2 & 3	2 & 3
225MHz	75MHz	3x	1 & 2	1 & 2	2 & 3	2 & 3
240MHz	60MHz	4x	2 & 3	2 & 3	2 & 3	2 & 3
Note: Pins designated should be in the closed position.						

CPU SPEED SELECTION (INTEL)					
CPU speed	Clock speed	Multiplier	BF0	BF1	BF2
100MHz	66MHz	1.5x	1 & 2	1 & 2	Open
133MHz	66MHz	2x	2 & 3	1 & 2	Open
166MHz	66MHz	2.5x	2 & 3	2 & 3	Open
Note: Pins designated should be in the closed position.					

CPU SPEED SELECTION (INTEL, CON'T)						
CPU speed	Clock speed	Multiplier	FS0	FS1	FS2	FS3
100MHz	66MHz	1.5x	1 & 2	2 & 3	2 & 3	2 & 3
133MHz	66MHz	2x	1 & 2	2 & 3	2 & 3	2 & 3
166MHz	66MHz	2.5x	1 & 2	2 & 3	2 & 3	2 & 3
Note: Pins designated should be in the closed position.						

**CPU SPEED SELECTION (INTEL MMX)**

CPU speed	Clock speed	Multiplier	BF0	BF1	BF2
166MHz	66MHz	2.5x	2 & 3	2 & 3	Open
200MHz	66MHz	3x	1 & 2	2 & 3	Open
233MHz	66MHz	3.5x	1 & 2	1 & 2	Open

Note: Pins designated should be in the closed position.

CPU SPEED SELECTION (INTEL MMX, CON'T)						
CPU speed	Clock speed	Multiplier	FS0	FS1	FS2	FS3
166MHz	66MHz	2.5x	1 & 2	2 & 3	2 & 3	2 & 3
200MHz	66MHz	3x	1 & 2	2 & 3	2 & 3	2 & 3
233MHz	66MHz	3.5x	1 & 2	2 & 3	2 & 3	2 & 3

Note: Pins designated should be in the closed position.

CPU VOLTAGE SELECTION (SINGLE)				
Voltage	VID0	VID1	VID2	VID3
3.4v	Pins 2 & 3 closed	Pins 1 & 2 closed	Pins 1 & 2 closed	Pins 1 & 2 closed
3.5v	Pins 1 & 2 closed	Pins 1 & 2 closed	Pins 1 & 2 closed	Pins 1 & 2 closed

CPU VOLTAGE SELECTION (DUAL)				
Voltage	VID0	VID1	VID2	VID3
2.2v	Pins 2 & 3 closed	Pins 1 & 2 closed	Pins 2 & 3 closed	Pins 2 & 3 closed
2.3v	Pins 1 & 2 closed	Pins 1 & 2 closed	Pins 2 & 3 closed	Pins 2 & 3 closed
2.8v	Pins 2 & 3 closed	Pins 2 & 3 closed	Pins 2 & 3 closed	Pins 1 & 2 closed
2.9v	Pins 1 & 2 closed	Pins 2 & 3 closed	Pins 2 & 3 closed	Pins 1 & 2 closed
3.2v	Pins 2 & 3 closed	Pins 2 & 3 closed	Pins 1 & 2 closed	Pins 1 & 2 closed