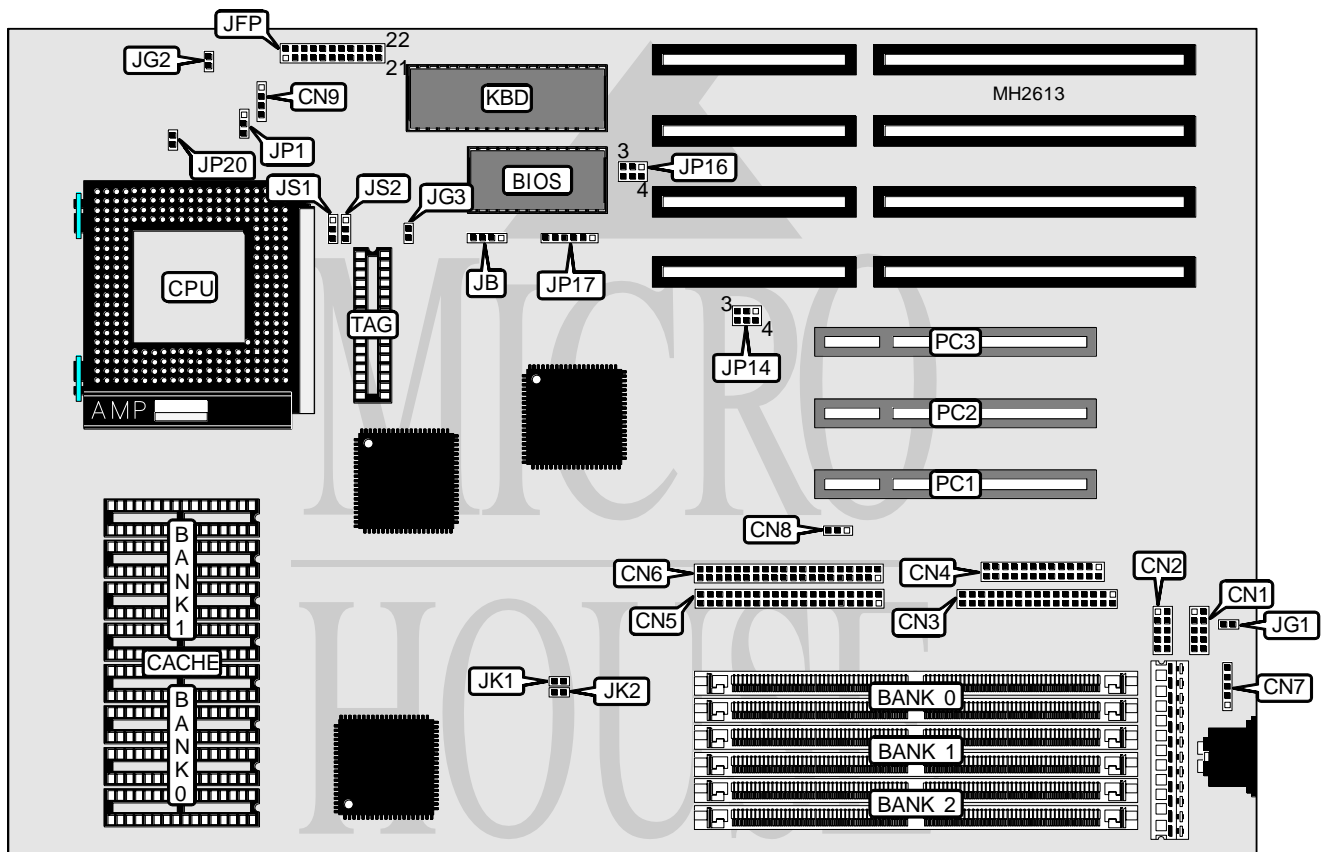


# MICRO-STAR INTERNATIONAL CO., LTD.

## MS-5109

<b>Processor</b>	Pentium
<b>Processor Speed</b>	75/90/100MHz
<b>Chip Set</b>	SIS
<b>Max. Onboard DRAM</b>	128MB
<b>Cache</b>	256/512/1024KB
<b>BIOS</b>	AMI
<b>Dimensions</b>	330mm x 218mm
<b>I/O Options</b>	32-bit PCI slots (3), floppy drive interface, green PC connector, IDE interfaces (2), parallel port, PS/2 mouse port, serial ports (2)
<b>NPU Options</b>	None



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**MS - 5109**

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CONNECTIONS			
Purpose	Location	Purpose	Location
Serial port 1	CN1	Turbo LED	JFP pins 12 - 13
Serial port 2	CN2	Turbo switch	JFP pins 15 - 17
Parallel port	CN3	Reset switch	JFP pins 19 - 20
Floppy drive interface	CN4	IDE interface LED	JFP pins 21 - 22
IDE interface (primary)	CN5	External battery	JB
IDE interface (secondary)	CN6	Green PC connector (monitor)	JG1
PS/2 mouse port	CN7	Green PC LED	JG2
Chassis fan power	CN9	Green PC connector	JG3
Power LED & keylock	JFP pins 1 - 5	32-bit PCI slots	PC1 - PC3
Speaker	JFP pins 6 - 10	IDE interface LED	

USER CONFIGURABLE SETTINGS		
Function	Jumper	Position
í PCI IDE interface enabled	CN8	pins 1 & 2 closed
PCI IDE interface disabled	CN8	pins 2 & 3 closed
í Battery type select internal	JB	pins 2 & 3 closed
Battery type select external	JB	Closed
í NA# disabled	JP1	pins 1 & 2 closed
NA# enabled	JP1	pins 2 & 3 closed
í BIOS type select EPROM	JP17	pins 2 & 3, 4 & 5 closed
BIOS type select flash	JP17	pins 1 & 2, 5 & 6 closed
í CPU voltage select 3.4v	JP20	Closed
CPU voltage select 3.5v	JP20	Open

DRAM CONFIGURATION			
Size	Bank 0	Bank 1	Bank 2
2MB	(2) 256K x 36	NONE	NONE
4MB	(2) 256K x 36	(2) 256K x 36	NONE
4MB	(2) 512K x 36	NONE	NONE
8MB	(2) 256K x 36	(2) 256K x 36	(2) 512K x 36
8MB	(2) 512K x 36	NONE	(2) 512K x 36
8MB	(2) 1M x 36	NONE	NONE
12MB	(2) 256K x 36	(2) 256K x 36	(2) 1M x 36
12MB	(2) 512K x 36	NONE	(2) 1M x 36
16MB	(2) 1M x 36	(2) 1M x 36	NONE
16MB	(2) 2M x 36	NONE	NONE
20MB	(2) 256K x 36	(2) 256K x 36	(2) 2M x 36
20MB	(2) 512K x 36	NONE	(2) 2M x 36
24MB	(2) 1M x 36	(2) 1M x 36	(2) 1M x 36
24MB	(2) 2M x 36	NONE	(2) 1M x 36
32MB	(2) 1M x 36	(2) 1M x 36	(2) 2M x 36
32MB	(2) 2M x 36	NONE	(2) 2M x 36
32MB	(2) 4M x 36	NONE	NONE

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DRAM CONFIGURATION (CON'T)			
Size	Bank 0	Bank 1	Bank 2
36MB	(2) 256K x 36	(2) 256K x 36	(2) 4M x 36
36MB	(2) 512K x 36	NONE	(2) 4M x 36
40MB	(2) 1M x 36	(2) 4M x 36	NONE
48MB	(2) 1M x 36	(2) 1M x 36	(2) 4M x 36
48MB	(2) 2M x 36	NONE	(2) 4M x 36
64MB	(2) 4M x 36	(2) 4M x 36	NONE
64MB	(2) 8M x 36	NONE	NONE
72MB	(2) 1M x 36	(2) 4M x 36	(2) 4M x 36
80MB	(2) 1M x 36	(2) 1M x 36	(2) 8M x 36
80MB	(2) 2M x 36	NONE	(2) 8M x 36
96MB	(2) 4M x 36	(2) 4M x 36	(2) 4M x 36
96MB	(2) 8M x 36	NONE	(2) 4M x 36
128MB	(2) 4M x 36	(2) 4M x 36	(2) 8M x 36
128MB	(2) 8M x 36	NONE	(2) 8M x 36
128MB	(2) 16M x 36	NONE	NONE

CACHE CONFIGURATION			
Size	Bank 0	Bank 1	TAG
256KB	(4) 32K x 8	(4) 32K x 8	(1) 8K x 8
512KB	(4) 64K x 8	(4) 64K x 8	(1) 16K x 8
1MB	(4) 128K x 8	(4) 128K x 8	(1) 32K x 8

CACHE JUMPER CONFIGURATION		
Size	JS1	JS2
256KB	pins 1 & 2 closed	pins 1 & 2 closed
512KB	pins 2 & 3 closed	pins 1 & 2 closed
1MB	pins 2 & 3 closed	pins 2 & 3 closed

CPU SPEED CONFIGURATION		
Speed	JK1	JK2
75MHz	Open	Open
90MHz	Open	Closed
100MHz	Closed	Closed

DACK/DRQ CONFIGURATION		
DACK/DRQ	JP14	JP16
DACK0/DRQ0	pins 1 & 4 closed	pins 1 & 4 closed
DACK1/DRQ1	pins 2 & 5 closed	pins 2 & 5 closed
DACK3/DRQ3	pins 3 & 6 closed	pins 3 & 6 closed