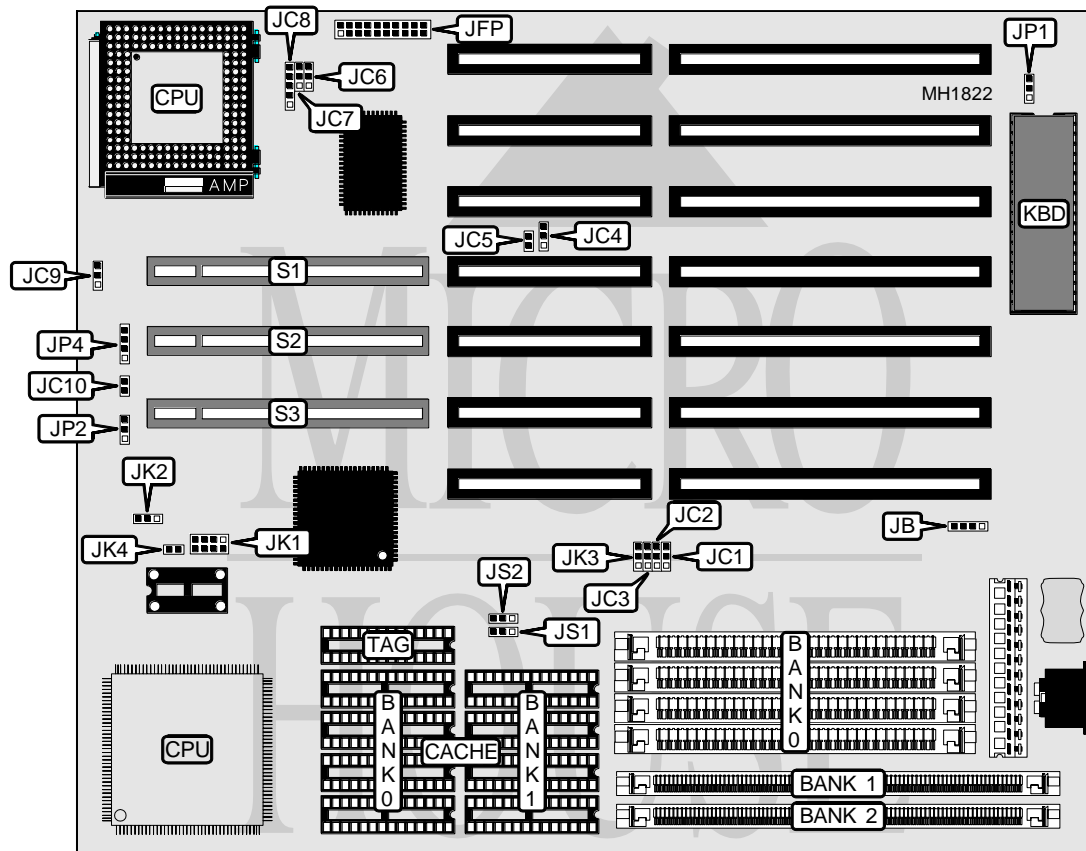


# MICRO-STAR INTERNATIONAL CO., LTD.

## MS-4131 VLB 486 AL2

<b>Processor</b>	80486SX/80487SX/80486DX/80486DX2
<b>Processor Speed</b>	25/33/40/50(internal)/50/66(internal)MHz
<b>Chip Set</b>	ALI
<b>Max. Onboard DRAM</b>	112MB
<b>Cache</b>	128/256KB
<b>BIOS</b>	AMI
<b>Dimensions</b>	254mm x 218mm
<b>I/O Options</b>	32-bit VESA local bus slots (3)
<b>NPU Options</b>	None



CONNECTIONS			
Purpose	Location	Purpose	Location
External battery	JB	32-bit VESA Local bus slot	S2
32-bit VESA Local bus slot	S1	32-bit VESA Local bus slot	S3

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PIN OUT CONFIGURATION	
Connector	JFP
Keylock	pins 1 & 2 closed
Power LED	pins 3 & 5 closed
Turbo LED	pins 12 & 13 closed
Turbo switch	pins 15, 16, & 17 closed
Reset	pins 19 & 20 closed
Speaker	pins 7, 8, 9, & 10 closed

USER CONFIGURABLE SETTINGS		
Function	Jumper	Position
í Factory configured - do not alter	JC1	pins 1 & 2 closed
í Factory configured - do not alter	JC2	pins 1 & 2 closed
í Factory configured - do not alter	JC3	pins 1 & 2 closed
í Factory configured - do not alter	JC5	Closed
í Factory configured - do not alter	JC7	pins 1 & 2 closed
í CPU PQFP not installed	JC8	Closed
CPU PQFP installed	JC8	Open
í Factory configured - do not alter	JC9	N/A
í Factory configured - do not alter	JC10	Open
í Monitor type select monochrome	JP1	pins 1 & 2 closed
Monitor type select color	JP1	pins 2 & 3 closed
í Factory configured - do not alter	JP4	N/A

CACHE CONFIGURATION			
Size	Bank 0	Bank 1	TAG
128KB	(4) 32K x 8	NONE	(1)8K x 8/(1)16K x 8/(1)32K x 8
256KB	(4) 32K x 8	(4) 32K x 8	(1) 16K x 8/(1) 32K x 8

CACHE JUMPER CONFIGURATION		
Size	JS1	JS2
64KB	pins 2 & 3 closed	pins 2 & 3 closed
128KB	pins 1 & 2 closed	pins 1 & 2 closed
256KB	pins 1 & 2 closed	pins 1 & 2 closed

CPU TYPE CONFIGURATION		
Type	JC4	JC6
80486SX	pins 1 & 2 closed	Open
80487SX	pins 2 & 3 closed	pins 1 & 2 closed
80486DX	pins 2 & 3 closed	pins 2 & 3 closed
80486DX2	pins 2 & 3 closed	pins 2 & 3 closed

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CPU SPEED CONFIGURATION					
Speed	JK1	JK2	JK3	JK4	JP2
25MHz	3 & 7 and 4 & 8	pins 1 & 2	pins 1 & 2	Closed	pins 1 & 2
33MHz	1 & 2 and 4 & 8	pins 1 & 2	pins 1 & 2	Closed	pins 1 & 2
40MHz	1 & 5 and 2 & 6	pins 2 & 3	pins 2 & 3	Closed	pins 2 & 3
50i MHz	3 & 7 and 4 & 8	pins 1 & 2	pins 1 & 2	Closed	pins 1 & 2
50MHz	pins 2 & 6	pins 2 & 3	pins 2 & 3	Open	pins 2 & 3
66i MHz	1 & 2 and 4 & 8	pins 1 & 2	pins 1 & 2	Closed	pins 1 & 2

Note: Pins designated should be in the closed position.

VESA WAIT STATE/BUS SPEED CONFIGURATION			
CPU speed	Wait states	JP4/pins 1 & 2	JP4/pins 3 & 4
≤ 33MHz	0 wait states	Open	Open
> 33MHz	1 wait state	Closed	Closed

DRAM CONFIGURATION			
Size	Bank 0	Bank 1	Bank 2
1MB	(4) 256K x 9	None	None
4MB	None	(1) 1M x 36	None
4MB	None	None	(1) 1M x 36
4MB	(4) 1M x 9	None	None
5MB	(4) 256K x 9	(1) 1M x 36	None
5MB	(4) 256K x 9	None	(1) 1M x 36
8MB	None	(1) 1M x 36	(1) 1M x 36
8MB	None	(1) 2M x 36	None
8MB	None	None	(1) 2M x 36
9MB	(4) 256K x 9	(1) 2M x 36	None
9MB	(4) 256K x 9	None	(1) 2M x 36
12MB	(4) 1M x 9	(1) 2M x 36	None
12MB	(4) 1M x 9	None	(1) 2M x 36
16MB	(4) 4M x 9	None	None
16MB	(4) 4M x 9	(1) 1M x 36	None
16MB	None	(1) 2M x 36	(1) 2M x 36
16MB	(4) 4M x 9	None	(1) 1M x 36
24MB	(4) 4M x 9	(1) 2M x 36	None
24MB	(4) 4M x 9	None	(1) 2M x 36
32MB	None	(1) 4M x 36	None
32MB	None	None	(1) 4M x 36
33MB	(4) 256K x 9	(1) 4M x 36	None
33MB	(4) 256K x 9	None	(1) 4M x 36
36MB	(4) 1M x 9	(1) 4M x 36	None
36MB	(4) 1M x 9	None	(1) 4M x 36
48MB	(4) 4M x 9	(1) 4M x 36	None
48MB	(4) 4M x 9	None	(1) 4M x 36

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DRAM CONFIGURATION (CONT.)			
Size	Bank 0	Bank 1	Bank 2
64MB	None	(1) 8M x 36	None
64MB	None	(1) 4M x 36	(1) 4M x 36
64MB	None	None	(1) 8M x 36
65MB	(4) 256K x 9	None	(1) 8M x 36
65MB	(4) 256K x 9	(1) 8M x 36	None
68MB	(4) 1M x 9	(1) 8M x 36	None
68MB	(4) 1M x 9	None	(1) 8M x 36
88MB	(4) 4M x 9	None	(1) 8M x 36
88MB	(4) 4M x 9	(1) 8M x 36	None
96MB	None	(1) 8M x 36	(1) 4M x 36
97MB	(4) 256K x 9	(1) 8M x 36	(1) 4M x 36
100MB	(4) 1M x 9	(1) 8M x 36	(1) 4M x 36
112MB	(4) 4M x 9	(1) 8M x 36	(1) 4M x 36