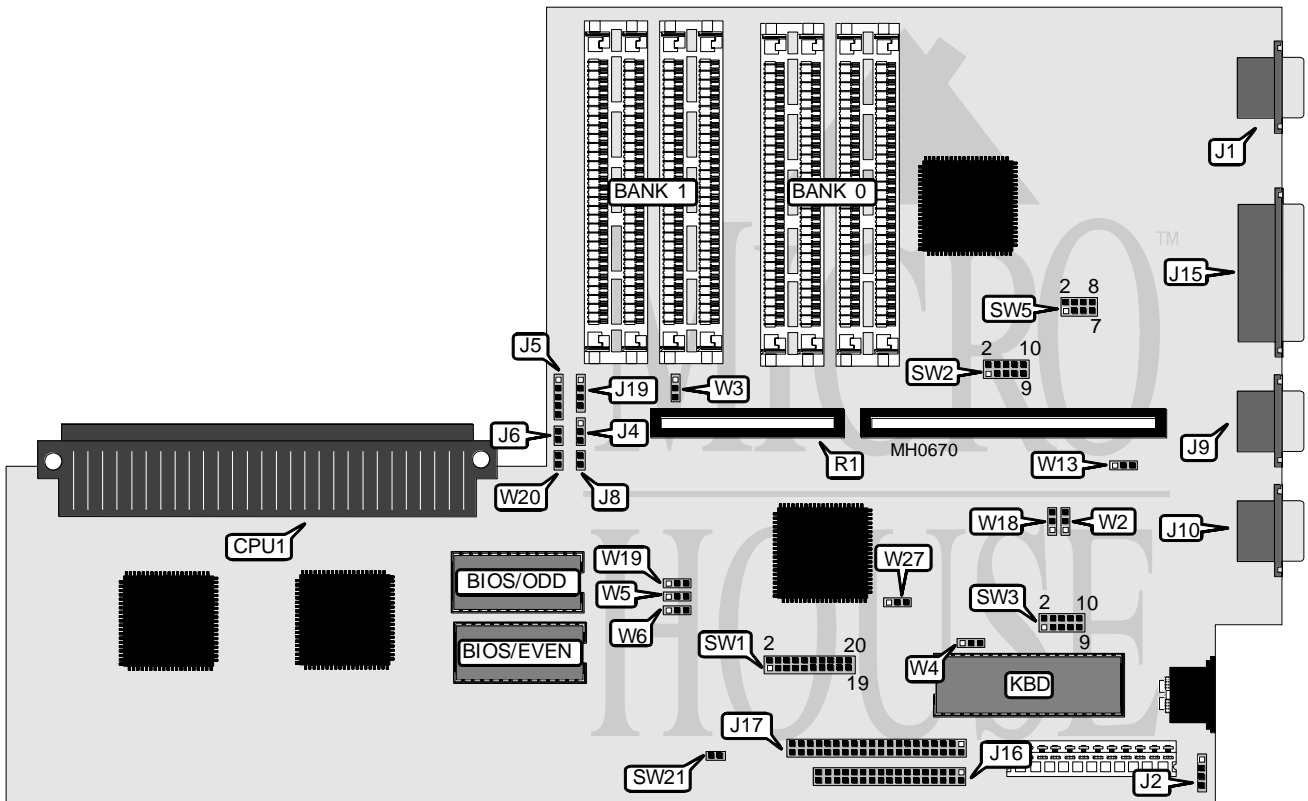


NORTHGATE COMPUTER SYSTEMS, INC.

SLIMLINE SP

Processor	80386DX/80486DX
Processor Speed	25/33MHz
Chip Set	VLSI
Max. Onboard DRAM	64MB
Cache	64/256KB
BIOS	AMI
Dimensions	350mm x 304mm
I/O Options	Proprietary CPU/NPU module slot, parallel port, serial ports (2), floppy drive interface, IDE interface, VGA port
NPU Options	80387/3167/4167 (on external CPU/NPU card)



CONNECTIONS			
Purpose	Location	Purpose	Location
Proprietary CPU module	CPU1	Serial port 1	J9
VGA port	J1	Serial port 2	J10
External battery	J2	Parallel port LPT1	J15
Turbo LED	J4	Floppy drive interface	J16
Power LED & keylock	J5	IDE interface	J17
Reset switch	J6	Speaker	J19
IDE interface LED	J8	Riser card	R1

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SLIMLINE SP

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USER CONFIGURABLE SETTINGS		
Function	Jumper	Position
í Floppy drive write precomp select alternate	W2	pins 2 & 3 closed
Floppy drive write precomp select normal	W2	pins 1 & 2 closed
í Factory configured - do not alter	W3	N/A
í Monitor type select monochrome	W4	pins 1 & 2 closed
Monitor type select color	W4	pins 2 & 3 closed
í CMOS memory normal operation	W8	Open
CMOS memory clear	W8	Closed
í Parallel port mode select bi-directional	W13	pins 2 & 3 closed
Parallel port mode select input only	W13	pins 1 & 2 closed
í Floppy drive mode select single speed	W18	pins 1 & 2 closed
Floppy drive mode select dual speed	W18	pins 2 & 3 closed
í Factory configured - do not alter	W27	N/A
í Factory configured - do not alter	W29	N/A
í Factory configured - do not alter	SW1 pins 1 & 2	N/A
í Factory configured - do not alter	SW1 pins 5 & 6	N/A
í VGA BIOS shadowing enabled	SW1 pins 11 & 12	Closed
VGA BIOS shadowing disabled	SW1 pins 11 & 12	Open
í BIOS shadowing enabled	SW1 pins 11 & 12	Closed
BIOS shadowing disabled	SW1 pins 11 & 12	Open
í IRQ6 enabled	SW2 pins 9 & 10	Closed
IRQ6 disabled	SW2 pins 9 & 10	Open
í Floppy drive interface enabled	SW3 pins 1 & 2	Open
Floppy drive interface disabled	SW3 pins 1 & 2	Closed

Note: The locations of W8 & W29 are unidentified.

DRAM CONFIGURATION		
Size	Bank 0	Bank 1
1MB	(4) 256K x 9	NONE
2MB	(4) 256K x 9	(4) 256K x 9
4MB	(4) 1M x 9	NONE
8MB	(4) 1M x 9	(4) 1M x 9
16MB	(4) 4M x 9	NONE
32MB	(4) 4M x 9	(4) 4M x 9

DRAM JUMPER/SWITCH CONFIGURATION			
Size	SW1	W5	W6
1MB	3 & 4, 17 & 18, 19 & 20	2 & 3	2 & 3
2MB	17 & 18, 19 & 20	2 & 3	2 & 3
4MB	3 & 4, 17 & 18	1 & 2	2 & 3
8MB	17 & 18	1 & 2	2 & 3
16MB	3 & 4	1 & 2	1 & 2
32MB	Open	1 & 2	1 & 2

Note: Pins designated should be in the closed position.

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SLIMLINE SP

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IDE CONFIGURATION		
Setting	SW21	W20
Enabled	Closed	Open
Disabled	Open	Closed

PARALLEL PORT IRQ CONFIGURATION	
IRQ	SW2
IRQ5	pins 5 & 6 closed
IRQ7	pins 7 & 8 closed

PARALLEL PORT CONFIGURATION	
Setting	SW3
LPT1/3BCh	pins 9 & 10 closed
LPT1/378h	Open
LPT2/278h	pins 7 & 8 closed
Disabled	pins 7 & 8, 9 & 10 closed

SERIAL PORT 1 CONFIGURATION		
Setting	SW2	SW3
Enabled	pins 1 & 2 closed	Open
Disabled	Open	pins 5 & 6 closed

SERIAL PORT 2 CONFIGURATION		
Setting	SW2	SW3
Enabled	pins 3 & 4 closed	Open
Disabled	Open	pins 3 & 4 closed

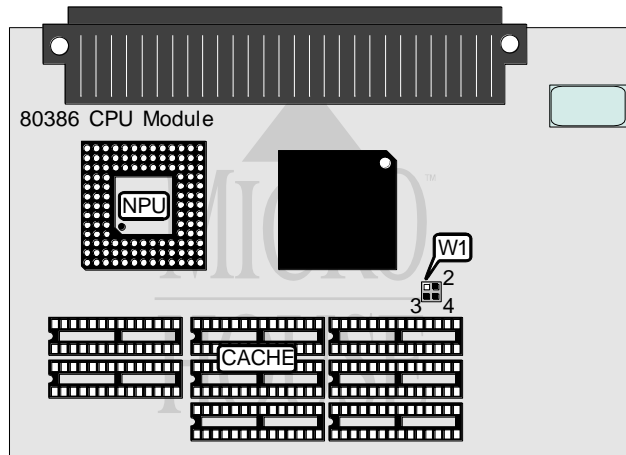
VIDEO CONFIGURATION		
Setting	SW5	W19
Enabled	pins 1 & 2, 3 & 4, 5 & 6 closed	pins 1 & 2 closed
Disabled	Open	pins 2 & 3 closed

BIOS CONFIGURATION	
Setting	SW1
F000-FFFF (VGA BIOS disabled)	pins 7 & 8, 9 & 10 closed
F000-FFFF, E000-EFFF (VGA BIOS disabled, BIOS shadowing enabled)	pins 7 & 8 closed
F000-FFFF VGA BIOS at C000-C7FF	pins 9 & 10 closed
F000-FFFF VGA BIOS at C000-C7FF, IDE interface at C800-CFFF	pins 9 & 10 closed

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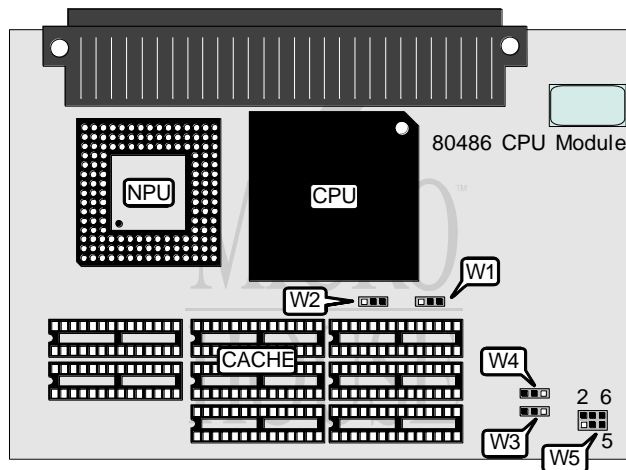
NORTHGATE COMPUTER SYSTEMS, INC. SLIMLINE SP CPU EXPANSION CARDS

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CACHE CONFIGURATION	
Size	Bank 0
64KB	(8) 8K x 8
256KB	(8) 32K x 8

CACHE JUMPER CONFIGURATION	
Size	W1
64KB	Open
256KB	pins 1 & 2, 3 & 4 closed



USER CONFIGURABLE SETTINGS			
Setting	W3	W4	W5
Burst mode enabled	pins 2 & 3 closed	pins 2 & 3 closed	pins 1 & 2 closed
Burst mode disabled	pins 1 & 2 closed	pins 1 & 2 closed	pins 1 & 2 closed

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SLIMLINE SP CPU EXPANSION CARDS

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CACHE CONFIGURATION	
Size	Bank 0
64KB	(8) 8K x 8
256KB	(8) 32K x 8

CACHE JUMPER CONFIGURATION			
Size	W1	W2	W5
64KB	pins 1 & 2 closed	pins 1 & 2 closed	Open
256KB	pins 2 & 3 closed	pins 2 & 3 closed	pins 3 & 4, 5 & 6 closed