



Figure 1. NEC BusinessMate 386/25

Specifications

Processor

- Intel 80386 8/25MHz

Memory

- 2MB or 8MB standard, expands to 16MB

I/O Expansion Slots

- Five 8/16 bit slots
- Two 8 bit only slots

Diskette Drive

- 1.2MB, 5.25" or 1.44MB, 3.5" drives

Integrated Features

- Diskette drive controller.
- No IDE interface.
- Enhanced keyboard.
- Parallel port.
- Two RS-232C serial ports.

Internal Expansion Bays

- Two 5.25" half height accessible bays
- Three 5.25" half height internal bays.

I/O Architecture (Bus s supported)

- ISA

Power Supply

- 237 Watt

Diagnostics

- Normal Post Diags performed on Power UP of system.
- For Diags use Test / Diagnostic utility disk from NEC.
- Troubleshoot according to errors found during test.

CMOS Access

- QAPLus/FE

Tools and Software Requirements

- 2PT Phillips screwdrivers
- Needle nose pliers
- Diags and formatted blank diskette
- Anti-static wrist strap

Jumper/Switch Settings

System Configuration -- SW1 SWITCH

Switch	Setting	Function
1	ON *	Color monitor installed
	OFF	Monochrome monitor used
2	ON	FDC port addr. assign secondary
	OFF *	FDC port addr. assign primary
3	ON *	Diskette controller on
	OFF	Diskette controller off
4	ON *	Serial port (COM2) on
	OFF	Serial port (COM2) off
5	ON *	Serial port (COM1) on
	OFF	Serial port (COM1) off
6	ON *	Parallel port on
	OFF	Parallel port off
7	ON	Intel 80387-25 installed
	OFF *	Weitek WTL3167 installed
8	OFF *	Not used
9	OFF *	Not used
10	OFF *	Not used

* Default

System Configuration, CPU Operation Mode

Jumper	Setting	Function
13G1 or 8E2	1-2	Address pipeline mode
	2-3 *	Address non-pipeline mode

* Default

System Configuration, Math Coprocessor Type

Jumper	Setting	Function
13G2 or 5L1	1-2	Intel 80387-25 installed
	2-3 *	Weitek WTL3167 installed

* Default

System Configuration, 8742 Test Mode

Jumper	Setting	Function
20B2	Jumped	8742 test mode ON
	Unjumped *	8742 test mode OFF

* Default

System Configuration, Test Mode

Jumper	Setting	Function
13A1	Released *	Test Mode Off
	Locked	Test Mode On

* Default

System Configuration, G8BUT HD Controller

Jumper	Setting	Function
W14	Unjumped *	Select translation mode
W15	Unjumped *	Cache enable
W18	Jumped *	Mode Select

* Default

Jumper/Switch Settings (Continued)

System Configuration, G9ZNH HD Controller

Jumper	Setting	Function
W1	1-2 *	HS3 selects for 16 head drives.
W2	Unjumped *	Wait state option
W3	1-2 *	Primary board addressing
W4	1-2 *	Controller output drivers disabled by firmware.
W5, W6	Unjumped *	Address bus control option
W7, W8	Unjumped *	Cntrl processor mode selected
W9	Unjumped *	Enable Caching
W10	Unjumped *	Diagnostic register non-latched.

* Default

System Configuration, VGB (G8BYL) Video Controller

Jumper	Setting	Function
S1	1 - 2 * 2 - 3	High Res - 132 Column Feature Connector
S2	1 - 2 * 2 - 3	16 Bit BIOS ROM data path 8 Bit BIOS ROM data path
S3	1 - 2 2 - 3 *	Enable Slot Sense / 16 bit transfer Disable Slot Sense / 8 bit transfer

* Default

System Configuration, G8ABH Video Controller

Jumper	Setting	Function
S1	2 - 3 * 1 - 2	Selects address 3XX Selects address 2XX
S2	UP * DOWN	Advanced Color / High Resolution All other displays
S3, S4	S3:2-3 * S4:1-2 * S3:2-3 S4:2-3 S3:1-2 S4:1-2	Selects ROM type 27256 Selects ROM type 27512 Selects ROM type 27128
S6	2 - 3 * 1 - 2	Selects 132 columns Selects feature connector
S7	3 - 7 * 1 - 5 2 - 6 4 - 8	Selects 31ms cycle for mouse Selects 8ms cycle for mouse Selects 15ms cycle for mouse Selects 61ms cycle for mouse
S8	1 - 5 * 2 - 6 3 - 7 4 - 8	Select IRQ051 for mouse Select IRQ041 for mouse Select IRQ031 for mouse Not Used
S9	2 - 3 * 1 - 2	Disables emul. of CGA, MDA, Herz Enables emul. of CGA, MDA, Herz.
S10	2 - 3 * 1 - 2	Disables 400 line mode Enables 400 line mode **
S11	2 - 3 * 1 - 2	Selects ROM BIOS linear mode. Selects ROM BIOS paged mode.
S12	2 - 3 *	Selects ROM BIOS linear mode.

Jumper	Setting	Function
	1 - 2	Selects ROM BIOS paged mode.
S13	2 - 3 * 1 - 1	Disables Parallel mouse cntrlr. Enables Parallel mouse cntrlr.

* Default ** Only available w/NEC Adv. Monitor or MultiSync

AGB Plus/AGB As Primary Display Board

Switch 5 Switch Settings

S5-1	S5-2	S5-3	S5-4	Configurations
On	Off	Off	On	40 x 25 color
Off	Off	Off	On	80 x 25 color
Off *	On *	On *	Off *	Advanced color, High-Res
On	On	On	Off	Advanced color, Emulation
On	Off	On	Off	Mono w/other 40x25 color
Off	Off	On	Off	Mono w/other 80x25 color

* Default

AGB Plus/AGB As Secondary Display Board

Switch 5 Switch Settings

S5-1	S5-2	S5-3	S5-4	Configurations
On	On	On	On	40 x 25 color
Off	On	On	On	80 x 25 color
Off *	Off *	On *	On *	Advanced color, High-Res
On	Off	On	On	Advanced color, Emulation
On	On	Off	On	Mono w/other 40x25 color
Off	On	Off	On	Mono w/other 80x25 color

* Default

Removal Procedures

Before beginning removal complete the following steps:

1. Turn off the computer and any peripheral devices.
2. Disconnect AC power cord from outlet and system.
3. Disconnect all peripheral devices from the computer.
4. Discharge any static using the static strap on chassis.

System Cover

1. Remove the top cover plate first.
2. Remove the screw holding top plate to unit's rear panel.
3. Lift the top plate up and off.
4. Remove the three screws securing the cover to back.
5. Remove the three screws that fasten the cover to top.
6. Pull the cover outward, then lift up to remove.

Field Replaceable Units

Memory	OEM Part	IBM Part
G8FDK 2MB memory mod.	136-009366-013A	67H9130
G8FDM 8MB memory mod	136-009366-014A	67H9131
512KB memory exp. brd.	136-005873-001A	67H9091
512KB memory exp. mod.	136-005873-002A	67H9092
1MB memory exp. module	136-009592-251A	65H9309
2MB memory exp. module	136-009631-655B	67H9149
4MB memory exp. board	136-007954-250A	67H9114
8MB memory exp. module	136-009631-656B	67H9150

Controller	OEM Part	IBM Part
G8CDQ ST506 HD cntrlr.	808-865892-007A	62H1455
G8BUT ESDI HD controller	808-865892-005A	68H5603

Field Replaceable Units (Continued)

System Boards	OEM Part	IBM Part
G8FBJ- System board	158-050249-000	67H9692

Diskette Drives	OEM Part	IBM Part
5.25", 360KB Floppy	136-005869-002A	67H9088
3.5", 720KB, Floppy	136-006372-424A	67H9094
5.25", 1.2MB Floppy	136-009598-410A	67H9148
3.5", 1.44MB Floppy	136-007954-222A	67H9112

Video Boards	OEM Part	IBM Part
Adv. graphics board plus	136-006793-A	47H8585
Advanced graphics board	136-005872-A	67H9090
G9XZT-Color graphics bd.	136-005871-A	67H9089
G8BYL video graphics bd.	136-008076-A	47H8600

Cables	OEM Part	IBM Part
5", ESDI HD, signal cable	808-840656-005A	67H2180
5" HD B cable	808-840069-011A	47H9817
COM1/COM2 relay cable	808-840649-001A	47H9824
Printer port relay cable	808-840648-010A	47H9823

Miscellaneous	OEM Part	IBM Part
G8FED Serial/parallel brd.	136-009366-015A	67H9132
Power supply (237 Watt)	136-009366-010A	67H9129
ISA, backplane	136-009534-217A	67H9141
Keyboard / mouse board	136-009534-218A	22H1957
Lithium Battery	136-009534-227A	20H9497
Fan	136-009534-235A	66H6830
ISA Backboard	136-260712-501B	47H8800

Internal Hard Drive	OEM Part	IBM Part
42MB 3.5", IDE HD	136-008174-426A	67H9116
80MB, 5.25", IDE HD	136-007954-223A	67H9113
100MB, 3.5", ESDI HD	134-500571-159O	67H9043
140MB, 5.25", ESDI HD	136-008174-620A	49H6837
300MB, 5.25", ESDI HD	136-008174-621A	67H9117