



Figure 1. NEC BusinessMate 386/33e

## Specifications

### Processor

- Intel 80386 8/33MHz

### Memory

- 8MB standard, expands to 32MB

### I/O Expansion Slots

- Five EISA slots
- Two 8/16 bit slots
- One 32 bit memory slot

### Diskette Drive

- 1.2MB, 5.25" or 1.44MB, 3-1/2"

### Integrated Features

- Diskette drive controller.
- PS/2 Mouse and Enhanced PS/2 style keyboard
- One parallel port and Two RS-232C serial ports.

### Internal Expansion Bays

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

### I/O Architecture (Bus s supported)

- Extended Industry Standard Architecture (EISA)

### Power Supply

- 325 Watt

### Diagnostics

- Normal Post Diags performed on Power UP of system.
- For Advanced Diags use a PC Diagnostic Utility.
- Troubleshoot according to errors found during test.

### CMOS Access

- QAPlus/FE

### Dimensions

- 7.1 w X 25.6 d X 26.8 h

## Tools and Software Requirements

- 1/4" Flat bladed and 2PT Phillips screwdriver
- T-15 Torx screwdriver
- Needle nose pliers
- Diags and formatted blank diskette
- Anti-static wrist strap

## Jumper/Switch Settings

### SW1 SWITCH SETTINGS

Switch	Setting	Function
1	ON *	Turns on parallel port
	OFF	Turns off parallel port
2	ON *	Turns on serial port (COM1)
	OFF	Turns off serial port (COM1)
3	ON *	Turns on serial port (COM2)
	OFF	Turns off serial port (COM2)
4	ON *	Turns on diskette drive controller
	OFF	Turns off diskette drive controller
5	ON	Diskette port addr. scndry. (37X)
	OFF *	Diskette port addr. primary (3FX)
6	ON	387 math coprocessor used
	OFF *	387 math coprocessor unused
7	ON	Base memory is 512KB
	OFF *	Base memory is 640KB
8	ON *	IRQ12 is on for mouse support
	OFF	Other option
9	ON *	Color display installed
	OFF	Monochrome display
10	ON *	Reserved, always on

\* Default

### System Board Jumper Settings

Jumper	Setting	Function
12C3	Unjumped*	Pipeline off
	Jumped	Pipeline on
12C2	Unjumped*	385 rsrv 1 pin tied to high
	Jumped	385 rsrv 1 pin tied to low
10B1	1-2 *	Output to CPU is delayed to end of posted I/O write cycle 385 local bus
	2-3	Output to CPU is transparent to CPU
16C1	Unjumped	32-bit data transmit off
	Jumped *	32-bit data transmit on
16C4	1-2	EMMC2 MMWT; MMRT2 is tied to low
	2-3 *	EMMC2 MMWT; MMRT2 is tied to high
16C3	1-2	EMMC2 MMRT1; MMRT1 is tied to low
	2-3 *	EMMC2 MMRT1; MMRT1 is tied to high
16F1	Unjumped	Insert 1 BCLK between back to back ISA 8/16 bit I/O cycles from CPU for I/O recovery time
	Jumped *	Insert 3 BCLK (16 bit cycles) or 11 BCLK (8 bit cycles) between back to back ISA 8/16 bit I/O cycles from CPU for I/O recovery time

\* Default

## Jumper/Switch Settings (Continued)

### System Board Jumper Settings

Jumper	Setting	Function
9M1	Unjumped*	Turns off manufacturing switch
	Jumped	Turns on manufacturing switch
10H1	1-2 *	Password feature on
	2-3	Password feature off
13G1	1-2	RASO time-out timer off
	2-3 *	RASO time-out timer on
3E1	1-2 *	Diskette rate 500/250/300KBps
	2-3	Diskette rate 500/250KBps
16C2	1-2	EMMC2 MMRT0; MMRT0 low
	2-3 *	EMMC2 MMRT0; MMRT0 high

\* Default

### G8BUT ESDI HD Controller Jumper Settings

Jumper	Setting	Function
W8	Jumped*	Mode Select
W14	Unjumped*	Select translation mode
W15	Unjumped*	Cache enabled

\* Default

### System Configuration, VGB Video Controller

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

\* 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 with static strap to chassis.

### System Cover

1. Remove the two screws from the rear of the system unit.
2. Lift the rear end of the cover.
3. Slide cover back from the front face so the tabs in front of system slide out of the tab slots in the cover.
4. Lift the cover off.

### Side Panels

1. Remove the four screws on the side panel.
2. Tilt the top of the panel towards you.
3. Lift the cover up and off.

### Front Bezel / Control Panel

1. Remove top cover as described before.
2. Remove 2 screws and washers located on the top front
3. Disconnect control panel wires from inside to bezel.
4. Tilt top of Bezel toward you and lift up front base.

## Special Notices:

- All NEC hard drives have been formatted at the factory

## Field Replaceable Units

Controller	OEM Part	IBM Part
G8FHY - I/O board	136-436492-A	61H5890
Multi- 8 board	158-050236-000	66H0384

Internal Hard Drive	OEM Part	IBM Part
100MB, 3.5", ESDI HD	134-500571-159O	67H9043
300MB, 5.25", ESDI HD	136-009366-018A	67H9133

System Boards	OEM Part	IBM Part
G8FHU- System Board	136-260131-500A	67H9695

Diskette Drives	OEM Part	IBM Part
5.25", 1.2MB Floppy	136-009598-410A	67H9148
3.5", 1.44MB Floppy (Thin)	136-009598-425A	20H9520

Video Boards	OEM Part	IBM Part
G8BYL- Video graphics brd.	136-008076-A	47H8600

Cables	OEM Part	IBM Part
5" HD B, ESDI/ST506 cable	808-840069-019A	67H2174
5" Floppy drive cable	158-050059-008	66H7450
COM1/COM2 relay cable	808-840649-001A	47H9824
Printer port relay cable	808-840648-010A	47H9823

Miscellaneous	OEM Part	IBM Part
Lithium battery	136-009534-227A	49H5462
G8EGS- I/O Board	136-260131-503A	67H9204
Fan cooling assembly	808-864027-038A	61H5880
Power supply (325 Watt)	808-891115-001A	49H5550

Memory	OEM Part	IBM Part
G8FHX- Memory exp. mod.	136-260131-502A	67H9203
G8FHW- Memory exp. brd.	136-260131-501A	67H9202