



Figure 1. NEC PowerMate 325, 425, 433, 466

Specifications

Processor

- Intel 386SX/25, 486SX/25, 486DX/33, 486DX2/66MHz

Memory

- **325:** 2MB standard, expands to 20MB
- **425, 433, 466:** 4MB standard, expands to 64MB

I/O Expansion Slots

- Three 8/16 bit slots

Standard Drives

- **325:** 1.44MB, 3.5" and 80 MB hard drive
- **425, 433, 466:** 1.44MB, 3.5" and 120 MB hard drive

Integrated Features

- Diskette drive and IDE controller.
- PS/2 style keyboard and mouse.
- One Parallel port and One RS-232C serial port.
- **325:** Cirrus SVGA 512K video controller.
- **425, 433, 466:** Cirrus SVGA 1MB video controller.

Internal Expansion Bays

- One user accessible 5.25" bay
- One user accessible 3.5" bay
- One internal 3.5" bay

I/O Architecture (Bus s supported)

- Industry Standard Architecture (ISA)

Power Supply

- 145 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

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

System Configuration, Switch SW1 ,For All Units

| Switch | Setting | Function |
|--------|---------|-------------------------------|
| 1 | ON | Turns off built in video |
| | OFF * | Turns on built in video |
| 2 | ON | Turns off diskette controller |
| | OFF * | Turns on diskette controller |
| 3 | ON | Turns off password feature |
| | OFF * | Turns on password feature |
| 4 | ON | Disallows BIOS reprogramming |
| | OFF * | Allows BIOS reprogramming |

* Default

Network Flash Jumper, PowerMate 325 Only

| Jumper | Setting | Function |
|--------|---------|-------------------------|
| J15 | 1-2 * | Turns off network flash |
| | 2-3 | Turns on network flash |

* Default

CPU Select Jumpers, PowerMate 425

| Jumper | Setting | Function |
|---------|---------|------------------------------------|
| JP1,JP2 | 1-2 * | 486SX-QFP, 486DX, 487SX, Overdrive |
| | 2-3 | 486SX-PGA |
| JP15 | 1-2 * | 25/50MHz |
| | 2-3 | 33/66MHz |

* Default

CPU Select Jumpers, PowerMate 433 and 466 only

| Jumper | Setting | Function |
|---------|---------|------------------------------------|
| JP1,JP2 | 1-2 * | 486SX-QFP, 486DX, 487SX, Overdrive |
| | 2-3 | 486SX-PGA |
| JP12 | 1-2 | 486SX-QFP, 487SX Coprocessor |
| | 2-3 * | 486SX-PGA, 486DX, Overdrive |
| JP15 | 1-2 | 25/50MHz |
| | 2-3 * | 33/66MHz |

* Default, JP12 is only installed on upgrade for 433 and 466

When upgrading a 486SX, change jumper before installing a 486DX or 486DX2 processor chip

Printer Port Interrupt, PowerMate 425, 433 and 466 only

| Jumper | Setting | Function |
|--------|---------|-----------|
| JP13 | 1-2 * | LPT1 IRQ7 |
| | 2-3 | LPT1 IRQ5 |

* Default

Network Flash Jumper, PowerMate 425, 433 and 466 only

| Jumper | Setting | Function |
|--------|---------|-------------------------|
| JP14 | 1-2 * | Turns off network flash |
| | 2-3 | Turns on network flash |

* 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 the chassis.

System Cover

How to remove the system cover:

1. Locate the cover release at the top of the system in the back of the unit.
2. Turn cover release with a coin or slotted screwdriver so that the slot is in the vertical position.
3. Slide cover to front of system a few inches.
4. Lift the cover up and off to remove.

Special Notices:

- All NEC hard drives are formatted at the factory and need no formatting and are configured as primary by default.
- All switch settings will not be reflected until the system has been completely repowered.
- IDE drive can not be used with the ST506 or ESDI type controller boards. Remove the Non-IDE boards.
- When removing the processor chips, use a chip puller.
- Multi-Sync monitors contain high voltages, any internal adjustments are to be made only by certified engineer.

| Diskette Drives | OEM Part | IBM Part |
|---------------------|-----------------|----------|
| 3.5", 1.44MB Floppy | 808-870954-101A | 37H8753 |
| 5.25", 1.2MB Floppy | 134-505442-0060 | 22H1966 |

| Cables | OEM Part | IBM Part |
|------------------------|----------------|----------|
| HD IDE signal cable | 158-050324-002 | 55H1077 |
| Floppy signal cable | 158-050503-001 | 66H7465 |
| Keyboard / mouse cable | 158-050366-001 | 55H1086 |

| Miscellaneous | OEM Part | IBM Part |
|-------------------------|-----------------|----------|
| ISA backboard | 158-026135-000A | 22H1962 |
| NEC Mouse PS/2 style | 158-050484-000 | 22H1970 |
| Keyboard PS/2 style | 808-897060-001A | 49H5552 |
| Power supply (145 Watt) | 158-050490-000 | 22H1963 |
| Battery 3.6v | 158-060155-000 | 20H9490 |

Field Replaceable Units

| Memory | OEM Part | IBM Part |
|------------------------------------|----------------|----------|
| 1MB @ 1MB x 9 SIMM | 158-082066-080 | 61H5863 |
| 2MB @ 2MB x 9 SIMM | 158-050294-002 | 61H6760 |
| 4MB @ 4MB x 9 SIMM | 158-082182-000 | 48H7041 |
| 8MB @ 8MB x 9 SIMM | 158-053380-000 | 61H6762 |
| 1MB SIMM, 1 x 9 ² | 158-053409-002 | 61H6763 |
| 1MB @ 256KB x 36 SIMM ² | 158-082315-080 | 61H5865 |
| 4MB SIMM, 1 x 36, 72 Pin | 158-053409-003 | 48H7042 |
| 4MB @ 1MB x 36 SIMM ² | 158-082311-080 | 61H5866 |
| 16MB @ 4MB x 36 SIMM ² | 158-082316-080 | 61H5867 |
| 16MB @ 4MB X 36 SIMM ² | 158-053409-004 | 67H9767 |

¹PowerMate 325 only, ²PowerMate 425, 433, and 466 only

| Internal Hard Drives | OEM Part | IBM Part |
|----------------------|----------------|----------|
| 80MB, 3.5", IDE HD | 158-050395-307 | 47H9506 |
| 120MB, 3.5", IDE HD | 158-050395-304 | 20H9516 |
| 170MB, 3.5", IDE HD | 158-050395-308 | 20H9517 |
| 240MB, 3.5", IDE HD | 158-050395-305 | 20H9532 |

| System Boards | OEM Part | IBM Part |
|-------------------------|-----------------|----------|
| G8KGR- 325 system board | 158-026129-001B | 67H9667 |
| G8KGQ- 425 system board | 158-026128-001A | 48H6996 |
| G8KHE- 433 system board | 158-026128-101A | 48H6999 |
| G8KHG- 466 system board | 158-026128-201A | 61H5862 |