Figure 1. NEC PowerMate V Pentium Series

Specifications

Processor

- Intel Pentium 75, 90, 100, 120, 133Mhz

Memory

- 8MB RAM, expands to 128MB
- 120, 133Mhz: 16MB RAM, expands to 128MB

I/O Expansion Slots

- Desktop: Two ISA, one PCI, one ISA/PCI
- Mini-tower: Three ISA, two PCI, one ISA/PCI
- 120,133Mhz: Two ISA, three PCI, one ISA/PCI

Standard Drives

- 1.44MB floppy and 540-MB HD

Integrated Features

- Integrated graphics (1MB VRAM)
- One parallel and two serial ports
- 32 bit PCI EIDE controller
- PS/2 Keyboard and mouse

Optional Features

- Network Card
- Multi-Media System
- 16MB Memory
- 1.2 GB HD
- Integrated Audio
- CD-ROM Reader (4X)
- 16MB RAM
- Fax/Modem (14.4 / 28.8)

Internal Expansion Bays

- Desktop: One 3.5'', Two 5.25'' user accessible
  One 3.5'' internal bay
- Mini-tower: One 3.5'', Three 5.25'' user accessible
  Three 3.5'' internal bays
- 120,133Mhz: One 3.5'', Three 5.25'' user accessible
  Two 3.5'' internal bays

I/O Architecture (Bus's supported)

- PCI and ISA

Dimensions

- Desktop: 4.4'' h   X   16.2'' w   X   16.2'' d
- Mini-tower: 14.5'' h   X   8.5'' w   X   16.44'' d
- 120,133Mhz: 15.5'' h   X   8.3'' w   X   17'' d

Power Supply

- Desktop: 145 Watt
- Mini-tower: 200 Watt

Tools and Software Requirements

- Phillips head screwdriver
- Needle nose pliers
- Diags and formatted blank diskette
- Anti-static wrist strap

Jumper/Switch Settings

System Board, Processor Settings (75,90,100Mhz)

90 Mhz	100 Mhz	75 Mhz	BF	AT CLK	Function
open	open	closed	open	1-2	75/50Mhz
closed	open	open	open	2-3	90/60Mhz
open	closed	open	open	2-3	100/66Mhz

Processor Voltage Jumper (75,90,100Mhz)

Setting	Function
open [1]	VRE (3.38v)
closed [2]	VR (3.52v)

[1] For V75 and V90 systems, [2] For 100 systems

Password Clear Jumper (75,90,100Mhz)

Setting	Function
open *	Normal operation
closed	Clears password

* Default

CMOS Clear Jumper (75,90,100Mhz)

Setting	Function
open *	Normal operation
closed	Reset CMOS settings

* Default

System Board Switch (120,133 Mhz) -- (SW9G1)

Switch	Setting	Function
1	OFF *	ISA clock speed @ 7.5Mhz / 120Mhz or @ 8.25Mhz /133Mhz
	ON	ISA clock speed @ 10Mhz / 120Mhz or @ 11Mhz /133Mhz
2	OFF	VR @ 3.3 -3.465 V
	ON	VRE @ 3.465- 3.63 V
3	OFF *	Normal operation
	ON	Clear password
4	OFF *	Normal operation
	ON	Reset CMOS
5	OFF *	Enables setup access
	ON	Disable setup access
6	OFF	Internal processor clock @ 3:2 speed
	ON *	Internal processor clock @ 2:1 speed
7,8	ON ,OFF	50 Mhz
	OFF,OFF	60 Mhz (120Mhz)
	OFF,ON	66 Mhz (133Mhz)

* Default

Removal Procedures

Initial:

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 while carefully making note of all their positions.
4. Discharge any static by touching static strap to chassis.

System Cover

Desktop:
1. Remove the two cover screws on rear of unit.
2. Pull the top cover about an inch toward the back of the unit.
3. Lift the top cover up and off the system unit.

Mini-tower:
1. Remove the four screws from the rear of the unit.
2. From the rear grasp the sides and slide the cover about an inch towards the back of the system.
3. Lift the cover up and away from the system.

Special Notices:

Diagnostics

- For CMOS use QAPlus/FE or (F2) during power-ON.
- For Advanced Diags use a PC Diagnostic Utility.
- Normal Post Diags performed on Power UP of system
- Troubleshoot according to errors found during test.

Hardware

- All NEC hard drives are formatted at the factory and needs no formatting and configured as primary drive.
- All switch settings will not be reflected until the system has been completely repowered.
- Multi-Sync monitors contain high voltages, any internal adjustments are to be made only by certified engineer.

BIOS Functions

- All IRQ used by built- in ports are not available for use by any ISA cards in the system.
- The system unit's CMOS is set with the correct hardware settings at the factory. Time and date may be the only thing to change.

Memory

- The SIMMs chips used should be 32 bit (non parity)
- Memory in each bank (Socket 1 & 2 or Socket 3 & 4) can be different size from the other bank but must be the same size within the bank itself.

Field Replaceable Units

Memory	OEM Part	IBM Part
256KB asynchronous cache[1]	158-082623-020	66H7554
256KB asynchronous cache[2]	158-082623-015	66H7553
256KB synchronous cache	158-082624-000	06J8609
Video DRAM, 256KB	158-082270-060	86H6082
Video DRAM, 1MB	158-053685-003	55H2389
4MB @ 4MB X 9 SIMM	158-082552-070	61H5845
8MB @ 8MB X 9 SIMM	158-082553-070	37H8754
4MB EDO memory	158-082629-070	70H6662
8MB EDO memory	158-082630-070	71H1469
4MB @ 1MB X 36 SIMM	158-053409-008	37H8767
8MB @ 2MB X 36 SIMM	158-053409-009	37H8768

Memory	OEM Part	IBM Part
16MB @ 4MB X 36 SIMM	158-053409-010	37H8769
32MB @ 8MB X 36 SIMM	158-053409-011	37H8770

[1] For V75 systems, [2] For V90 and V100 systems

Internal Hard Drive	OEM Part	IBM Part
540MB, IDE HD	158-050395-342	68H6440
850MB, IDE HD	158-050395-364	86H4403
1.08GB, IDE HD	158-050395-348	69H4484
1.3GB, IDE HD	158-050395-346	68H9060
1.6GB, IDE HD	158-050395-361	86H4401
1.6GB, IDE HD	158-050395-344	86H6071

Diskette Drives	OEM Part	IBM Part
3.5'', 1.44MB Floppy	158-050966-000	86H5193
5.25'', 1.2MB Floppy	158-053476-000	22H1988

Cables	OEM Part	IBM Part
Floppy signal cable	158-050503-001	66H7465
HD IDE signal cable	158-050383-000	66H7460
CD-ROM IDE signal cable	158-050562-004	61H7419
Audio cable for CD ROM	158-050824-000	66H7520
MIDI port cable, Internal	158-050903-000	86H5192
7' RJ11 phone cable	158-050519-001	86H5198
Floppy signal cable	158-050578-001	66H7477

CD-ROM Drives	OEM Part	IBM Part
CD-ROM, 4x	158-050849-000	67H9723
CD-ROM, 6x	158-050982-000	86H4404

Miscellaneous	OEM Part	IBM Part
Fan assembly	158-050865-006	66H7525
Network board *	158-050796-000	66H0436
PCI/ISA backboard	158-026204-000A	67H9683
Power supply (145 Watt)	158-050730-000	61H7412
Power supply (200 Watt)	158-050684-000	48H7032
CMOS 3v battery	158-060367-000	66H7549
RTC Module	158-082595-000	66H7552
Microphone	158-050878-000	66H7528
Keyboard PS/2 style	158-050939-000	70H3703
PCI/ISA backboard, 5 slot	158-026206-000A	86H6070
NEC PS/2 style mouse	158-050789-000	86H6075

* For network ready systems only

System Boards	OEM Part	IBM Part
System bd. Multimedia	158-050866-003C	71H1470
System bd. no-multimedia	158-050866-004C	86H3264

Processors	OEM Part	IBM Part
Pentium 75 Mhz	158-082502-006	67H9771
Pentium 90 Mhz	158-082502-007	61H5840
Pentium 100 Mhz	158-082502-012	62H1015
Pentium 120 Mhz	158-082502-009	86H5179
Pentium 133 Mhz	158-082502-015	86H5180
Pentium 133 Mhz	158-082502-016	70H8623
Heat-sink for Pentium only	158-060324-001	70H3241