

NEC PowerMate Express 486SX-20e/25e, 486-33e/50e/33e (Enhanced), 486DX2-50e/66e

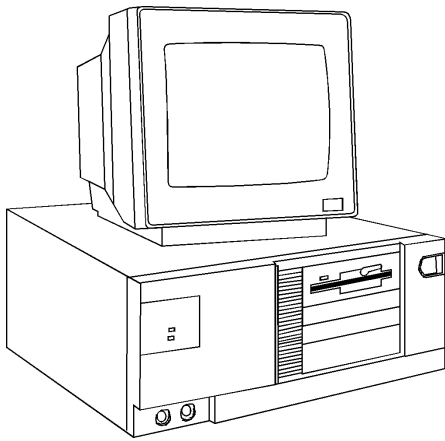


Figure 1. NEC PowerMate Express
486SX-20e/25e
486-33e/50e/33e (Enhanced),
486DX2-50e/66e

Specifications

Processor

- Intel 486SX-20/25, 486DX-33/50, 486DX2-50/66MHz

Memory

- **486SX-20e/25e, 486-33e/50e:**
4MB standard, expands to 64MB
- **486-33e(Enhanced), 486DX2-50e/66e:**
8MB standard, expands to 256MB

I/O Expansion Slots

- Five 32 bit EISA expansion slots

Diskette Drive

- 1.44MB drive standard

Hard Drives

- **486SX-20e/25e:** 120MB or 240MB IDE
- **486-33e/50e:** 120MB IDE or 240MB IDE or 535MB SCSI
- **486-33e (Enhanced):** 535MB SCSI
- **486DX2-50e/66e:** 240MB IDE or 535MB SCSI

Integrated Features

- Diskette and IDE controller
- One parallel port and Two serial ports
- Flash ROM, 8K Internal cache, 128K external cache
- **486-33e (Enhanced), 486DX2-50e/66e:** Local bus SVGA
- **486-50e:** 1024 EVGA

Internal Expansion Bays

- One 5.25" slim line 1" front accessible bay
- Two 5.25" half size 1.6" front and rear accessible bays

I/O Architecture (Bus s supported)

- Extended Industry Standard Architecture (EISA)

Power Supply

- 285 Watt

Optional Features

- **All Models:** Internal/External CDROM
- **486SX-20e/25e:** VGA, EVGA-1 MB, BitBit EVGA-1MB
- **486-33e:** VGA, EVGA-1 MB, BitBit EVGA-1MB

CMOS Access

- QAPlus/FE

Diagnostics

- Normal Post Diags performed on Power UP of system.
- NEC EISA configuration utility diskette

Tools and Software Requirements

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

Jumper/Switch Settings

System Board G8JGE For: 486SX-20e/25e, 486-33e/50e

Jumper	Setting	Function
3F1	1-2	Password feature off
	2-3 *	Password feature on
11B5	open *	I/O recovery off
	shorted	I/O recovery on
15A1	open *	NEC VGA adapter not used
	shorted	NEC VGA adapter installed
15C3	1-2 *	LPT1 = IRQ7
	2-3	LPT2 = IRQ7
	4-5	LPT1 = IRQ5
	5-6 *	LPT2 = IRQ5
15K1	open	Manufacturing loop jumper off
	shorted	Manufacturing loop jumper on
17H1	1-2	Write data to flash ROM on
	2-3 *	Write data to flash ROM off
18F1	1-2 *	BIOS ROM select 27C256 (28F256)
	2-3	BIOS ROM select 27C512 (28F512)

* Default

Processor Board, Test Mode For: 486SX-20e/25e

Jumper	Setting	Function
15A2 &	1-2 *	Normal operation
15A3	2-3	Test mode

* Default

System Board G8LKE For: 486-33e (Enh.), 486DX2-50e/66e

Jumper	Setting	Function
3F1	1-2	Password feature off
	2-3 *	Password feature on
11B5	open *	I/O recovery off
	shorted	I/O recovery on
15A1	open	NEC VGA adapter not used
	shorted	NEC VGA adapter installed
	*	
15K1	open *	Manufacturing loop jumper off
	shorted	Manufacturing loop jumper on
16L2	open *	Internal FDD controller on
	shorted	Internal FDD controller off
17K3	open *	Flash ROM flashable
	shorted	Flash ROM not flashable

* 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 by touching static strap to chassis.

System Cover

How to remove cover:

1. Unlock the cover lock if locked.
2. Loosen the two rear panel thumb screws.
3. Slide cover to the front of system a few inches.
4. To remove, pull sides outward and lift up.

Field Replaceable Units

Memory	OEM Part	IBM Part
4MB SIMM, 1 x 36	136-261977-704A	61H6014
16MB SIMM, 4 x 36	136-261977-705A	48H6416
Memory expansion board ¹	136-262258-007A	48H6418
Memory expansion board ²	136-263477-401A	61H6018
32MB SIMM, 8 x 36	136-262705-010A	61H6016
SCSI adapter memory mod.	158-050334-102	61H6041

¹ For 486SX-20e/25e, 486-33e/50e

² For 486-33e (Enhanced), 486DX2-50e/66e

Controllers and Adapters	OEM Part	IBM Part
EISA SCSI host adapter	158-050334-203	61H6039
SCSI adapter smart ROM	158-050334-201	48H7017
SCSI adapter cache board	158-050334-205	61H6042
ESDI caching controller	158-050334-130	47H9479

Video Boards	OEM Part	IBM Part
Express - VGA adapter	158-050494-000	67H9709
BASE - VGA adapter	158-053395-003	61H6038
BitBlit - EVGA adapter	158-053395-002	67H9752

Internal Hard Drives	OEM Part	IBM Part
45MB, 3.5", IDE HD	134-500988-099O	67H9045
120MB, 3.5", IDE HD	808-880145-001A	47H3851
140MB, 5.25", ESDI HD	136-008174-620A	49H6837
300MB, 5.25", ESDI HD	136-008174-621A	67H9117
300MB, SCSI HD	136-262258-009A	61H6029
600MB, SCSI HD	136-262258-010A	47H9500
600MB, 5.25", SCSI HD	134-505034-0020	67H9046
1.3GB, SCSI HD	158-050395-501	55H1796

CD-ROM Drive	OEM Part	IBM Part
CD-ROM External, CDR-73M	09600704	67H8008

System Boards	OEM Part	IBM Part
System Board, 486-33e	158-053306-002	61H6013

Processor Boards	OEM Part	IBM Part
Processor Brd., 486SX-20e	158-050393-000	61H6019
Processor Brd., 486-SX25e	158-050394-001	48H7019
Processor Brd., 486-33e	158-050394-000	48H6417
Processor Brd., 486-50e	136-262848-501A	61H5884
Processor Brd., 486-33e Enh.	136-263293-501A	61H5885
Processor Brd., 486DX2-50e	136-263294-501A	61H5886
Processor Brd., 486DX2-66e	158-050504-000A	61H5887

Diskette Drives	OEM Part	IBM Part
3.5", 1.44MB Floppy	134-505642-206O	48H6251
3.5", 1.44MB Floppy (Thin)	808-870954-001A	20H9520
5.25", 1.2MB Floppy	136-261977-404A	20H9508

Cables	OEM Part	IBM Part
HD/FD front power cable	808-858649-001A	67H2206
HD rear drive power cable	808-858649-002A	67H2207
HD, IDE data cable	808-857766-003A	22H0530
SCSI HD internal cable	158-050343-002	66H7456
5", Floppy signal cable	808-840655-014A	67H2179
Keyboard / mouse cable	808-858650-001A	67H2208
IDE / LED cable	808-858596-002A	67H2205
5", ESDI HD, signal cable	808-840656-005A	67H2180
5" HD B, ESDI/ST506 cable	808-840069-019A	67H2174
SCSI HD external cable	136-260968-516A	66H6897

Miscellaneous	OEM Part	IBM Part
Power supply w/ fan	136-261977-100A	49H5551
Auxiliary fan	158-050414-000	61H6032
Keyboard PS/2 style	808-897060-001A	49H5552
Lithium battery	804-020612-002A	49H5462
Fan	808-864027-052A	67H2246
NEC PS/2 style mouse	158-050484-000	22H1970

Tape Drives	OEM Part	IBM Part
525MB SCSI-2 tape drive	158-050389-100	37H8553
2.0/8.0GB DAT tape drive	158-050389-200	37H8554