IBM PS/2 (Enhanced Model 90 XP 486) - Technical Specifications

IBM Enhanced Personal System/2 Model 90 XP 486

General information
Machine type: 9590
Announce date: March, 1993

Excerpt from the original announcement letter;

"IBM brings enhanced ergonomic features and added function to its popular Personal System/2 (R) (PS/2(R)) Model 90 XP 486 family of products (0LA and 0LF) with new ISO capable models featuring Intel 486DX2-50 microprocessor. The new models are based on existing 8590 technology and feature greatly enhanced graphics support. The new 9590 models support all features and options currently available on the corresponding 8590 models. As with all PS/2 Model 90 XP 486 systems, these feature Micro Channel architecture and an upgradeable processor complex card and are designed to take advantage of today's technology, as well as future processor enhancements. All models feature pre-installed OS/2 2.00.1 supporting 16 and 32-bit applications, an IBM mouse, a 2.88MB diskette drive, 8MB of system memory, and the XGA(tm)-2 Display Adapter/A. One model features a new, high capacity 212MB (million bytes) fixed disk drive. The other model features a new, capacity 400MB (million bytes) fixed drive."

System characteristics
Microprocessor: Intel 80486DX-2
Clock speed: 50Mhz
Coprocessor: integrated 80487 on 486DX2
Type of BUS: 32-bit Micro Channel
Total number of expansion slots: 4 (desktop case)
Ports: PS/2 keyboard, PS/2 mouse, 2 DMA serial, DMA parallel, XGA-2,

Memory
Min/Max on system board: 8/64MB
Type of memory:
RAM: DRAM (PS/2 72-pin SIMM) 70ns parity checked (8 sockets)
ROM: 128kb
Cache: 8kb L1, 0kb L2

Physical description
Power supply: 194w, 110-220VAC manual voltage switch
Weight: 11.4kg (25 lbs) (one fixed disk installed)
Dimensions (HxWxD): (140 x 440 x 430mm)

Mass storage
Drive bays: 4 (3 x 3.5" HH, 1 x 5.25" HH)
Floppy Disk
Size: 3.5 inch half-height
Capacity: 1.44MB

Hard disk
Size: 3.5 inch half-height
Capacity: 212 (0LA), 400MB (0LF)
Access time:
Interface: SCSI (PS/2 bus master SCSI adapter/A with cache)

Display
Size:
Display type: Optional Analog CRT
Graphics modes supported: Integrated 32-bit XGA-2 Display adapter/A (1MB)

1024x768, 256 colours
640x480, 65536 colours

Keyboard
Type: 101 key enhanced, 122 key host connect, 84 key space saving

Software
Operating system: IBM PC DOS Versions 5.0, OS/2 V.2, AIX PS/2 1.3

Configurations
Various memory, diskette drive, hard drive, monitor, and keyboard configurations including;
9590-0LA - System Unit 486DX2-50, 8MB, 212MB, 2.88, 101 keyboard
9590-0LF - System Unit 486DX2-50, 8MB, 400MB, 2.88, 101 keyboard
9590-KLA - System Unit 486DX2-50, 8MB, 212MB, 2.88, 101 keyboard, OS/2 2.1
9590-KLG - System Unit 486DX2-50, 8MB, 540MB, 2.88, 101 keyboard, OS/2 2.1
9590-DLA - System Unit 486DX2-50, 8MB, 212MB, 2.88, 101 keyboard, Choice of PC DOS 6.1/Win 3.1 or OS/2 2.00.1 or OS/2 2.1
9590-DLG - System Unit 486DX2-50, 8MB, 540MB, 2.88, 101 keyboard, Choice of PC DOS 6.1/Win 3.1 or OS/2 2.00.1 or OS/2 2.1

Options

Description (#Feature Number) (Part Number)

SYSTEM BOARD MEMORY:

- IBM Personal System/2 2MB Memory Module Kit-70ns (#0129) (6450902)
- IBM Personal System/2 4MB Memory Module Kit-70ns (#0128) (6450128)
- IBM Personal System/2 1MB Memory Module Kit-85ns (#5212) (6450603)
- IBM Personal System/2 2MB Memory Module Kit-85ns (#5213) (6450604)
- IBM Personal System/2 2MB Memory Module Kit-80ns (#5214) (6450608)
- IBM Personal System/2 4MB Memory Module Kit-80ns (#3933) (87F9977)

MEMORY CACHE:

- IBM Personal System/2 256KB Cache Option (#1098) (6451095)

DASD:

- IBM Personal System/2 1.44MB 3.5" Slim High Diskette Drive (#1072) (6451072)
- IBM Personal System/2 60MB SCSI Fixed Disk Drive (#1049) (6451049)
- IBM Personal System/2 80MB SCSI Fixed Disk Drive (#1045) (6451045)
- IBM Personal System/2 120MB SCSI Fixed Disk Drive (#1050) (6451050)
- IBM Personal System/2 160MB SCSI Fixed Disk Drive (#1046) (6451046)
- IBM Personal System/2 320MB SCSI Fixed Disk Drive (#1108) (6451108)
- IBM Personal System/2 Micro Channel SCSI Adapter (#1005) (6451109)
- IBM Personal System/2 Micro Channel SCSI Adapter with Cache (#1018) (6451110)
- IBM Personal System/2 Micro Channel SCSI Adapter External Terminator (#1039) (6451039)
- IBM Personal System/2 Fixed Disk Drive Kit D (#1119) (6451120)
- IBM Personal System/2 External Enclosure for SCSI Devices 3511-003
- IBM Personal System/2 CD-ROM Drive (#1113) (6451113)
- IBM Personal System/2 External CD-ROM Drive 3510-001
- IBM Personal System/2 5.25-inch Slim High Diskette Drive (#1066) (6451066)
- IBM Personal System/2 5.25-inch Diskette Adapter/A (#1007)(6451007)
- IBM Personal System/2 4869-001 5.25-inch 360KB External Diskette Drive
- IBM Personal System/2 4869-002 5.25-inch 1.2MB External Diskette Drive
- IBM Optical Disk Drive 3363-A11
- IBM Optical Disk Drive 3363-B01

COMMUNICATIONS:

- IBM Personal System/2 Adapter/A for ETHERNET Networks (#1091)(6451091)
- IBM Personal System/2 Dual Async Adapter/A (#1014)(6451013)
- The IBM 3270 Connection (#2000)(74F3465)
- IBM S/370 Channel Emulator/A (#3205) (1674899)
- IBM System 36/38 Work Station Emulation Adapter (#6279)(69X6279)
- IBM PC Network Baseband Adapter/A (#1223)(1501223)
- IBM PC Network Adapter II/A (#1222)(1501222)
- IBM PC Network Adapter II/A - Frequency 2 (#5647)(96X5647)
- IBM PC Network Adapter II/A - Frequency 3 (#5648)(96X5648)
- IBM Token-Ring Network Adapter/A (#4790)(69X8138)
- IBM Token-Ring Network Adapter/A - Remote Program Load (#8881) (25F8887)
- IBM Token-Ring Network 16/4 Adapter/A (#1133) (16F1133)-FRU level #53F7748
- IBM Personal System/2 300/1200 Internal Modem/A (#0349)(6450349)
- IBM Personal System/2 300/1200/2400 Internal Modem/A (#1755) (94X1755)
- IBM Personal System/2 Multi-protocol Adapter/A (#3043)(6451003)
- IBM Realtime Interface Co-Processor Multiport/2 (#6263 or #6247) (09F1897 or 16F1820) *
- IBM Realtime Interface Co-Processor Multiport/2 8 Port RS-232 Interface Board (#6265) (09F1952)
- IBM Realtime Interface Co-Processor Multiport/2 8 Port RS-422A Interface Board (#6326) (15F8852)
- IBM Realtime Interface Co-Processor Multiport/2 6 Port RS-232C Synchronous Interface Board (#6327) (15F8861)
- IBM Realtime Interface Co-Processor Multiport/2 4 Port RS-232 Interface Board (#6267) (09F1955)
- IBM Realtime Interface Co-Processor Multiport/2 RS-232/RS-422 Interface Board

(#6266) ((09F1958)

- IBM Realtime Interface Co-Processor Portmaster Adapter/A (#6360, 6364 or 6368) (53F2601, 53F2604 or 53F2607) *
- IBM Realtime Interface Co-Processor Portmaster 8 Port RS-232 Interface Board/A (#6362) (53F2610)
- IBM Realtime Interface Co-Processor Portmaster 8 Port RS-422 Interface Board/A (#6363) (53F2613)
  IBM Personal System/2 Model 90 XP 486 supports a maximum of two of these adapters.
- IBM Realtime Interface Co-Processor Surge Protection Adapter (#6361) (53F2625)
- IBM X.25 Interface Co-Processor/2 (#6401) (16F1858)
- IBM Display Station Emulation Adapter/A (#7743)(92X0743)
- Store Controller Kit (#6500) (83X8187)
- Second Store Loop Adapter/A (#6701) (83X7575)
- IBM Personal System/2 FaxConcentrator Adapter/A (#2530) (94X2530)

* Due to physical limitations of these adapters, they cannot be installed in slot #4 of the PS/2 Model 90 XP 486 systems.

PROCESSOR UPGRADE:

- IBM Personal System/2 486/33 Processor Upgrade Option (#5264) (6451094)
  The processor upgrade installation is provided by IBM or an IBM Authorized Remarketer.

DISPLAYS AND DISPLAY ADAPTERS:

- IBM Personal System/2 XGA Display Adapter/A (#5887) (75X5887)
- IBM Personal System/2 M-Motion Video Adapter (#3487) (34F3087) **, $
- IBM Personal System/2 Video Memory Expansion Option (#4007) (75X5889)
- IBM Personal System/2 Image Adapter/A (#4324)(07F4400)
- IBM Personal System/2 Image Adapter/A 1MB (#0072) (44F9914)
- IBM Personal System/2 Image Adapter/A 3MB (#0073) (44F9919)
- IBM Personal System/2 Image Adapter/A 3MB 6091 (#0074) (44F9921)
- IBM Personal System/2 Image Adapter/A Printer/Scanner Option (#1632) (07F4402) (Requires #4324 or #0072 or #0073 or #0074)
- IBM Personal System/2 Image Adapter/A Memory Expansion Kit (#3231) (07F4406) (Requires #1632)
- IBM Personal System/2 8503 Monochrome Display **
- IBM Monochrome Display 8506 (Requires #4324 or #0072 or #0073)
- IBM Monochrome Display 8507
- IBM Monochrome Display 8508 (Requires #4324 or #0072 or #0073)
- IBM Personal System/2 Colour Display 8512 **
- IBM Personal System/2 Colour Display 8513 **
- IBM Personal System/2 Colour Display 8514
- IBM Personal System/2 Colour Display 8515
- IBM 6091 Colour Display (Requires #0074)

** - Supports VGA or lower resolution modes only.
$ - The IBM Personal System/ M-Motion Video Adapter requires the M-Motion Adapter

Software Diskette version 1.01 or higher.

Plus many more IBM and 3rd party adapter cards...
Note: Options may no longer be available from IBM.