

HP Vectra PC Service Handbook 7th Edition



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Preface

This document provides quick reference information for the current HP Vectra product line. It is intended to be used by HP-qualified service personnel to help with the installation, servicing, and repair of HP Vectra personal computers.

HP Vectra products covered by this handbook are listed below (current products are shown in **bold text**, discontinued products are shown in *italic text*):

Vectras in the medium-profile desktop box:



- **HP Vectra XM2 PC Series**
- **HP Vectra XP PC Series**
- **HP Vectra VL2 PC Series**
- **HP Vectra VL2 5/60 PC**
- **HP Vectra M2 PC Series**
- **HP Vectra 486VL PC Series**
- **HP Vectra 486XM PC Series**
- **HP Vectra 486M & MI PC Series**

Vectras in the low-profile desktop box:



- **HP Vectra N2 PC Series**
- **HP Vectra 486N & NI (D27xxA) PC Series**
- **HP Vectra 386/33N & NI (D27xxA) PC Series**
- *HP Vectra 486N (D26xxA) PC Series*
- *HP Vectra 386/16N, 386/20N & 386/25N PCs*

Vectras in the full-height desktop box:



- **HP Vectra XU PC Series**
- **HP Vectra 486U PC Series**
- *HP Vectra 486s/20 PC*
- *HP Vectra 386s/20 & 386s/25 PCs*

Vectras in the desktide box:



- *HP Vectra 486/33ST PC*
- *HP Vectra 486/66ST PC*
- *HP Vectra 486 PC*
- *HP Vectra 486/25T PC*
- *HP Vectra 486/33T PC*
- *HP Vectra RS/16 PC*
- *HP Vectra RS/20 PC*
- *HP Vectra RS/20C PC*
- *HP Vectra RS/25C PC*

Vectras in the classic desktop box:



- *HP Vectra 386/25 PC*
- *HP Vectra 286/12 PC*
- *HP Vectra QS/16 PC*
- *HP Vectra QS/16S PC*
- *HP Vectra QS/20 PC*
- *HP Vectra ES PC*
- *HP Vectra ES/12 PC*

HP Vectra Product Line Overview

Vectra Model	Micro-processor	Co-processor	Accessory Slots ¹	Disk Controller	Video Controller	Max. RAM
Medium-Profile Desktop Vectras (four shelves for disks)						
Vectra XP PC Series²						
Vectra 60/XP	Pentium™ -60	Integrated in Pentium™ processor	Two 16-bit ISA slots, 1 combo (ISA or PCI), 1 PCI	Integrated IDE/ISA	Integrated Ultra VGA + 2/PCI (2 MB, upgradeable to 4 MB)	192 MB
Vectra XM2 PC Series						
4/50	486DX2-50	Integrated in 486DX microprocessor	Two 16-bit ISA slots, 1 combo (ISA or PCI), 1 PCI	Integrated Fast IDE controller	Integrated Ultra VGA 2 PCI (1 MB, upgradeable to 2 MB)	96 MB
4/50i ³	486DX2-50					
4/66	486DX2-66					
4/66i ³	486DX2-66					
4/100	486DX4-100					
4/100i ³	486DX4-100					
Vectra VL2 PC Series						
4/25e	486SX-25	None	Four 16-bit ISA slots	ISA Bus IDE controller	Integrated Ultra VGA (512 KB, upgradeable to 1 MB)	64 MB
4/33se	486SX-33					
4/50se	486 SX2-50					
4/50e	486 DX2-50					
4/66e	486 DX2-66	Integrated in 486DX microprocessor				
4/33s	486SX-33	None		Local Bus IDE controller	Integrated Ultra VGA (1 MB, standard)	
4/50	486DX2-50	Integrated in 486DX microprocessor				
4/66	486DX2-66					
4/100	486DX4-100					
Vectra VL2 5/60 PC						
5/60	Pentium™ 60	Integrated in microprocessor	Two 16-bit ISA slots, 1 combo (ISA or PCI), 1 PCI	Fast IDE controller on PCI bus	PCI video board (1 MB, upgradeable to 2 MB)	192 MB

1 Accessory slots may be occupied by a disk controller board and a video board

2 The Vectra NI, MI, XM, and XP have an integrated LAN adapter.

3 Vectra XM2 model with integrated LAN adapter.

Vectra Model	Micro-processor	Co-processor	Accessory Slots ¹	Disk Controller	Video Controller	Max. RAM
Medium-Profile Desktop Vectras (continued)						
Vectra M2 PC Series						
4/33s	486SX-33	None	Three full-length 16-bit ISA slots, 1 combo (ISA or VL)	Fast IDE Controller on Local Bus	Integrated Ultra VGA (1 MB, upgradeable to 2 MB)	96 MB
4/33si ²	486SX-33					
4/50	486DX-50	Integrated in microprocessor				
4/50i ²	486DX-50					
4/66	486DX-66					
4/100	DX4-100					
486VL PC Series						
486/25VL	486SX-25	487SX-25	Four 16-bit ISA slots	Integrated IDE	Integrated Ultra VGA (512 KB, upgradeable to 1 MB)	32 MB no parity
486s/33VL	486SX-33	None				
486/33VL	486DX-33	Integrated in 486DX microprocessor				
486/66VL	486DX2-66					
486XM PC Series³						
486s/33XM	486SX-33	487SX-33	Four 16-bit ISA slots	Integrated IDE	Integrated Ultra VGA + 2 (1 MB, upgradeable to 2 MB)	64 MB
486/33XM	486DX-33	Integrated in 486DX microprocessor				
486/50XM	486DX2-50					
486/66XM	486DX2-66					
486M & MI PC Series³						
486/25M & MI	486SX-25	487SX-25	Four 16-bit ISA slots	Integrated IDE	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	48 MB
486s/33M & MI	486SX-33	487SX-33				
486/33M & MI	486DX-33	Integrated in 486DX microprocessor				
486/66M	486DX2-66					

1 Accessory slots may be occupied by a disk controller board and a video board

2 Vectra M2 model with integrated LAN adapter.

3 The Vectra MI, XM, and XP have an integrated LAN adapter.

HP Vectra Product Line Overview (continued)

Vectra Model	Micro-processor	Co-processor	Accessory Slots ¹	Disk Controller	Video Controller	Max. RAM
Low-Profile Desktop Vectras (two shelves for disks)						
Vectra N2 PC Series						
4/25	486SX-25	None	Three full-length 16-bit ISA slots	Fast IDE Controller on Local Bus	Integrated Ultra VGA (1 MB, upgradeable to 2 MB)	96 MB
4/25si ²	486SX-25					
4/33s	486SX-33	None				
4/33si ²	486SX-33					
4/50	486DX-50	Integrated in microprocessor				
4/50i ²	486DX-50					
4/66	486DX-66					
486N (D26xxA) and 486N & NI (D27xxA) PC Series³						
486/25N & NI	486SX-25	487SX-25	Three 16-bit ISA slots	Integrated IDE	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	48 MB
486s/33N & NI	486SX-33	487SX-33				
486/33N & NI	486DX-33	Integrated in 486DX microprocessor				
486/50N	486DX2-50					
486/66N	486DX2-66					
386/16N, 386/20N, 386/25N, and 386/33N & NI PC Series						
386/16N	386SX-16	387SX-16 or 387SL	Three 16-bit ISA slots	Integrated IDE	Integrated Super VGA (256 KB)	16 MB
386/20N	386SX-20	387SX-20 or 387SL				
386/25N	386SX-25	387SX-25 or 387SL				
386/33N & NI ⁴	386SX-33	387SL Cyrix®			Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	

1 Accessory slots may be occupied by a disk controller board and a video board

2 Vectra N2 model with integrated LAN adapter.

3 The Vectra NI has an integrated LAN adapter.

4 The Vectra 386/33NI system boards have an integrated LAN adapter.

HP Vectra Product Line Overview (continued)

Vectra Model	Micro-processor	Co-processor	Accessory Slots ¹	Disk Controller	Video Controller	Max. RAM
Full-Height Desktop Vectras (four shelves for disks)						
XU PC Series						
XU 5/90	Pentium™	Integrated in Pentium™ processor	Three 16-bit EISA slots, 1 combo (ISA or PCI), 1 PCI	Integrated SCSI/IDE	Integrated Ultra VGA + (2 MB)	256 MB
XU 5/90C					Matrox Graphics Accelerator (2 MB, upgradeable to 4 MB)	
486U PC Series						
486/25U	486SX-25	487SX-25	Five 32-bit EISA slots	Integrated IDE	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	64 MB
486/33U	486DX-33	Integrated in 486DX microprocessor				
486/50U						
486/66U						
486s/20 PC and 386s PCs						
486s/20	486SX-20	487SX-20	Five 32-bit EISA slots	Integrated IDE	Ultra VGA board	64 MB
386s/20	386SX-20	387SX-20 or 387SL	Five 16-bit ISA slots	Integrated IDE	Integrated Super VGA (256 KB, upgradeable to 512 KB)	16 MB
386s/25	386SX-25	387SX-25 or 387SL				

1 Accessory slots may be occupied by a disk controller board and a video board



HP Vectra Product Line Overview (continued)

Vectra Model	Micro-processor	Co-processor	Accessory Slots ¹	Disk Controller	Video Controller	Max. RAM
Deskside PCs (six shelves for disks)						
486ST PCs						
486/33ST	486DX-33	Integrated in 486DX microprocessor	Eight 32-bit EISA slots	Integrated IDE	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	64 MB
486/66ST	486DX2-66					
486/25 PC and 486T PCs						
486/25	486DX-25	Integrated in 486DX microprocessor. Plus Weitek 4167 on 486/33T	Eight 32-bit EISA slots	Integrated IDE	None	64 MB
486/25T	486DX-25					
486/33T	486DX-33					
RS PCs						
RS/16	386DX-16	387DX or Weitek 3167	Two 8-bit & six 16-bit ISA	ST-506, or ESDI, or high-perf ESDI, or IDE board	VGA board	16 MB
RS/20	386DX-20					
RS/25	386DX-25					
RS/33	386DX-33					
Classic Desktop Vectras (three shelves for disks)						
386/25	386DX-25	387-25 or Weitek 3167	One 8-bit & six 16-bit ISA slots	IDE board	Super VGA board	32 MB
286/12	286-12	287-12	One 8-bit & four 16-bit ISA slots	ST-506 or IDE board	Integrated Super VGA (256 KB)	8 MB (on memory board)
QS PCs						
QS/16S	386SX-16	387SX-16 or 387SL	One 8-bit & six 16-bit ISA slots	ST-506, or IDE ² or ESDI ² board	VGA or Super VGA board	8 MB
QS/16	386DX-16	387DX-16				16 MB ³
QS/20	386DX-20	387DX-20				
ES PCs						
ES	286-8	287	Two 8-bit & five 16-bit ISA slots	ST ² -506 board	VGA board	8 MB (on memory board)
ES/12	286-12					

1 Accessory slots may be occupied by a disk controller board and a video board

2 ST: Seagate Technology; IDE: Integrated Drive Electronics, also known as embedded AT; ESDI: Enhanced Small Device Interface.

3 (8 MB on processor board & 8 MB on memory board)

HP Vectra Model Numbers

Model Number	HP Vectra
D1210A	HP Vectra ES and ES/12 Refer to Chapter 24.
D1215A	
D1220A	
D1226A	
D1227A	
D1310A	
D1315A	
D1320A	
D1326A	
D1327A	
D1340A	
D1346A	
D1347A	
D1410A	
D1411A	
D1412A	
D1414A	
D1415A	
D1417A	
D1419A	
D1420A	
D1421A	
D1422A	
D1422B	
D1424A	
D1424B	
D1425A	
D1427A	
D1430A	
D1432A	
D1432B	
D1434A	
D1434B	
D1435A	
D1437A	
D1439A	

Model Number	HP Vectra
D1460A	<p>HP Vectra QS</p> <p>Refer to Chapter 23.</p>
D1461B	
D1461C	
D1462A	
D1462B	
D1462C	
D1464A	
D1464B	
D1464C	
D1465A	
D1470A	
D1472A	
D1472B	
D1474A	
D1474B	
D1475A	
D1477A	
D1481B	
D1481C	
D1482B	
D1486B	
D1487B	
D1488B	
D1488C	
D1489B	
D1489C	
D1492B	
D1496B	
D1497B	
D1491B	
D1498B	
D1499B	

Model Number	HP Vectra
D1500A	<p>HP Vectra RS</p> <p>Refer to Chapter 20.</p>
D1501A	
D1502A	
D1600A	
D1601A	
D1602A	
D1603A	
D1604A	
D1606B	
D2001A	
D2002A	
D2003A	
D2004A	
D2020A	
D2021A	
D2022A	
D2023A	
D2024A	
D2025A	
D2080A	
D2082A	
D2083A	
D2219C	<p>HP Vectra 486 & 486T</p> <p>Refer to Chapter 19.</p>
D2220A	
D2220C	
D2221A	
D2221C	
D2222A	
D2222C	
D2223A	
D2223C	
D2236A	
D2237A	
D2238A	
D2239A	
D2240A	

Model Number	HP Vectra
D2260A	<p>HP Vectra 486s/20</p> <p>Refer to Chapter 16.</p>
D2261A	
D2262A	
D2263A	
D2264A	
D2265A	
D2266A	<p>HP Vectra 486U</p> <p>Refer to Chapter 15.</p>
D2268A	
D2268B	
D2269A	
D2269B	
D2272A	
D2274A	
D2274B	
D2275A	
D2275B	
D2278A	
D2280A	
D2280B	
D2281A	
D2284A	
D2286A	
D2286B	
D2287A	
D2360A	<p>HP Vectra 386/25</p> <p>Refer to Chapter 21.</p>
D2361A	
D2362A	
D2363A	
D2364A	
D2371A	
D2460A	<p>HP Vectra 286/12</p> <p>Refer to Chapter 22.</p>
D2461A	
D2462A	
D2463A	
D2464A	
D2467A	

Model Number	HP Vectra
D2470A	<p>HP Vectra 386/16N</p> <p>Refer to Chapter 13.</p>
D2471A	
D2471B	
D2472A	
D2473A	
D2473B	
D2474A	
D2480A	<p>HP Vectra 386/20N</p> <p>Refer to Chapter 13.</p>
D2481A	
D2481B	
D2482A	
D2483A	
D2483B	
D2484A	
D2486A	
D2490A	<p>HP Vectra 386/25N</p> <p>Refer to Chapter 13.</p>
D2491A	
D2492A	
D2493A	
D2494A	
D2495A	
D2496A	
D2497A	
D2498A	
D2512A	<p>HP Vectra 386s</p> <p>Refer to Chapter 17.</p>
D2513A	
D2514A	
D2515A	
D2570A	
D2571A	
D2572A	
D2574A	
D2575A	
D2578A	
D2579A	

Model Number	HP Vectra	
D2635A	<p>HP Vectra 486ST</p> <p>Refer to Chapter 18.</p>	
D2636A		
D2637A		
D2638A		
D2639A		
D2640A		
D2641A		
D2642A		
D2646A		
D2647A		
D2648A		
D2610A		<p>HP Vectra 486N</p> <p>Refer to Chapter 12.</p>
D2611A		
D2612A		
D2613A		
D2614A		
D2615A		
D2620A		
D2621A		
D2622A		
D2623A		
D2624A		
D2625A		
D2631A		
D2633A		
D2681A		
D2683A		
D2701A	<p>HP Vectra 386/33N & NI</p> <p>Refer to Chapter 11.</p>	
D2702A		
D2703A		
D2704A		
D2707A		
D2712A		
D2751A	<p>HP Vectra 486N & NI</p> <p>Refer to Chapter 10.</p>	
D2752A		
D2753A		
D2761A		
D2762A		
D2763A		
D2771A		
D2772A		
D2773A		
D2793A		

Model Number	HP Vectra	
D2851A	<p>HP Vectra 486M & MI</p> <p>Refer to Chapter 8.</p>	
D2852A		
D2853A		
D2855A		
D2857A		
D2857B		
D2859A		
D2861A		
D2862A		
D2863A		
D2865A		
D2867A		
D2871A		
D2872A		
D2872B		
D2873A		
D2873B		
D2874A		
D2877A		
D2877B		
D2892A		
D2893A		
D2901A		<p>HP Vectra 486XM</p> <p>Refer to Chapter 7.</p>
D2902A		
D2903A		
D2911A		
D2911B		
D2912A		
D2913A		
D2913B		
D2914A		
D2921A		
D2921B		
D2923A		
D2924A		
D2931A		
D2931B		
D2933A		
D2934A		

Model Number	HP Vectra
D3001A	HP Vectra XP Refer to Chapter 2.
D3002A	
D3003A	
D3004A	
D3021A	HP Vectra 486VL Refer to Chapter 6.
D3021B	
D3022A	
D3024A	
D3025A	
D3025B	
D3026A	
D3028A	
D3031A	
D3032A	
D3033A	
D3035A	
D3036A	
D3037A	
D3038A	
D3039A	
D3085A	HP Vectra XU Refer to Chapter 14.
D3086A	
D3087A	
D3091A	
D3092A	
D3094A	
D3034A	HP Vectra VL2 and VL2e Refer to Chapter 3.
D3041A	
D3042A	
D3042B	
D3043A	
D3112A	
D3113A	
D3115A	
D3116A	
D3121A	
D3122A	
D3122B	

Model Number	HP Vectra
D3123A	<p>HP Vectra VL2 and VL2e</p> <p>Refer to Chapter 3.</p>
D3123B	
D3124A	
D3125A	
D3126A	
D3127A	
D3128A	
D3129A	
D3131A	
D3133A	
D3135A	
D3136A	
D3137A	
D3138A	
D3139A	
D3172A	
D3173A	
D3174A	
D3191A	
D3192A	
D3193A	
D3194A	
D3195A	
D3196A	
D3141A	<p>HP Vectra N2</p> <p>Refer to Chapter 9.</p>
D3142A	
D3143A	
D3144A	
D3145A	
D3146A	
D3148A	
D3149A	
D3180A	
D3181A	
D3186A	
D3187A	
D3188A	
D3189A	

Model Number	HP Vectra	
D3151A	<p>HP Vectra M2</p> <p>Refer to Chapter 5.</p>	
D3152A		
D3153A		
D3157A		
D3158A		
D3159A		
D3161A		
D3162A		
D3164A		
D3182A		
D3183A		
D3185A		
D3175A		<p>HP Vectra VL2 5/60</p> <p>Refer to Chapter 4.</p>
D3176A		
D3177A		
D3178A		
D3210A	<p>HP Vectra XM2</p> <p>Refer to Chapter 1.</p>	
D3211A		
D3212A		
D3213A		
D3220A		
D3221A		
D3222A		
D3223A		
D3224A		
D3230A		
D3231A		
D3232A		
D3233A		

Part Numbers for Diagnostic Tools

Description	Part Number
HP Vectra PC Diagnostic Utility Kit (ver. B.00.03)	Available on HP internal BBS
9-pin Datacomm Test Hood	24540-60010
25-pin Serial Datacomm Test Hood	02620-60062
25-pin Parallel Datacomm Test Hood	24540-60011
Memory Module Extractor Tool (Vectra 386/25)	5181-4810
Peripheral Exerciser Disk Kit	45935-63210
Electrically Conductive Field Service Grounding Kit	9300-1609
Vectra RS Cache Memory Board Removal Tool	D2010-40001
PLCC IC extractor tool	5041-2553
486 Microprocessor Removal Tool	8710-1944

HP Bulletin Board System (BBS)

HP operates an electronic bulletin board System (BBS) that can be accessed by HP Support personnel. The BBS can be used to obtain patches, drivers, and system utilities. Contact your HP Support Organization for more information. If a BIOS upgrade is available from the BBS, it is indicated in the handbook by 'Refer to HP internal BBS'.

Logging on to the HP BBS

HP Support personnel can log on to the HP Internal FTP Server at IP Address 15.128.137.186

What's New in this Edition?

This edition includes seven new chapters covering the Vectra XP Pentium™-based PCs (including faster 70 ns main memory modules and PCI bus), the Vectra XU Pentium-based PCs (using the 90 MHz Pentium processor), the Vectra XM2 PCs (featuring the IntelDX4 processor), the Vectra VL2 5/60 PC (60-MHz Pentium, PCI bus), the Vectra VL2 PCs, the Vectra M2, and the Vectra N2.

Each Vectra is described in its own chapter. The contents of each chapter are organized as follows:

- Models and Accessories
- System Board, BIOS/Setup and Memory
- Part Numbers

There are four appendices that contain information that applies to all Vectras.

- A. HP Vectra POST Routine and Error Codes
- B. HP Vectra Hardware IRQs and Memory Map
- C. HP Utilities and Operating System Quick Reference
- D. HP Vectra PC Service Notes

Service notes which have become inactive have been removed from this edition. For information on HP LAN Servers refer to their service documentation.

A revision bar indicates the changes made to the manual. If you find an error, let us know by sending in the Reader Reply Card.

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HP Vectra XM2 PC Series

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	Integ. LAN	Multi-media
Vectra XM2 PC Series							
HP Vectra XM2 4/50 PC (CPL: 07/94 ▶)							
D3210A	1.44 MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA 2 (1 MB, upgradeable to 2 MB)	8 MB	None	None
D3211A		210 MB (D2387A)					
HP Vectra XM2 4/50i PC (CPL: 07/94 ▶)							
D3212A	1.44 MB (D2035A)	210 MB (D2387A)	Integrated IDE controller	Integrated Ultra VGA 2 (1 MB, upgradeable to 2 MB)	8 MB	Yes	None
D3213A		340 MB (D2890A)					
HP Vectra XM2 4/66 PC (CPL: 07/94 ▶)							
D3220A	1.44 MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA (1 MB, upgradeable to 2 MB)	8 MB	None	None
D3221A		270 MB (D2894A)					
HP Vectra XM2 4/66i PC (CPL: 07/94 ▶)							
D3222A	1.44 MB (D2035A)	270 MB (D2894A)	Integrated IDE controller	Integrated Ultra VGA 2 (1 MB, upgradeable to 2 MB)	8 MB	Yes	None
D3223A		340 MB (D2890A)					Yes
D3224A		540 MB (D2891A)					None

Medium-Profile  Desktop Vectras

HP Vectra XM2 PC Series 1-1

HP Vectra XM2 PC Series

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	Integ. LAN	Multi-media
HP Vectra XM2 4/100 PC (CPL: 07/94 ▶)							
D3230A	1.44 MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA 2 (1 MB, upgradeable to 2 MB)	8 MB	None	None
D3231A		270 MB (D2894A)					
HP Vectra XM2 4/100i PC (CPL: 07/94 ▶)							
D3232A	1.44 MB (D2035A)	270 MB (D2894A)	Integrated IDE controller	Integrated Ultra VGA 2 (1 MB, upgradeable to 2 MB)	8 MB	Yes	None
D3233A		540 MB (D2891A)					

Note

The HP Vectra XM2 PC Series has 256 KB of level-two cache memory.

Supported Accessories

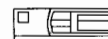
1-MB Video Memory Upgrade kit	D3241A
4-MB Main Memory Upgrade kit	D2974A
8-MB Main Memory Upgrade kit	D2975A
16-MB Main Memory Upgrade kit	D2297A
32-MB Main Memory Upgrade kit	D2298A
<i>Setting Up Your PC and Getting Started manuals</i>	D3240A

Multimedia Products

HP Sound DSP 16	D2941A
HP Integrated Office	D2887A

Input Devices

Mouse (PS/2, Microsoft)	C1413A
Keyboard	C1405B
Keyboard	C3754A



HP Vectra XM2 PC Series

Video Displays

Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch	D2035A
Flexible Disk 1.2 MB 5-1/4 inch	D2881A
IDE 240 MB Hard Disk	D1697A
IDE 170 MB Hard Disk	D2330B
IDE 210 MB Hard Disk	D2387A
IDE 450 MB Hard Disk	D2884A
IDE 340 MB Hard Disk	D2890A
IDE 540 MB Hard Disk	D2891A
IDE 270 MB Hard Disk	D2894A
SCSI 430 MB Hard Disk	D1699A
CD-ROM Drive	D2886A/B

Datacomm and LAN Boards

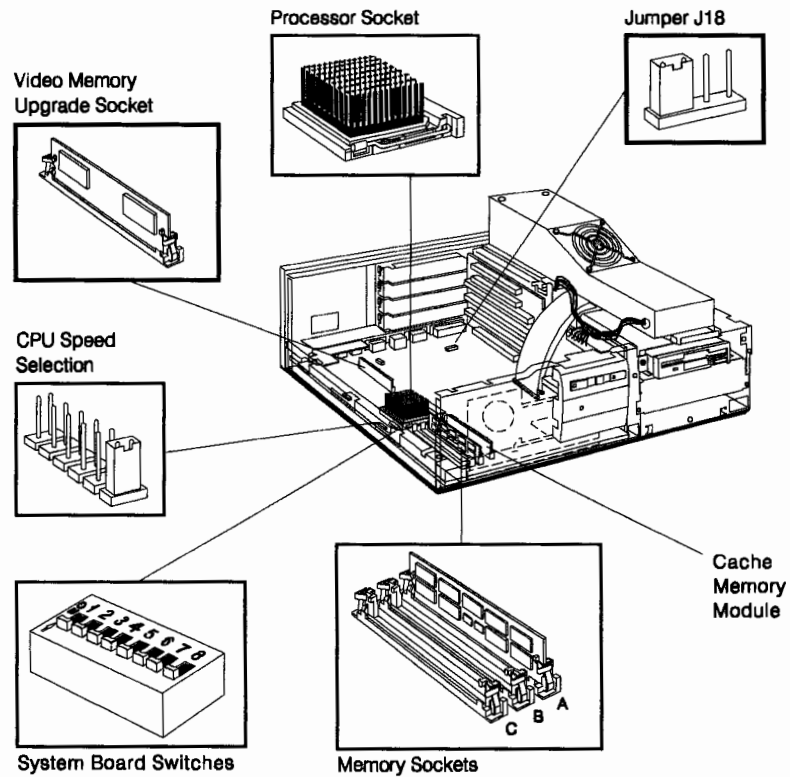
Serial Parallel Board	24540B
Dual Serial Board	24541B
Ethertwist PC Link Adapter	27245A
Ethertwist Adapter/16	27247A
Ethertwist Adapter/16	27247B
HP ThinLAN Board	27250A
Token-Ring Adapter	D2378A
Coaxial LAN Adapter Board	D2746A

Medium-Profile 
Desktop Vectras

HP Vectra XM2 PC Series 1-3

HP Vectra XM2 PC Series

System Board, BIOS, and Memory



Jumper J18

This jumper is used to select a synchronous connection between the PCI bus and the processor bus. This jumper must not be changed from the factory default setting shown above.

HP Vectra XM2 PC Series

System Board Switches

Switch #	Function		Default
1	OFF	Onboard VGA controller - enabled	OFF
	ON	Onboard VGA controller - disabled	
2	OFF	Security mode - disabled	OFF
	ON	Security mode - configuration cannot be changed using Setup	
3	OFF	EEPROM stored configuration information - valid	OFF
	ON	EEPROM stored configuration information - erased	
4	OFF	Passwords - enabled	OFF
	ON	Passwords - disabled (erased)	
5	OFF	Flash ROM updates - enabled	OFF
	ON	Flash ROM updates - disabled	
6	OFF	Not used	OFF
7	OFF	Not used	OFF
8	OFF	Not used	OFF

Setup and BIOS History

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra XM2 PC Series HP Vectra XM2 PC Series				
Displayed in Setup	July 94	First release	Available on HP PC Internal BBS	N/A

Video Memory

The PC is supplied with 1 MB of video memory for 1280×1024 in 256 colors. An additional 1-MB video memory module can be installed in a video memory socket (to make a total of 2 MB) for 1280×1024 in 64 K colors.

Cache Memory

The PC has 256 KB of integrated level-two cache memory.

Medium-Profile
Desktop Vectras 

HP Vectra XM2 PC Series 1-5

HP Vectra XM2 PC Series

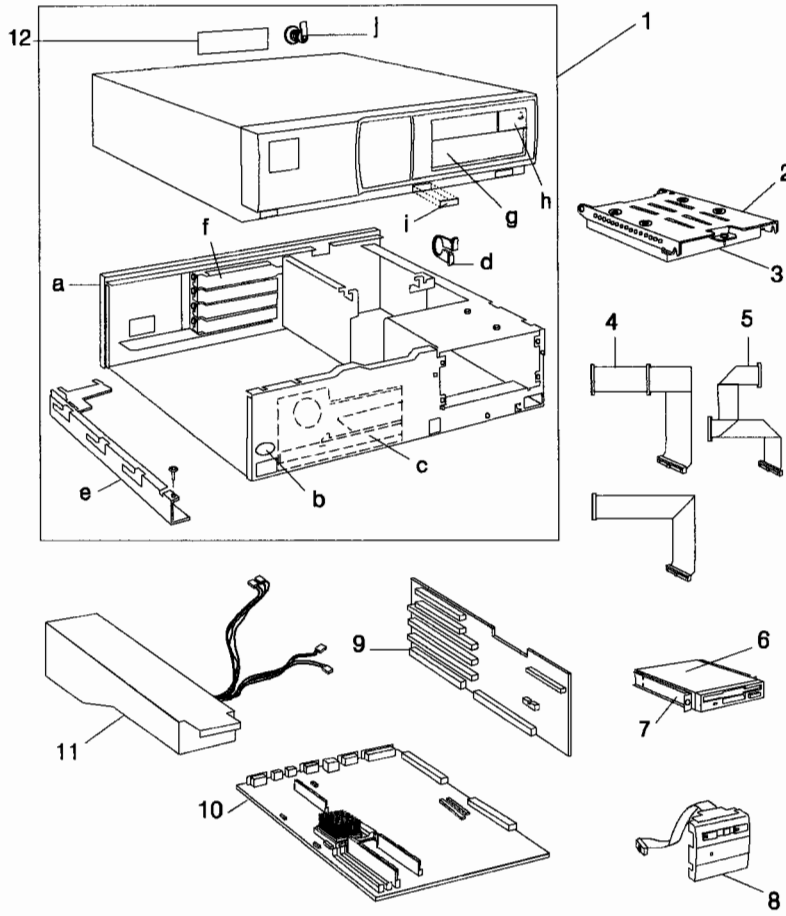
Main Memory

HP Vectra XM2 PC has three sockets on the system board labeled A, B, and C. Main memory modules can be installed up to a maximum of 96 MB.

Typical memory configurations

For a TOTAL memory of:	Install memory modules in these banks:		
	Bank A	Bank B	Bank C
4 MB	4 MB	-	-
8 MB	4 MB	4 MB	-
8 MB	8 MB	-	-
12 MB	4 MB	4 MB	4 MB
12 MB	4 MB	8 MB	-
16 MB	4 MB	4 MB	8 MB
16 MB	8 MB	8 MB	-
16 MB	16 MB	-	-
20 MB	4 MB	8 MB	8 MB
20 MB	4 MB	16 MB	-
24 MB	4 MB	4 MB	16 MB
24 MB	8 MB	8 MB	8 MB
32 MB	8 MB	8 MB	16 MB
32 MB	16 MB	16 MB	-
36 MB	4 MB	16 MB	16 MB
40 MB	4 MB	4 MB	32 MB
48 MB	16 MB	16 MB	16 MB
48 MB	8 MB	8 MB	32 MB
64 MB	16 MB	16 MB	32 MB
64 MB	32 MB	32 MB	-
96 MB	32 MB	32 MB	32 MB

Part Numbers



Medium-Profile 
 Desktop Vectras

HP Vectra XM2 PC Series 1-7

HP Vectra XM2 PC Series

Parts List for HP Vectra XM2 PC Series

Item	Description	Repl. Part Number	Exchange Part Number list
1	Box Assembly: a. Rear Bezel b. Bumper Foot c. System Board Guide d. Security Bracket e. Side panel f. I/O Panel Blank g. Filler Panel 5.25-inch h. Filler Panel 1.75-inch i. Infrared Filter/Cap j. Cover lock Assembly	5063-4597 5041-2578 5063-0877 5042-0504 5062-5590	—
	Multimedia Box Assembly:	5063-4556	—
	Speaker Support	5063-4559	
	Infrared Module Support	5063-5707	—
2	3.5-inch, h-h, Tray (5 pack) for non-supported hard disk drives	Order product number D2037A	
3	Hard Disk Drive	See disk drive parts list	
4	Hard Disk Cable (IDE drive)	5182-0311	—
5	Flexible Disk Drive Cable	5182-1805	—
6	Flexible Disk Drive	See disk drive parts list	
7	Mounting Rails for 3.5-inch non-HP Disk Drives	5063-0309	—
8	Status (Control) Panel	5063-5705	—
	Multimedia Status (Control) Panel	5063-5706	—
9	Backplane Assembly	5063-5704	
10	System Board	See PC's parts list	
11	Power Supply Assembly	5063-4553	
12	Serial Label	5181-0395	—
	Mounting Rails for 5.25-inch non-HP Disk Drives	Order product number D2880A	

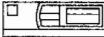
Vectra XM2 PC Series

Parts List for HP Vectra XM2 PC Series

Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated IDE disk and Ultra VGA 2 controllers, and integrated Ethernet):		
Vectra XM2	D3201-63001 ¹	D3201-69001
Vectra XM2i (LAN models)	D3202-63001 ¹	D3202-69001
LAN Adapters:		
Coaxial Adapter Board (D2746A)	D2746-63001	—
Processor:		
Intel486DX-50	5063-4583	—
Intel486DX2-66	5063-4584	—
Intel486DX4-100	5063-5731	—
Cache Memory Modules:		
256-KB level-two Cache Memory Module (D2944A)	5063-0880	
Main Memory Modules:		
4-MB Main Memory DRAM kit	D2974-63001	
8-MB Main Memory DRAM kit	D2975-63001	—
16-MB Main Memory DRAM kit	D2297-63001	D2297-69001
32-MB Main Memory DRAM kit	D2298-63001	D2298-69001
Video Memory Modules:		
1-MB Video Memory Module kit (D3241A)	5063-5710	—
Nameplate:		
HP Vectra XM2 4/50 Logo	5042-0552	—
HP Vectra XM2 4/50i Logo	5042-0553	—
HP Vectra XM2 4/66 Logo	5042-0554	—
HP Vectra XM2 4/66i Logo	5042-0555	—
HP Vectra XM2 4/66i Communication Logo	5042-0599	—
HP Vectra XM2 4/100 Logo	5042-0556	—
HP Vectra XM2 4/100i Logo	5042-0557	—
Support Manuals		Part Number
Familiarization Guide		D3201A + 49A-90001
Technical Reference Manual: Hardware and BIOS		5962-3416 ²

1 These replacement assemblies are supplied without a processor chip.

2 Electronic File only.

Medium-Profile 
Desktop Vectras

HP Vectra XM2 PC Series 1-9

HP Vectra XP PC Series

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	CD-ROM	L 2 Cache
Vectra XP PC Series							
HP Vectra 60/XP PC (CPL: 12/93 ▶)							
D3001A	1.44 MB (D2035A)	None	Integrated IDE/ISA controller	Integrated Ultra VGA 2/PCI (2 MB, upgradeable to 4 MB)	8 MB	No	256 KB
D3002A		240 MB (D1697A)					
D3003A		450 MB (D2884A)					

Supported Accessories

1-MB Video Memory Upgrade kit	D2942B
4-MB Main Memory (70 ns) Upgrade kit	D2974A
8-MB Main Memory (70 ns) Upgrade kit	D2975A
16-MB Main Memory (70 ns) Upgrade kit	D2297A
32-MB Main Memory (70 ns) Upgrade kit	D2298A
<i>Setting Up Your PC</i> and <i>Using Your PC</i> manuals	D3000A

Medium-Profile Desktop Vectras 

HP Vectra XP PC Series

2

Video Displays

Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Multimedia Products

HP Sound DSP 16	D2941A
HP Integrated Office	D2887A

Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch	D2035A
Flexible Disk 1.2 MB 5-1/4 inch	D2881A
IDE 240 MB Hard Disk	D1697A
IDE 450 MB Hard Disk	D2884A
IDE 340 MB Hard Disk	D2890A
IDE 540 MB Hard Disk	D2891A
IDE 270 MB Hard Disk	D2894A
SCSI 430 MB Hard Disk	D1699A
SCSI 1035 MB Hard Disk	D2076A
CD-ROM Drive	D2886A/B

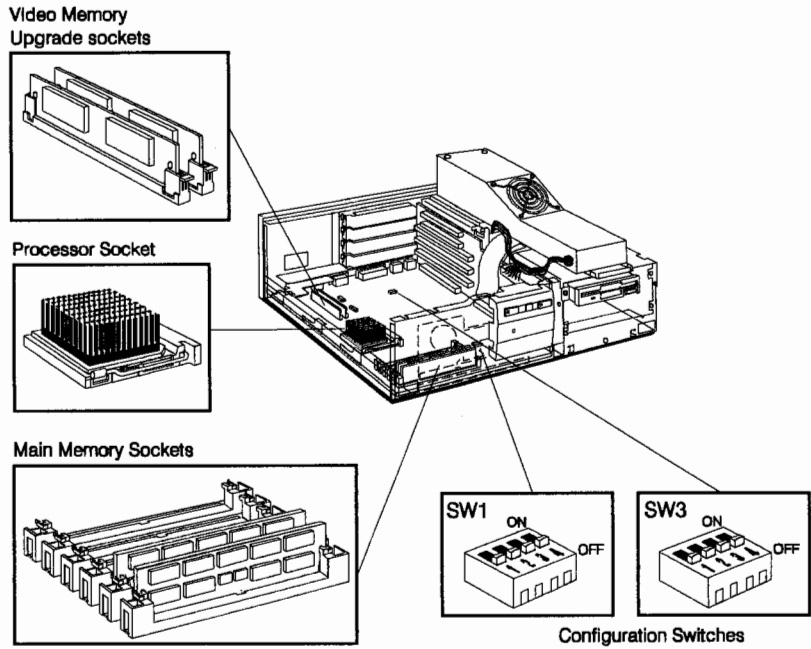
Datacomm and LAN Boards

Serial Parallel Board	24540B
Dual Serial Board	24541B
Ethertwist PC Link Adapter	27245A
Ethertwist Adapter/16	27247A
Ethertwist Adapter/16	27247B
HP ThinLAN Board	27250A
Token-Ring Adapter	D2378A
Coaxial LAN Adapter Board	D2746A

Input Devices


Keyboard	C1405B
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System Board, BIOS, and Memory



System Board Switch Block SW1-SW2

Switch #		Function	Default
SECU	OFF	Disables security mode to allow changes to the PC's configuration	OFF
	ON	Enables security mode to prevent changes to the PC's configuration	
CCFG	OFF	Retain the configuration stored in CMOS	OFF
	ON	Clear the configuration stored in CMOS Switch ON if you need to clear the PC's configuration information, for example, if the configuration is corrupted.	
FLSH	OFF	Enables System ROM updates using the HPROMInit utility	OFF
	ON	Disables System ROM updates	
1-4	OFF	Not used	OFF

Medium-Profile Desktop Vectras 

HP Vectra XP PC Series

System Board Switch Block SW3-SW4

2

Switch #		Function	Default
MHZ	OFF	Sets the processor bus speed to 66.6 MHz (for the PENTIUM™ Processor-66)	ON
	ON	Sets the processor bus speed to 60 MHz (for the PENTIUM™ Processor-60)	
3_2	OFF	Not used	OFF
PWRD	OFF	Enables passwords to be set and stored in EEPROM	OFF
	ON	Disables passwords Switch ON if you need to clear the current passwords.	
MIRQ	OFF	Enables IRQ 12 for the mouse interrupt	OFF
	ON	Disables the mouse Switch to ON if you install an accessory that uses IRQ 12 (this disables the mouse).	

Video Memory

The PC is supplied with 2 MB of video memory for 1600×1280 in 256 colors. An additional 2 MB of video memory (two 1-MB video memory modules) can be installed in the video memory sockets (to make a total of 4 MB). If additional video memory is added, both sockets must be filled.

Cache Memory

- The PC has 256 KB of integrated level-two cache memory.

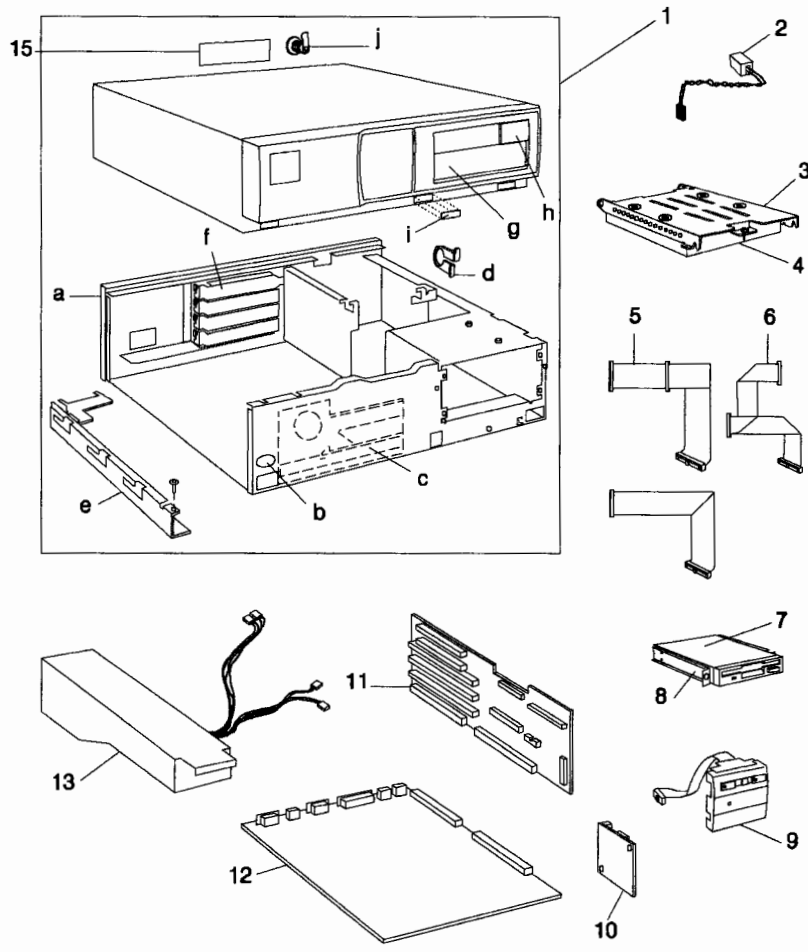
Main Memory

The PC is supplied with 8 MB of main memory (two 4-MB main memory modules) in Bank 1 (slots 1 and 2). The system board has three banks (six sockets) for 70 ns main memory modules. The same size main memory modules must be installed in pairs within banks.

Main Memory Configuration

For a TOTAL memory of:	Install Main Memory Modules in These Banks (each bank has two sockets):						Using These Modules
	Bank 1		Bank 2		Bank 3		
	1	2	3	4	5	6	
8 MB	4 MB	4 MB					Standard
16 MB	4 MB	4 MB	4 MB	4 MB			Two 4-MB modules
24 MB	4 MB	4 MB	8 MB	8 MB			Two 8-MB modules
32 MB	4 MB	4 MB	8 MB	8 MB	4 MB	4 MB	Two 4-MB modules and two 8-MB modules
40 MB	4 MB	4 MB	8 MB	8 MB	8 MB	8 MB	Four 8-MB modules
56 MB	4 MB	4 MB	16 MB	16 MB	8 MB	8 MB	Two 16-MB modules and two 8-MB modules
72 MB	4 MB	4 MB	16 MB	16 MB	16 MB	16 MB	Four 16-MB modules
96 MB	16 MB	16 MB	16 MB	16 MB	16 MB	16 MB	Six 16-MB modules
128 MB	16 MB	16 MB	16 MB	16 MB	32 MB	32 MB	Two 32-MB modules and four 16-MB modules
160 MB	16 MB	16 MB	32 MB	32 MB	32 MB	32 MB	Four 32-MB modules and two 16-MB modules
192 MB	32 MB	32 MB	32 MB	32 MB	32 MB	32 MB	Six 32-MB modules

2 Part Numbers



HP Vectra XP PC Series

Parts List for HP Vectra XP PC Series

Item	Description	Repl. Part Number	Exchange Part Number list
1	Box Assembly: a. Rear Bezel b. Bumper Foot c. System Board Guide d. Security Bracket e. Side panel f. I/O Panel Blank g. Filler Panel 5.25-inch h. Filler Panel 1.75-inch i. Infrared Filter j. Key lock Assembly	5063-4597 5041-2578 5063-0877 5042-0504 5062-5590	- - - -
2	Battery	1420-0513	-
3	3.5-inch, h-h, Tray (5 pack) for non-supported hard disk drives	Order product number D2037A	
4	Hard Disk Drive (standard) ¹ 270 MB 450 MB	D2894-63003 D2884-63003	D2894-69003 D2884-69003
5	Hard Disk Cable (IDE drive)	5182-0311	-
6	Flexible Disk Drive Cable,	5082-1089	-
7	Flexible Disk Drive	D2035-63004	
8	Mounting Rails for 3.5-inch non-HP Flexible Disk Drives	5063-0309	-
9	Status (Control) Panel	5063-0876	-
10	Infrared Assembly	5063-0850	-
11	Backplane Assembly	5182-1082	
12	System Board (includes integrated IDE disk and Ultra VGA 2/PCI controllers, and integrated Ethernet)	D3001-63001 ²	D3001-69001 ²
13	Power Supply Assembly 157 W	5063-4520	-
	Mounting Rails for 5.25-inch non-HP Disk Drives	Order product number D2880A	

1 For optional disk drive information, see the *Accessory Service Handbook*.

2 These replacement assemblies are supplied without a processor chip.

HP Vectra XP PC Series

Parts List for HP Vectra XP PC Series

Description	Repl. Part Number	Exchange Part Number
LAN Adapter:		
Coaxial Adapter Board (D2746A)	D2746-63001	-
Processor:		
PENTIUM™-60	5182-1080	-
Main Memory Modules:¹		
4-MB Main Memory Module kit (36-bit) 70ns	D2974-63001	
8-MB Main Memory Module kit (36-bit) 70ns	D2975-63001	
16-MB Main Memory Module kit (36-bit) 70ns	D2297-63001	D2297-69001
32-MB Main Memory Module kit (36-bit) 70ns	D2298-63001	D2298-69001
Video Memory Modules:¹		
1-MB Video Memory Module kit (D2942B)	5063-4519	-
Nameplate:		
HP Vectra 60/XP Logo	5042-0515	-
Support Manuals		Part Number
Familiarization Guide		D300xA + 49A-90001
Technical Reference Manual: Hardware and BIOS		None ²

1 Memory modules must be installed in matching pairs.

2 Electronic File only.

Part Numbers for HP Utility Diskettes

Description	Rev	Date Code	Part #	Info.
Windows & DOS Video Drivers	3.17E	-	5063-0898	Kit

Notes: _____

HP Vectra VL2 & VL2e PC Series

3

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	L 2 Cache	Multi-media	
Vectra VL2e PC Series								
HP Vectra VL2e 4/25e PC (CPL: 03/94 ▶)								
D3131A	1.44 MB (D2035A)	None	Integrated IDE controller on ISA bus	Integrated Ultra VGA (512 KB, upgradeable to 1 MB)	4 MB	None	None	
D3121A		106 MB			2 MB			
D3124A		170 MB (D2330B)			4 MB			
D3122A		210 MB (D2387A)			4 MB			
D3122B		210 MB (D2387A)			4 MB			
HP Vectra VL2e 4/33se PC (CPL: 03/94 ▶)								
D3125A	1.44 MB (D2035A)	None	Integrated IDE controller on ISA bus	Integrated Ultra VGA (512 KB, upgradeable to 1 MB)	4 MB	None	None	
D3123A		170 MB (D2330B)						
D3123B		210 MB (D2387A)						
D3042A		170 MB (D2330B)						Yes ¹
D3042B		210 MB (D2387A)						Yes ¹
D3042B		210 MB (D2387A)						Yes ¹

1 Includes HP Sound DSP 16 (Audio board, audio control panel, and SCSI CD-ROM drive).

Medium-Profile  Desktop Vectras

HP Vectra VL2 & VL2e PC Series 3-1

HP Vectra VL2 & VL2e PC Series

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	L 2 Cache	Multi-media	
Vectra VL2e PC Series								
HP Vectra VL2e 4/50se PC (CPL: 07/94 ▶)								
D3195A	1.44 MB (D2035A)	210 MB (D2387A)	Integrated IDE controller on ISA bus	Integrated Ultra VGA (512 KB, upgradeable to 1 MB)	4 MB	None	None	
D3196A		340 MB (D2890A)						
Vectra VL2e PC Series								
HP Vectra VL2e 4/50e PC (CPL: 07/94 ▶)								
D3112A	1.44 MB (D2035A)	210 MB (D2387A)	Integrated IDE controller on ISA bus	Integrated Ultra VGA (512 KB, upgradeable to 1 MB)	4 MB	None	None	
D3113A		340 MB (D2890A)						
Vectra VL2e PC Series								
HP Vectra VL2e 4/66e PC (CPL: 07/94 ▶)								
D3115A	1.44 MB (D2035A)	210 MB (D2387A)	Integrated IDE controller on ISA bus	Integrated Ultra VGA (512 KB, upgradeable to 1 MB)	4 MB	None	None	
D3116A		340 MB (D2890A)						
Vectra VL2 PC Series								
HP Vectra VL2 4/33s PC (CPL: 03/94 ▶)								
D3126A	1.44 MB (D2035A)	None	Integrated Fast IDE controller on local bus	Integrated Ultra VGA (1 MB, 60 ns)	4 MB	Opt.	None	
D3127A		210 MB (D2387A)						
D3128A		340 MB (D2890A)						
D3129A		210 MB (D2387A)						
D3191A		8 MB						Yes ¹
D3192A		340 MB (D2890A)						None

1 Includes HP Sound DSP 16 (Audio board with SCSI CD-ROM drive).

HP Vectra VL2 & VL2e PC Series

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	L 2 Cache	Multi-media
HP Vectra VL2 4/50 PC (CPL: 03/94 ▶)							
D3135A	1.44 MB (D2035A)	None	Integrated Fast IDE controller on local bus	Integrated Ultra VGA (1 MB, 60 ns)	4 MB	Opt.	None
D3133A		210 MB (D2387A)					
D3136A		340 MB (D2890A)					
D3193A		210 MB (D2387A)			8 MB		
D3194A		340 MB (D2890A)					
D3034A					4 MB		
D3041A							Yes ²
HP Vectra VL2 4/66 PC (CPL: 03/94 ▶)							
D3137A	1.44 MB (D2035A)	None	Integrated Fast IDE controller on local bus	Integrated Ultra VGA (1 MB, 60 ns)	4 MB	Opt.	None
D3138A		340 MB (D2890A)			8 MB		
D3139A		210 MB (D2387A)					
D3043A		340 MB (D2890A)					Yes ³
HP Vectra VL2 4/100 PC (CPL: 03/94 ▶)							
D3172A	1.44 MB (D2035A)	None	Integrated Fast IDE controller on local bus	Integrated Ultra VGA (1 MB, 60 ns)	4 MB	Opt.	None
D3173A		340 MB (D2890A)			8 MB		
D3174A		210 MB (D2387A)					

- 1 Available in US Only. Includes HP Integrated Office (US approved Fax/Modem and Audio board).
- 2 Available in US Only. Includes HP Integrated Office (US approved Fax/Modem, Audio board, and SCSI CD-ROM drive).
- 3 Includes HP Sound DSP 16 (Audio board, audio control panel, and SCSI CD-ROM drive).

Medium-Profile  Desktop Vectras

HP Vectra VL2 & VL2e PC Series 3-3

HP Vectra VL2 & VL2e PC Series

Supported Accessories

512 KB Video Memory Upgrade Kit (VL2e only)	D3169A
128 KB Cache Memory Upgrade Kit (VL2 only)	D3168A
256 KB Cache Memory Upgrade Kit (VL2 only)	D2944A
4 MB Main Memory Upgrade Kit	D2974A
8 MB Main Memory Upgrade Kit	D2975A
16 MB Main Memory Upgrade Kit	D2297A
32 MB Main Memory Upgrade Kit	D2298A
<i>Vectra VL2 & VL2e User's Guide</i>	D3130B

Processor upgrades:

VL2e Processor Upgrade to 486DX-33 (33 MHz)	D2169A
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When you upgrade the processor, check the part number of the new processor and set the JP4 jumper as described in the processor upgrade jumper configuration table. Note that the PCs power management capability is lost after a processor upgrade.

Video Displays

Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Multimedia Products

HP Sound DSP 16	D2941A
HP Integrated Office	D2887A

HP Vectra VL2 & VL2e PC Series

Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch
Flexible Disk 1.2 MB 5-1/4 inch
IDE 240 MB Hard Disk
IDE 170 MB Hard Disk
IDE 210 MB Hard Disk
IDE 450 MB Hard Disk
IDE 340 MB Hard Disk
IDE 540 MB Hard Disk
IDE 270 MB Hard Disk
CD-ROM Drive



D2035A
D2881A
D1697A
D2330B
D2387A
D2884A
D2890A
D2891A
D2894A
D2886B

Datacomm and LAN Boards

Ethertwist PC Link Adapter
Ethertwist Adapter/16
Token-Ring Adapter


27245A
27247B
D2378A

Input Devices

HP Logitech-type Mouse
Keyboard
Keyboard

C3751-60101
C1405B
C3346-602xx or
C3753A

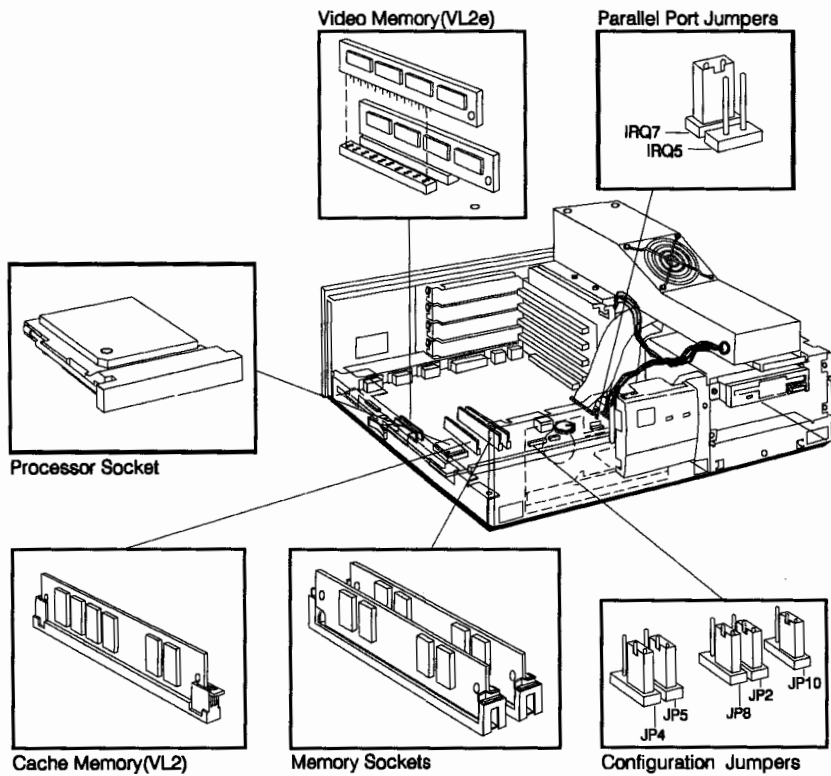
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Medium-Profile 
Desktop Vectras

HP Vectra VL2 & VL2e PC Series 3-5

System Board, BIOS, and Memory

3



HP Vectra VL2 & VL2e PC Series

VL2 & VL2e Configuration Jumpers

Jumper Setting	Function	Default
JP10	1-2 Select P24T write through mode.	2-3
	2-3 Select P24T write back mode.	
JP2	1-2 Clears CMOS RAM Configuration.	2-3
	2-3 Enables CMOS RAM Configuration.	
JP8	1-2 Disables on board VGA circuitry.	2-3
	2-3 Enables on board VGA circuitry.	
JP5	- Reserved for factory use - do not move.	
JP4 ¹	1-2 33 MHz processor speed selection.	
	2-3 25 MHz processor speed selection.	
JP12	(VL2 DX4 models only) Reserved for factory use - do not move.	
IRQ7	Parallel port 1.	yes
IRQ5	Alternative parallel port 1.	no

1 Default setting dependent on model

IRQs and I/O Addresses for the VL2 & VL2e

IRQ	Function	I/O Port Hex
IRQ 3	Serial Port A (COM1)	3F8-3FF
IRQ 4	Serial Port B (COM2)	2F8-2FF
IRQ 6	Flexible Disk Controller	3F0-3F7
IRQ 7 (5) ¹	Parallel Port 1 (LPT1)	378-37F
IRQ 14	IDE Hard Disk Controller	1F0-1F7
-	Video controller	3B0-3DF

1 Numbers in brackets indicate alternate IRQ selected by jumper on the system board. See the Configuration Jumper table for details.

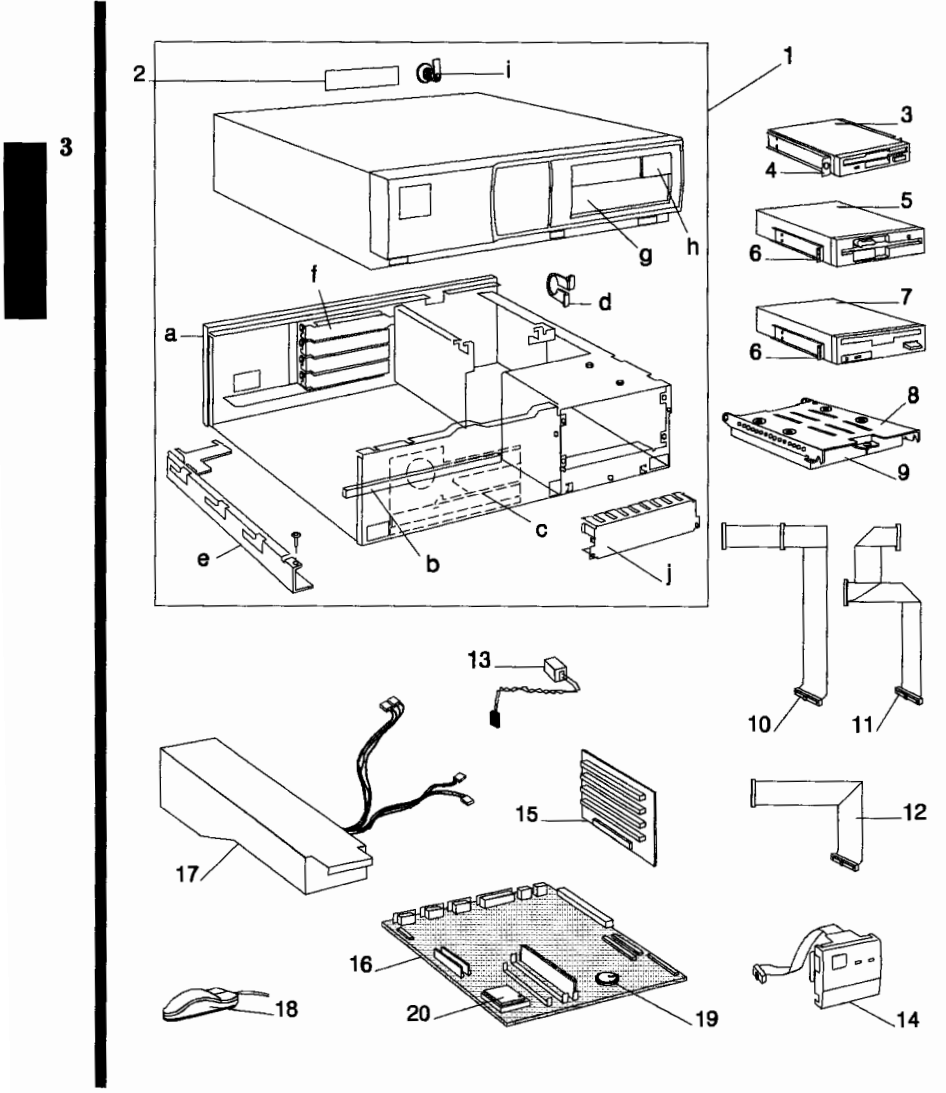
BIOS History

BIOS Ver.	Date	Description	Kit Part No.
Vectra VL2 & VL2e PC Series HP Vectra VL2 & VL2e PC Series			
GA.04.02	March 94	First release	N/A
SGA.04.02	May 94	Second "Special" release	N/A
GA.04.04	May 94	Third release	N/A
GA.04.05	June 94	Fourth release	5063-5730

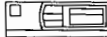
Medium-Profile 
 Desktop Vectras

HP Vectra VL2 & VL2e PC Series 3-7

Part Numbers



3-8 HP Vectra VL2 & VL2e PC Series

Medium-Profile Desktop Vectras 

HP Vectra VL2 & VL2e PC Series

Parts List for HP Vectra VL2 & VL2e PC Series

Item	Description	Repl. Part Number	Exchange Part Number list
1	Box Assembly: a. Rear Bezel b. System Board Side Guide c. Security Bracket d. Side panel e. I/O Panel Blank f. Filler Panel 5.25-inch g. Filler Panel 1.75-inch h. Cover lock Assembly i. Hard Disk Drive cover panel.	5063-4597 5042-0507 5041-2578 5063-0877 5062-5590	-
2	Serial Label		-
3	Flexible Disk Drive 3.5-inch	D2035-63004	-
4	Mounting Rails for 3.5-inch non-HP Disk Drives	Order product number D2037A	
5	Flexible Disk Drive 5.25-inch	D2881-63001	-
6	Mounting Rails for 5.25-inch non-HP Disk Drives	Order product number D2880A	
7	5.25-inch SCSI CD-ROM Drive	D2886-60103	-
8	3.5-inch, h-h, Tray (5 pack) for non-supported hard disk drives	Order product number D2037A	
9	Hard Disk Drive (standard) ¹ 106 MB 170 MB 210 MB 340 MB	D3032-63021 D2330-63021 D2387-63001 D2890-63021	- D2330-69021 D2387-69001 D2890-69021
10	Hard Disk Cable (IDE drive)	5182-1036	-
11	Flexible Disk Drive Cable	5182-1037	-
12	SCSI Flat Cable	5182-1045	-
13	4.5V Battery (5 year life)	1420-0513	-
14	Status (Control) Panel	5063-0889	-
15	Backplane PCA	5063-0887	-
16	System Board	See PC's parts list	
17	Power Supply Assembly	5063-4553	-
18	Mouse	C3751-60101	-
19	System Board Battery	1420-0314 ²	-
20	Processor	See next page for Processor Replacement Part Numbers	

1 For optional disk drive information, see the *Accessory Service Handbook*.

2 Replace the battery with a Panasonic/Rayovac BR2325 battery, available from most local stores, or its equivalent HP battery using this number from your dealer or HP Sales and Service Office. Return the old battery to the supplier.

Medium-Profile 
Desktop Vectras

HP Vectra VL2 & VL2e PC Series 3-9

Vectra VL2 & VL2e PC Series

Parts List for HP Vectra VL2 & VL2e PC Series

Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated IDE disk and Ultra VGA + controllers): ¹		
Vectra VL2e	D3121-63001	D3121-69001 ¹
Vectra VL2	D3126-63001 ¹	D3126-69002 ¹
Vectra VL2 DX4-100	D3172-63001 ¹	D3172-69001 ¹
Processor:		
486SX-25 'SL'	5063-4561	-
486SX-33 'SL'	5063-4554	-
486SX2-50 'SL'	5063-5730	-
486DX2-50 'SL'	5063-4583	-
486DX2-66 'SL'	5063-4584	-
DX4-100 'SL' (VL2 4-100 only)	5063-4598	-
Second Level Cache Memory Modules (VL2 only):		
128-KB Cache Memory Module kit (D3168A)	D3168-63001	-
256-KB Cache Memory Module kit (D2944A)	5063-0880	-
Main Memory Modules: (70 ns)		
2-MB Main Memory Module kit, 32-bit	5063-5722	-
4-MB Main Memory Module kit, 32-bit	5063-4548	-
8-MB Main Memory Module kit, 32-bit	5063-4549	-
4-MB Main Memory Module kit, 36-bit (D2974A)	D2974-63001	-
8-MB Main Memory Module kit, 36-bit (D2975A)	D2975-63001	-
16-MB Main Memory Module kit, 36-bit (D2297A)	D2297-63001	D2297-69001
32-MB Main Memory Module kit, 36-bit (D2298A)	D2298-63001	D2298-69001
Video Memory Modules (VL2e only):		
512-KB Video Memory kit (D3169A)	D3169-83001	-
Nameplate:		
HP Vectra VL2 4/25e Logo	5042-0543	-
HP Vectra VL2 4/33se Logo	5042-0524	-
HP Vectra VL2 4/33s Logo	5042-0544	-
HP Vectra VL2 4/50se Logo	5042-1104	-
HP Vectra VL2 4/50e Logo	5042-1105	-
HP Vectra VL2 4/66e Logo	5042-1106	-
HP Vectra VL2 4/50 Logo	5042-0540	-
HP Vectra VL2 4/66 Logo	5042-0526	-
HP Vectra VL2 4/100 Logo	5042-0567	-
Support Manuals:		Part Number
Familiarization Guide		D312x + 49A-90001
Technical Reference Manual: Hardware and BIOS		None ²

1 These assemblies are supplied without main memory modules or processor.

2 Electronic File only.

Vectra VL2 & VL2e PC Series

Part Numbers for HP Utility Diskettes

Description	Rev	Date Code	Part #	Info.
BIOS Kit	GA.04.05		5063-5739	Kit
Drivers and Utilities disk kit			5063-4531	

3

Notes: _____

HP Vectra VL2 5/60 PC Series

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	Integ. LAN	L 2 Cache
Vectra VL2 5/60 PC Series (CPL: 06/94 ▶)							
D3175A	1.44 MB (D2035A)	None	Fast IDE controller on PCI bus	VGA/PCI (1 MB, upgradeable to 2 MB)	8 MB	No	256 KB
D3176A		210 MB (D2387A)					
D3177A		340 MB (D2890A)					
D3178A		540 MB (D2891A)					

Supported Accessories

1-MB Video Memory Upgrade kit	D3179A
4-MB Main Memory (70 ns) Upgrade kit	D2974A
8-MB Main Memory (70 ns) Upgrade kit	D2975A
16-MB Main Memory (70 ns) Upgrade kit	D2297A
32-MB Main Memory (70 ns) Upgrade kit	D2298A
<i>Setting Up Your PC</i> and <i>Using Your PC</i> manuals	D3190A

Input Devices

Mouse (PS/2 / Microsoft)	C1413A
Keyboard	C3753A

Medium-Profile  Desktop Vectras

HP Vectra VL2 5/60 PC Series

Video Displays

Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Multimedia Products

HP Sound DSP 16	D2941A
HP Integrated Office	D2887A

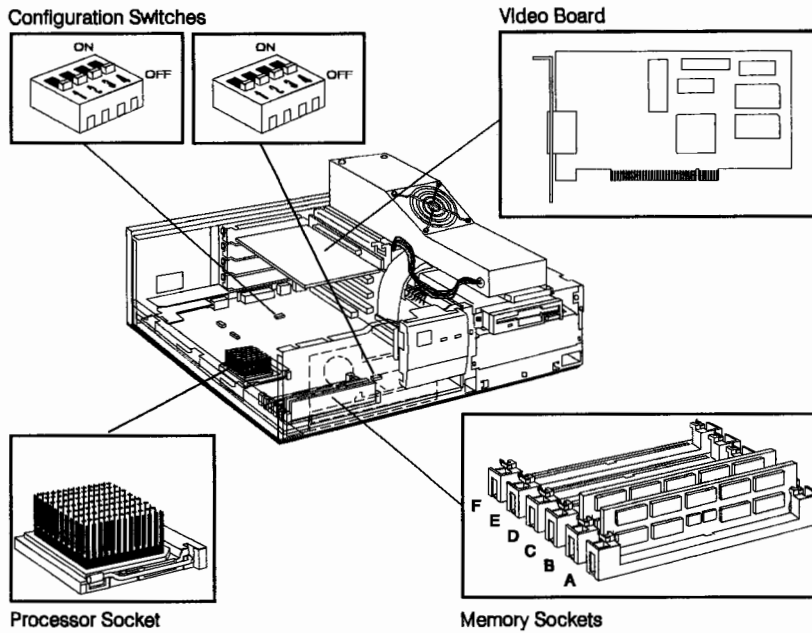
Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch	D2035A
Flexible Disk 1.2 MB 5-1/4 inch	D2881A
IDE 170 MB Hard Disk	D2330B
IDE 210 MB Hard Disk	D2387A
IDE 450 MB Hard Disk	D2884A
IDE 340 MB Hard Disk	D2890A
IDE 540 MB Hard Disk	D2891A
IDE 270 MB Hard Disk	D2894A
CD-ROM Drive	D2886B

Datacomm and LAN Boards

Ethertwist PC Link Adapter	27245A
Ethertwist Adapter/16	27247B
Token-Ring Adapter	D2378A

System Board, BIOS, and Memory



4

System Board Switch Block SW1

Switch #		Function	Default
1-1 SECU	OFF	Disables security mode to allow changes to the PC's configuration	OFF
	ON	Enables security mode to prevent changes to the PC's configuration	
1-2 CCFG	OFF	Retain the configuration stored in CMOS	OFF
	ON	Clear the configuration stored in CMOS Switch ON if you need to clear the PC's configuration information, for example, if the configuration is corrupted.	
1-3	OFF	Not used, always OFF	OFF
1-4	OFF	Not used, always OFF	OFF

Medium-Profile Desktop Vectras 

HP Vectra VL2 5/60 PC Series

System Board Switch Block SW3

Switch #		Function	Default
3_1 MHZ	ON	Identifies the system board's speed. Always ON, do not change.	ON
3_2	OFF	Not used always OFF	OFF
3_3 PWRD	OFF	Enables the User Password to be set and stored in CMOS	OFF
	ON	Disables the User Password. Switch ON if you need to clear the current password.	
3_4 MIRQ	OFF	Enables IRQ 12 use for the mouse interrupt	OFF
	ON	Disables the mouse Switch to ON if you install an accessory that uses IRQ 12 (this disables the mouse).	

4

Setup and BIOS History

BIOS Ver.	Date	Description	Klt Part No.	Min Setup
Vectra VL2 5/60 PC Series				
Displayed in Setup	-, 94	First release	Available on HP PC Internal BBS	N/A

Main Memory

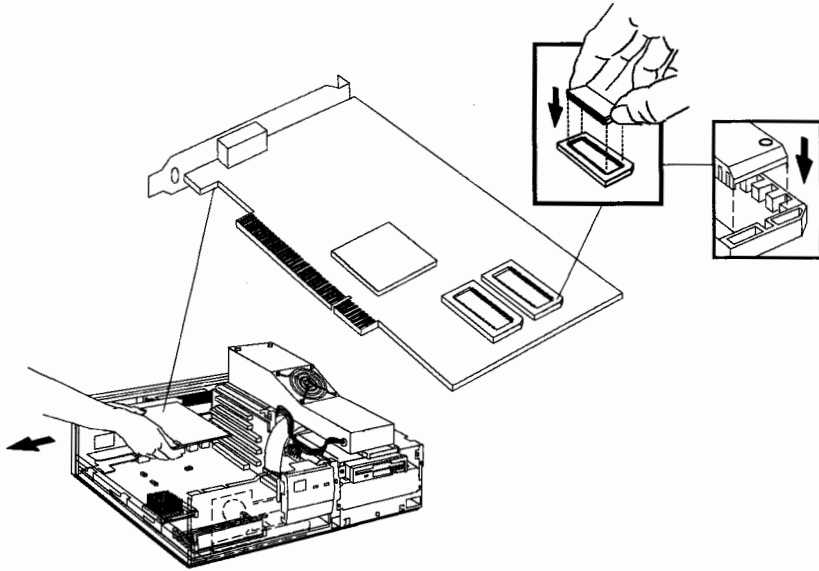
The system board has three banks (six sockets, labeled A through F) for 70 ns main memory modules. The PC is supplied with 8 MB of main memory (two 4-MB main memory modules) in Bank 1 (slots A and B). The same size main memory modules must be installed in pairs within banks.

Cache Memory

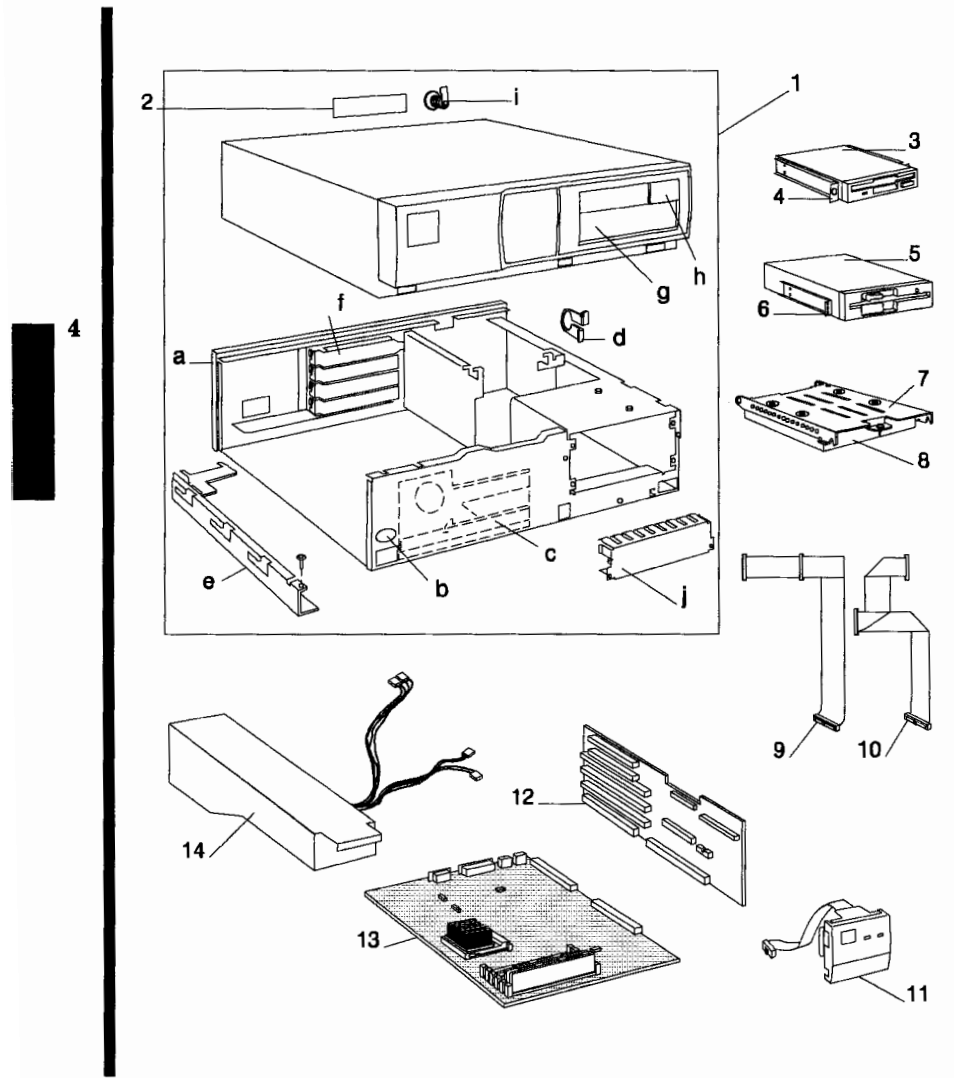
- The PC has 256 KB of integrated level-two cache memory.

Video Memory

The video board is supplied with 1 MB of video memory for 1024×768 in 256 colors. An additional 1 MB of video memory (two 512KB video memory modules) can be installed in the video memory sockets (to make a total of 2 MB for 1024×768 in 64 K colors).



Part Numbers



HP Vectra VL2 5/60 PC Series

Parts List for HP Vectra VL2 5/60 PC Series

Item	Description	Repl. Part Number	Exchange Part Number list
1	Box Assembly: a. Rear Bezel b. Bumper Foot c. System Board Guide d. Security Bracket e. Side panel f. I/O Panel Blank g. Filler panel 5.25-inch h. Filler panel 1.75-inch i. Cover lock Assembly j. RFI filler panel	5063-4597	-
2	Rear Bezel Label	5042-0587	-
3	3.5-inch flexible Disk Drive	D2035-63004	-
4	Mounting Rails for 3.5-inch non-HP Flexible Disk Drives	5063-0309	-
5	5.25-inch flexible Disk Drive	See disk drive parts list	
6	Mounting Rails for 5.25-inch non-HP Disk Drives	Order product number D2880A	
7	3.5-inch, h-h, Tray (5 pack) for non-supported hard disk drives	Order product number D2037A	
8	Hard Disk Drive (standard) ¹ 210 MB 340 MB 540 MB	D2387-63001 D2890-63001 D2891-63003	D2387-69001 D2890-69021 D2891-69003
9	Hard Disk Cable (IDE drive)	5182-0311	-
10	Flexible Disk Drive Cable	5182-1089	-
11	Status (Control) Panel	5063-0889	-
12	Backplane Assembly	5063-5729	-
13	System Board (includes integrated IDE disk controller)	D3175-63001 ²	D3175-69001 ²
14	Power Supply Assembly 100 W	5063-4553	-

1 For optional disk drive information, see the *Accessory Service Handbook*.

2 These replacement assemblies are supplied without a processor chip.

HP Vectra VL2 5/60 PC Series

Parts List for HP Vectra VL2 5/60 PC Series

Description	Repl. Part Number	Exchange Part Number
Processor	5182-1080	-
Main Memory Modules:¹		
4-MB Main Memory Module kit (36-bit, 70ns)	D2974-63001	-
8-MB Main Memory Module kit (36-bit, 70ns)	D2975-63001	-
16-MB Main Memory Module kit (36-bit, 70ns)	D2297-63001	D2297-69001
32-MB Main Memory Module kit (36-bit, 70ns)	D2298-63001	D2298-69001
Video Memory Modules:¹		
1-MB Video Memory Module kit (D3179A)	5063-5727	-
Nameplate:		
HP Vectra VL2 5/60 Logo	5042-0586	-
Support Manuals:		Part Number
Familiarization Guide		D3175A + 49A-90001
Technical Reference Manual: Hardware and BIOS		None ²

1 Memory modules must be installed in matching pairs.

2 Electronic file only.

Part Numbers for HP Utility Diskettes


Description	Rev	Date Code	Part #	Info.
Windows & DOS Video Drivers			5063-4590	Kit

Notes: _____

HP Vectra M2 PC Series

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	Integ. LAN	L 2 Cache
Vectra M2 PC Series							
HP Vectra M2 4/33s PC (CPL: 06/94 ▶)							
D3151A	1.44 MB (D2035A)	None	Integrated Fast IDE controller on local bus	Integrated Ultra VGA (1 MB, 60 ns)	8 MB	None	None (opt.)
D3152A		210 MB (D2387A)					
D3182A		340 MB (D2890A)					
HP Vectra M2 4/33si PC (CPL: 06/94 ▶)							
D3153A	1.44 MB (D2035A)	210 MB (D2387A)	Integrated Fast IDE controller on local bus	Integrated Ultra VGA (1 MB, 60 ns)	8 MB	Yes	None (opt.)
HP Vectra M2 4/50 PC (CPL: 06/94 ▶)							
D3158A	1.44 MB (D2035A)	None	Integrated Fast IDE controller on local bus	Integrated Ultra VGA (1 MB, 60 ns)	8 MB	None	None (opt.)
D3159A		210 MB (D2387A)					
D3183A		340 MB (D2890A)					
HP Vectra M2 4/50i PC (CPL: 06/94 ▶)							
D3157A	1.44 MB (D2035A)	210 MB (D2387A)	Integrated Fast IDE controller on local bus	Integrated Ultra VGA (1 MB, 60 ns)	8 MB	Yes	None (opt.)

Medium-Profile 
Desktop Vectras

HP Vectra M2 PC Series 5-1

HP Vectra M2 PC Series

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	Integ. LAN	L 2 Cache
HP Vectra M2 4/66 PC (CPL: 06/94 ▶)							
D3161A	1.44 MB (D2035A)	None	Integrated	Integrated	8 MB	None	None (opt.)
D3162A		340 MB (D2890A)	Fast IDE controller on local bus	Ultra VGA (1 MB, 60 ns)			
HP Vectra M2 4/100 PC (CPL: 06/94 ▶)							
D3185A	1.44 MB (D2035A)	None	Integrated	Integrated	8 MB	None	256KB
D3164A		340 MB (D2890A)	Fast IDE controller on local bus	Ultra VGA (1 MB, 60 ns)			

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Supported Accessories

Accessory

512 KB Video Memory Upgrade Kit	D3169A
128 KB Cache Memory Upgrade Kit	D3168A
256 KB Cache Memory Upgrade Kit	D2944A
4 MB Main Memory Upgrade Kit	D2974A
8 MB Main Memory Upgrade Kit	D2975A
16 MB Main Memory Upgrade Kit	D2297A
32 MB Main Memory Upgrade Kit	D2298A

Input Devices

Keyboard	C1405B
HP Logitech-type Mouse	C3751A

HP Vectra M2 PC Series

Video Displays

Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Multimedia Products

HP Sound DSP 16	D2941A
HP Integrated Office	D2887A

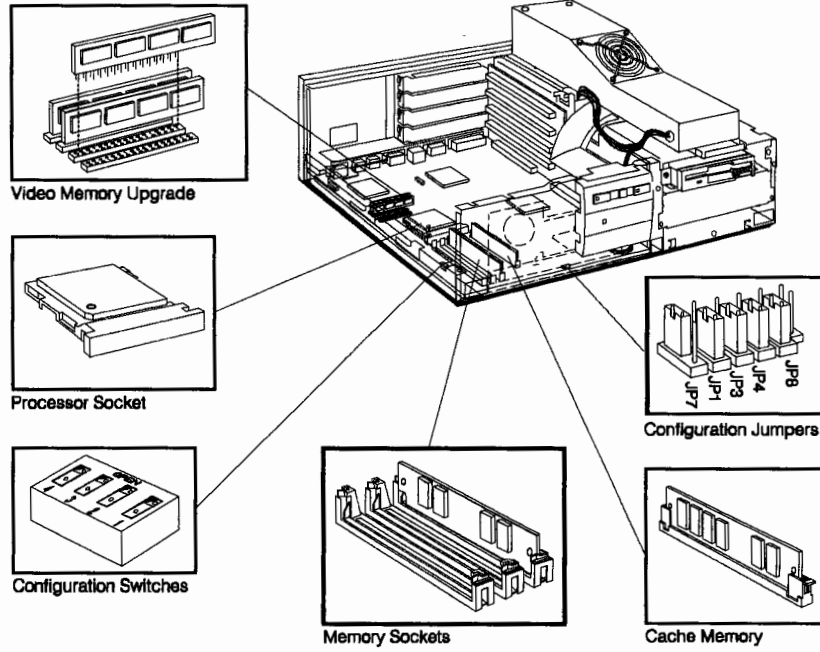
Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch	D2035A
Flexible Disk 1.2 MB 5-1/4 inch	D2881A
IDE 170 MB Hard Disk	D2330B
IDE 210 MB Hard Disk	D2387A
IDE 450 MB Hard Disk	D2884A
IDE 340 MB Hard Disk	D2890A
IDE 540 MB Hard Disk	D2891A
IDE 270 MB Hard Disk	D2894A
CD-ROM Drive	D2886A/B

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System Board, BIOS, and Memory

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HP Vectra M2 PC Series

M2 Configuration Jumpers

Jumper Setting		Function	Default
JP1	1-2	PENTIUM Overdrive: Level-one cache write through mode.	2-3
	2-3	PENTIUM Overdrive: Level-one cache write back mode.	
JP2	9-10	Select IRQ 7 for LPT	9-10
	11-12	Select IRQ 5 for LPT	
JP3 ¹	1-2	Select 33 MHz processor speed	
	2-3	Select 25 MHz processor speed	
JP4	1-2	Select > 33 MHz processor speed	2-3
	2-3	Select 25/33 MHz processor speed	
JP7	1-2	VESA ID bit (CPU speed ≤ 33 MHz)	1-2
	2-3	VESA ID bit (CPU speed > 33 MHz)	
JP8 ¹	1-2	IntelDX4 processor	
	2-3	Other processor	

¹ Default setting dependent on model

M2 System Board Switches

Switch #		Function	Default
1 SECUR	CLOSED	Enables security mode to prevent changes to the PC's configuration	CLOSED
	OPEN	Disables security mode to allow changes to the PC's configuration	
2 VGAEN	OPEN	Enables VGA	OPEN
	CLOSED	Disables VGA	
3 CONFIG	OPEN	Retain the configuration stored in CMOS	OPEN
	CLOSED	Clear the configuration stored in CMOS Switch to CLOSED if you need to clear the PC's configuration information, for example, if the configuration is corrupted.	
4 PSWRD	OPEN	Enables the passwords to be set and stored in CMOS	OPEN
	CLOSED	Disables the passwords Switch to CLOSED if you need to clear the current password.	

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Medium-Profile 
Desktop Vectras

HP Vectra M2 PC Series 5-5

HP Vectra M2 PC Series

IRQs and I/O Addresses

IRQ	Function	I/O Port Hex
IRQ 3	Serial Port B (COM2) or LAN	3F8-3FF
IRQ 4	Serial Port A (COM1) or LAN	2F8-2FF
IRQ 6	Flexible Disk Controller	3F0-3F7
IRQ 7 (5) ¹	Parallel Port 1 (LPT1)	378-37F
IRQ 14	IDE Hard Disk Controller	1F0-1F7
-	Video controller	3B0-3DF

1 Numbers in brackets indicate alternate IRQ selected by jumper on the system board. See the Configuration Jumper table for details.

Setup and BIOS History

The HP BIOS includes a SETUP program. See the HP Vectra M2 Familiarization guide for details.

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BIOS Ver.	Date	Description	Kit Part No.	Min Setup
HP Vectra M2 PC Series				
GB.04.03	June 94	First release	N/A	N/A

Second-Level Cache Memory

HP Vectra M2 PCs have one cache memory socket. A 128 KB or 256 KB second-level cache memory kit may be installed in all HP Vectra M2 PCs except the HP Vectra 4/100. The HP Vectra 4/100 PC has 256 KB second-level cache memory as standard.

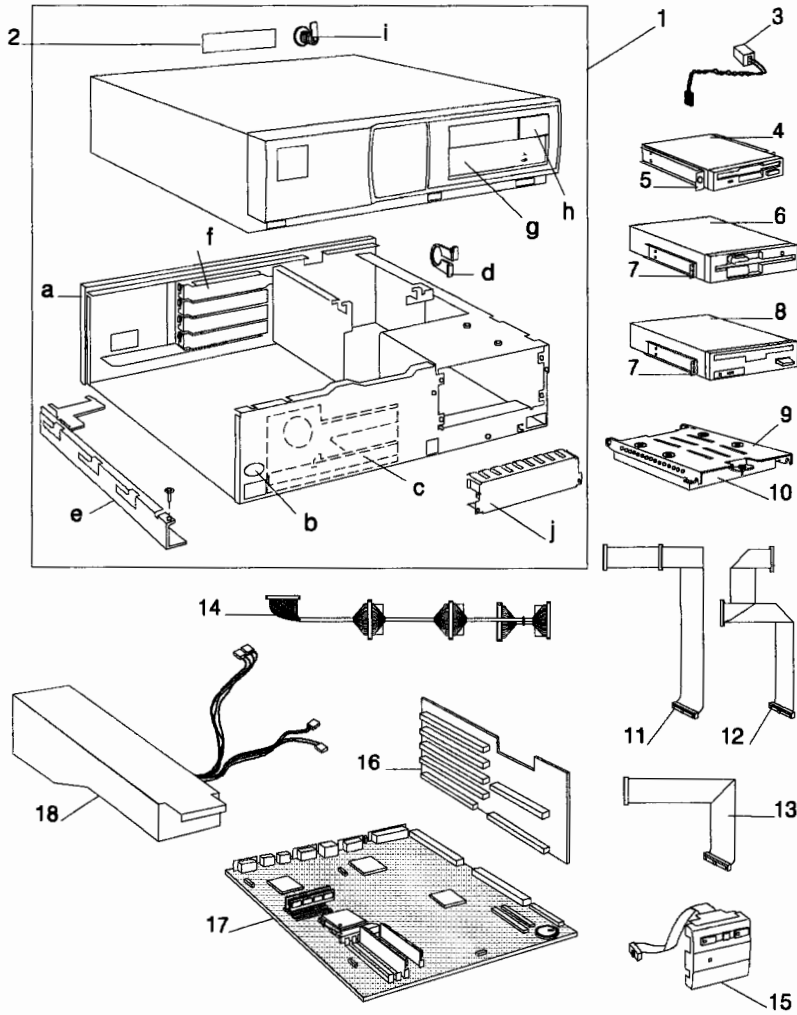
Video Memory

The PC is supplied with 1 MB of video memory for 1024×768 in 256 colors. An additional 1 MB of video memory (two 512KB video memory modules) can be installed in the video memory sockets (to make a total of 2 MB for 1024×768 in 64 K colors).


Main Memory

The HP Vectra M2 PC has three sockets on the system board and is supplied with 8-MB main memory as standard. Main memory modules (36-bit) of 4 MB, 8 MB, 16 MB, and 32 MB can be installed in *any combination* in the sockets, up to a maximum of 96 MB.

Part Numbers



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Medium-Profile Desktop Vectras 

HP Vectra M2 PC Series

Parts List for HP Vectra M2 PC Series

Item	Description	Repl. Part Number	Exchange Part Number list
1	Box Assembly: a. Rear Bezel b. Bumper foot c. System Board Guide d. Security bracket e. Side panel f. I/O Panel Blank g. Filler panel 5.25-inch h. Filler panel 1.75-inch i. Cover lock assembly	5063-4597 5042-0558 5041-2578 5063-0877 5062-5590	- - - -
2	Rear Bezel label	5042-0558	-
3	3 V Battery 4.5 V Battery (optional accessory)	1420-0314 ¹ 1420-0513	- -
4	Flexible Disk Drive, 3.5-inch	D2035-63004	-
5	Mounting Rails for 3.5-inch non-HP Disk Drives	5063-0309	-
6	Flexible Disk Drive, 5.25-inch	See disk drive parts list in <i>Accessory Service Handbook</i>	
7	Mounting Rails for 5.25-inch devices	D2880A	-
8	CD-ROM drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
9	3.5-inch, h-h, Tray (5 pack) for non-supported hard disk drives	Order product number D2037A	
10	Hard Disk Drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
11	Hard Disk Cable (IDE drive)	5182-1090	-
12	Flexible Disk Drive Cable	5181-1091	-
13	Hard disk cable, flat (SCSI)	5181-1045	-
14	Hard disk cable, round (SCSI)	5181-0397	-
15	Status (Control) Panel	5063-5705	-
16	Backplane Assembly	5063-5718	-
17	System Board	See parts list on next page	
18	Power Supply Assembly	5063-4553	-

¹ Replace the battery with a Panasonic/Rayovac BR2325 battery, available from most local stores, or its equivalent HP battery using this number from your dealer or HP Sales and Service Office. Return the old battery to the supplier.

Vectra M2 PC Series

Parts List for HP Vectra M2 PC Series


Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated IDE disk and Ultra VGA+ controllers): ¹	D3151-63001 ¹	D3151-69001
	D3153-63001 ¹	D3153-69001
	D3185-63001 ¹	-
Processor:		
486SX-33 'SL'	5063-4554	-
486DX2-50 'SL'	5063-4583	-
486DX2-66 'SL'	5063-4584	-
486DX4-100 'SL'	5063-4598	-
Second Level Cache Memory Modules:		
128-KB Cache Memory Module kit (D3168A)	D3168-63001	-
256-KB Cache Memory Module kit (D2944A)	5063-0880	-
Main Memory Modules (70 ns):		
4-MB Main Memory Module kit, 36-bit (D2974A)	D2974-63001	-
8-MB Main Memory Module kit, 36-bit (D2975A)	D2975-63001	-
16-MB Main Memory Module kit, 36-bit (D2297A)	D2297-63001	D2297-69001
32-MB Main Memory Module kit, 36-bit (D2298A)	D2298-63001	D2298-69001
Video Memory Modules:		
512-KB Video Memory kit (D3169A)	D3169-83001	-
Nameplates:		
HP Vectra M2 4/33s Logo	5042-0533	-
HP Vectra M2 4/33si Logo	5042-0534	-
HP Vectra M2 4/50 Logo	5042-0541	-
HP Vectra M2 4/50i Logo	5042-0536	-
HP Vectra M2 4/66 Logo	5042-0537	-
HP Vectra M2 4/100 Logo	5042-0542	-
Support Manuals:		Part Number
Familiarization Guide		D314x+49A-90001
Technical Reference Manual: Hardware and BIOS		None ²

1 These assemblies are supplied without main memory modules

2 Electronic file only.

Part Numbers for HP Utility Diskettes

Description	Rev	Date Code	Part #	Info.
Windows & DOS Video Drivers			5063-4532	Kit

Medium-Profile 
Desktop Vectras

HP Vectra M2 PC Series 5-9

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HP Vectra 486VL PC Series

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	L 2 Cache	Add-on
Vectra 486VL PC Series							
HP Vectra 486/25VL PC (CPL: 07/93 ▶)							
D3021A	1.44 MB (D2035A)	120 MB (D1696A)	Integrated IDE controller	Integrated Ultra VGA (512 KB, upgradeable to 1 MB)	4 MB	None	None
D3021B		170 MB (D2330A)					
D3022A		240 MB (D1697A)					
D3024A ¹		170 MB (D2330A)					
D3031A		None					
D3032A		106 MB (D3032-60003)					
D3036A							
HP Vectra 486s/33VL PC (CPL: 07/93 ▶)							
D3033A	1.44 MB (D2035A)	170 MB (D2330A)	Integrated IDE controller	Integrated Ultra VGA (512 KB, upgradeable to 1 MB)	4 MB	Opt.	None
D3039A		240 MB (D1697A)					

¹ HP Sound DSP 16 includes: CD-ROM drive, audio/SCSI board, audio cable, SCSI cable, headphones, audio software and drivers, Kodak CD, and Users Guide.

Medium-Profile 
Desktop Vectras

HP Vectra 486VL PC Series 6-1

HP Vectra 486VL PC Series

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	L 2 Cache	Add-on
HP Vectra 486/33VL PC (CPL: 07/93 ▶)							
D3025A	1.44 MB (D2035A)	120 MB (D1696A)	Integrated IDE controller	Integrated Ultra VGA (512 KB, upgradeable to 1 MB)	4 MB	Opt.	None
D3025B		170 MB (D2330A)					
D3026A		240 MB (D1697A)					
D3035A		None					
HP Vectra 486/66VL PC (CPL: 07/93 ▶)							
D3028A	1.44 MB (D2035A)	240 MB (D1697A)	Integrated IDE controller	Integrated Ultra VGA (512 KB, upgradeable to 1 MB)	4 MB	Opt.	None
D3037A		None					
D3038A		420 MB (D2895-60001)					

Supported Accessories

128-KB Second-Level Cache Memory Upgrade kit	D3029A
512-KB Video Memory Upgrade kit	D2713A
2-MB Main Memory Upgrade kit	D2381A
4-MB Main Memory Upgrade kit	D2156A
8-MB Main Memory Upgrade kit	D2152A
16-MB Main Memory Upgrade kit	D2676A
<i>Vectra 486VL User's Guide</i>	D3020A
Processor upgrades:	
486VL Processor Upgrade to 486DX-33 (33 MHz)	D2169A

When you upgrade the processor, check the part number of the new processor and set the MHZ and DXGEN jumpers as described in the processor upgrade jumper configuration table.

HP Vectra 486VL PC Series

Video Displays

Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Multimedia Products

HP Sound DSP 16	D2941A
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Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch	D2035A
Flexible Disk 1.2 MB 5-1/4 inch	D2881A
IDE 120 MB Hard Disk	D1696A
IDE 240 MB Hard Disk	D1697A
IDE 170 MB Hard Disk	D2330A
IDE 450 MB Hard Disk	D2884A
CD-ROM Drive	D2886A/B

Datacomm and LAN Boards

Ethertwist PC Link Adapter	27245A
Ethertwist Adapter/16	27247B
Token-Ring Adapter	D2378A

Input Devices

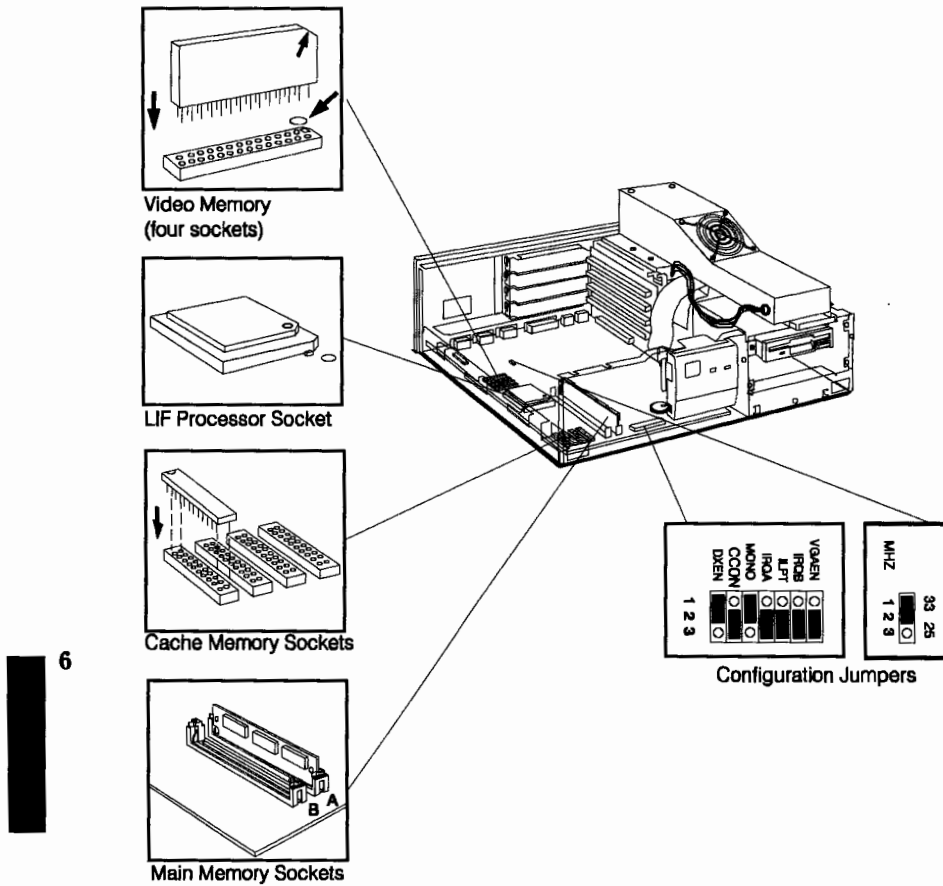
HP Logitech-type Mouse	C3750-60101
Keyboard	C1405B
Keyboard	C3346-602xx

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Medium-Profile 
Desktop Vectras

HP Vectra 486VL PC Series 6-3

System Board, BIOS, and Memory



Video Memory

If additional video memory is added, all four sockets must be filled.

Main Memory

2-MB, 4-MB, 8-MB, and 16-MB 32-bit main memory modules can be installed in *any combination* in the two sockets up to a maximum of 32 MB.

Cache Memory

128 KB of second-level cache memory may be installed (except in the 486/25VL). All four chips must be installed.

HP Vectra 486VL PC Series

486VL Configuration Jumpers (7-way Block)

Jumper Setting	Function		Default
VGAEN	1-2	Disables the integrated VGA.	2-3
	2-3	Enables the integrated VGA. (disable if a video board is installed)	
IRQB	1-2	Sets the IRQ for serial port 2 to IRQ15.	2-3
	2-3	Sets the IRQ for serial port 2 to IRQ3.	
ILPT	1-2	Sets the IRQ for the parallel port to IRQ5.	2-3
	2-3	Sets the IRQ for the parallel port to IRQ7	
IRQA	1-2	Sets the IRQ for serial port 1 to IRQ9.	2-3
	2-3	Sets the IRQ for serial port 1 to IRQ4.	
MONO	1-2	Selects color video output.	1-2
	2-3	Selects the monochrome video output.	
CCON	1-2	Clears the configuration stored in CMOS. Clear the PC's configuration information if, for example, the configuration is corrupted.	2-3
	2-3	Retains the configuration information stored in CMOS.	
DXEN	1-2	Selects pinouts for the processor in the upgrade socket. (See Processor upgrades.)	SX-type
	2-3		DX-type

486VL Clock Selection Jumper (1-way Block)

Jumper Setting	Function		Default
MHZ	1-2	Sets the bus speed of the processor board.	486/33VL
	2-3		486/66VL
			486/25VL

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Processor Upgrade—Jumper Configuration

Microprocessor Type	Jumper Setting	
	MHZ	DXGEN
486DX-33	1-2	2-3
486DX2-50	2-3	2-3
DX OverDrive/25	2-3	2-3
SX OverDrive/25	2-3	1-2
486DX2-66	1-2	2-3
SX OverDrive/33	1-2	1-2
DX OverDrive/33, Intel ODP486DX-33 (DX pinouts)	1-2	2-3
DX OverDrive/33, Intel ODP486DX-33 (SX pinouts)	1-2	1-2

Medium-Profile 
Desktop Vectras

HP Vectra 486VL PC Series 6-5

HP Vectra 486VL PC Series

IRQs and I/O Addresses for the 486VL

IRQs and I/O addresses for the HP Vectra 486VL

IRQ	Function	I/O Port Hex
IRQ 3 (15) ¹	Serial Port 1 (COM2)	2F8-2FF
IRQ 4 (9) ¹	Serial Port 0 (COM1)	3F8-3FF
IRQ 6	Flexible Disk Controller	1F0-1F7
IRQ 7 (5) ¹	Parallel Port 0 (LPT1)	378-37F
-	Video	3B0-3DF

1 Numbers in brackets indicate alternate IRQs selected by jumpers on the system board. See the Configuration Jumper table for details.

Setup and BIOS History

AMI BIOS includes a new SETUP program used on Vectra 486VL PCs. See the HP Vectra 486VL Familiarization guide for details.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra 486VL PC Series HP Vectra 486VL PC Series				
AA.05.00	July 93	First release	N/A	N/A
AA.05.01	Oct 93	Support new video controller chip	N/A	N/A
AA.05.02	Oct 93	Improves memory area use on AA.05.01 versions only	N/A	N/A

Beep Codes for HP Vectra 486VL Only

No. of beeps	Error	Suspect Component ¹
1	Memory refresh Failure	System board / Main memory module
3	Base 32KB Memory Failure	Main memory module
4	Timer Not Operational	System board
5	Processor Error	Processor chip / System board
6	8042 Gate-A20 Failure	System board
7	Processor Exception Interrupt Error	Processor chip / System board
8	Display Memory R/W error	VRAM / System board / Add-in video adapter, if any
9	ROM Checksum error	ROM / System board
10	CMOS Shutdown Register R/W Error	System board

1 Most likely component listed first

Error Messages for HP Vectra 486VL Only

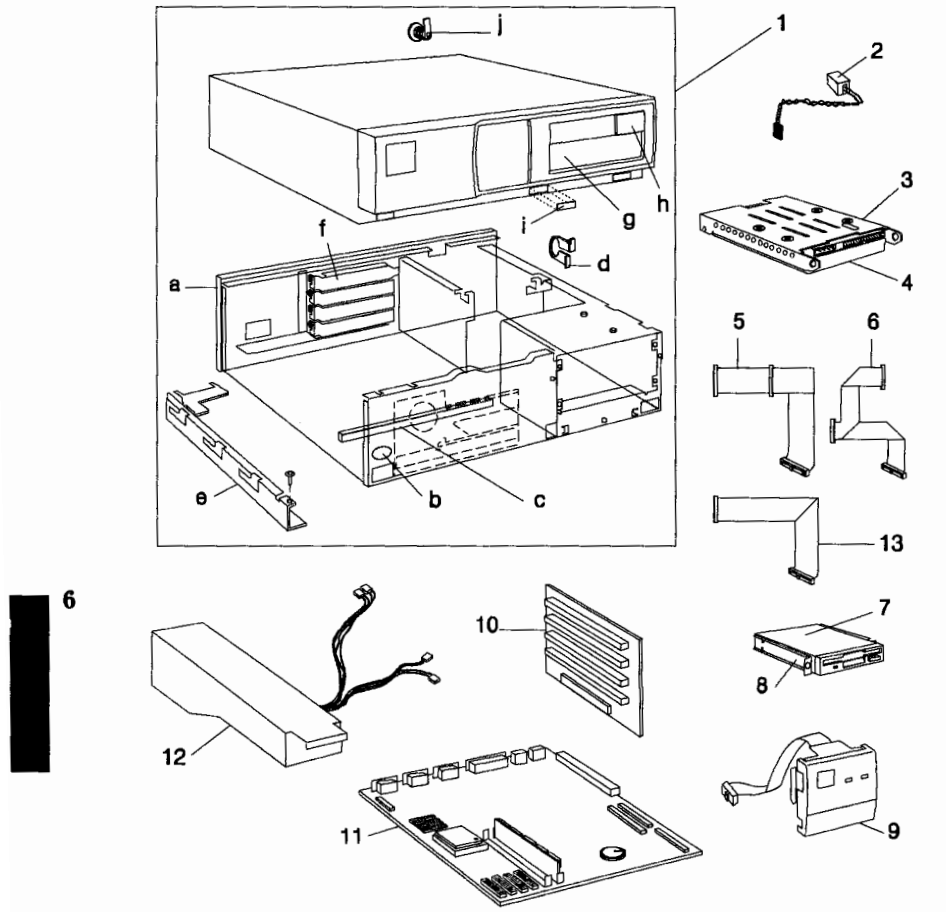
Error Message	Suspect Component¹
8042 Gate-A20 Error	Keyboard controller / System board / Keyboard
Address line short	System board
C:Drive Error	HDD Cable / HDD set-up / HDD / System board
C:Drive Failure	HDD Cable / HDD set-up / HDD
Cache Memory Bad Do Not Enable Cache!	System board
CH-2 Timer Error	
CMOS Battery State Low	Battery ²
CMOS Checksum failure	Wrong set-up, run set-up program / Battery
CMOS Display Type Mismatch	
CMOS Memory Size Mismatch	
CMOS System Options Not Set	
CMOS Time And Date Not Set	
D:Drive Error	HDD Cable / HDD set-up / HDD / System board
D:Drive Failure	HDD cable / HDD set-up / HDD
Diskette Boot Failure	Corrupted diskette / FDD
Display Switch Not Proper	Wrong MONO jumper position on system board
DMA #1 Error	System board
DMA #2 Error	
DMA Error	
FDD Controller Failure	FDD Cable / System board
HDD Controller Failure	HDD Cable / System board
INTR #1 Error	System board
INTR #2 Error	
Invalid Boot Diskette	Wrong diskette
KB/Interface Error	Loose cable or connector / Keyboard / System board
Keyboard Error	Loose cable or connector / Keyboard
No ROM BASIC	HDD Cable / HDD set-up / HDD

¹ Most likely component listed first

² Customers are advised to change the battery on a yearly basis.

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Part Numbers



HP Vectra 486VL PC Series

Parts List for HP Vectra 486VL PC Series

Item	Description	Repl. Part Number	Exchange Part Number list
1	Box Assembly: a. Rear Bezel b. Bumper Foot c. System Board Guide d. Security Bracket e. Side panel f. I/O Panel Blank g. Filler Panel 5.25-inch h. Filler Panel 1.75-inch i. Infrared Filler Cap j. Cover lock Assembly	5063-4597 5042-0507 5041-2578 5063-0877 5042-0505 5062-5590	- - - -
2	Battery ¹	1420-0513	-
3	3.5-inch, h-h, Tray (5 pack) for non-supported hard disk drives	Order product number D2037A	
4	Hard Disk Drive (standard) ² 106 MB (D3032-60003) 120 MB 170 MB 240 MB 450 MB	D1696-60007 D1696-60007 D2330-60003 D1697-60009 D2884-63003	D1696-69003 D1696-69003 D2330-69001 D1697-69007 D2884-69003
5	Hard Disk Cable (IDE drive)	5182-1036	-
6	Flexible Disk Drive Cable	5182-1037	-
7	Flexible Disk Drive (3.5-inch)	D2035-63004	
8	Mounting Rails for 3.5-inch non-HP Disk Drives	5063-0309	-
9	Status (Control) Panel	5063-0889	-
10	Backplane Assembly	5063-0887	-
11	System Board	See PC's parts list	
12	Power Supply Assembly	5063-0888	-
13	Hard Disk Cable, flat (SCSI)	5181-1045	-
	Mounting Rails for 5.25-inch non-HP Disk Drives	Order product number D2880A	

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1 Optional enhancement on 486VL (ensures longer lifespan than onboard button cell).

2 For optional disk drive information, see the *Accessory Service Handbook*.

Vectra 486VL PC Series

Parts List for HP Vectra 486VL PC Series

Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated IDE disk and Ultra VGA + controllers):		
Vectra 486/25VL	D3021-63003 ¹	D3021-69002 ¹
Vectra 486s/33VL	D3025-63002 ²	D3025-69002 ²
Vectra 486/33VL	D3025-63002 ²	D3025-69002 ²
Vectra 486/66VL	D3025-63002 ²	D3025-69002 ²
System Board Battery	1420-0314 ³	-
Math Coprocessor:		
487SX-25	non-HP	-
Processor:		
486SX-33	5063-0865	-
486DX-33	1820-7615	-
486DX2-66	1821-0859	-
Second Level Cache Memory Modules:		
128-KB Cache Memory Module	D3029A	-
Main Memory Modules:		
2-MB Main Memory Module kit	D2381-63001	-
4-MB Main Memory Module kit (32-bit)	5182-1033	-
4-MB Main Memory Module kit (36-bit)	1818-4703	D2156-69001
8-MB Main Memory Module kit (36-bit)	1818-4702	D2152-69001
16-MB Main Memory Module kit (36-bit)	D2676-83001	-
Video Memory Modules:		
512-KB Video Memory kit (D2713A)	D2713-83001	-
Nameplate:		
HP Vectra 486/25VL Logo	5042-0506	-
HP Vectra 486s/33VL Logo	5042-0522	-
HP Vectra 486/33VL Logo	5042-0508	-
HP Vectra 486/66VL Logo	5044-0509	-
Drivers:		Part Number
V12 Drivers and Utilities kit (For Windows and AutoCad)		5063-4531
Support Manuals:		Part Number
Familiarization Guide		D302x + 49A-90001
Technical Reference Manual: Hardware and BIOS		None

1 These assemblies are supplied without main memory modules

2 These assemblies are supplied without main memory modules or processors

3 Replace the battery with a Panasonic/Rayovac BR2325 battery, available from most local stores, or its equivalent HP battery using this number from your dealer or HP Sales and Service Office. Return the old battery to the supplier



HP Vectra 486XM PC Series

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	Integ. LAN	L 2 Cache
Vectra 486XM PC Series							
HP Vectra 486s/33XM PC (CPL: 07/93 ▶)							
D2901A	1.44 MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA 2 (1 MB, upgradeable to 2 MB)	4 MB	Yes	None (opt.)
D2902A		170 MB (D2330A)					
D2903A		240 MB (D1697A)					
HP Vectra 486/33XM PC (CPL: 07/93 ▶)							
D2911A	1.44 MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA 2 (1 MB, upgradeable to 2 MB)	4 MB	Yes	128 KB
D2911B		170 MB (D2330A)			8 MB		
D2912A		240 MB (D1697A)			4 MB		
D2913A		450 MB (D2884A)			8 MB		
D2913B							
D2914A							

Medium-Profile 
Desktop Vectras

HP Vectra 486XM PC Series 7-1

HP Vectra XM PC Series

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	Integ. LAN	L 2 Cache
HP Vectra 486/50XM PC (CPL: 07/93 ▶)							
D2921A	1.44 MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA (1 MB, upgradeable to 2 MB)	4 MB	Yes	256 KB
D2921B					8 MB		
D2923A		240 MB (D1697A)					
D2924A		450 MB (D2884A)					
HP Vectra 486/66XM PC (CPL: 07/93 ▶)							
D2931A	1.44 MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA 2 (1 MB, upgradeable to 2 MB)	4 MB	Yes	256 KB
D2931B					8 MB		
D2933A		240 MB (D1697A)			8 MB		
D2934A		450 MB (D2884A)					
D2935A					16 MB		

Supported Accessories

128-KB Second-Level Cache Memory Upgrade kit	D2943A
256-KB Second-Level Cache Memory Upgrade kit	D2944A
1-MB Video Memory Upgrade kit	D2942A
2-MB Main Memory Upgrade kit	D2381A
4-MB Main Memory Upgrade kit	D2156A
8-MB Main Memory Upgrade kit	D2152A
16-MB Main Memory Upgrade kit	D2676A
<i>Setting Up Your PC</i> and <i>Using Your PC</i> manuals	D2900A
Coprocessor upgrade:	
486XM PC with 487SX-33 Math Coprocessor	Non-HP
Processor upgrades:	
486XM Processor Upgrade to 486DX-33 (33 MHz)	D2169A

Input Devices

Mouse (PS/2, Microsoft)	C1413A
Keyboard	C1405B

HP Vectra XM PC Series

Video Displays

Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Multimedia Products

HP Sound DSP 16	D2941A
HP Integrated Office	D2887A

Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch	D2035A
Flexible Disk 1.2 MB 5-1/4 inch	D2881A
IDE 120 MB Hard Disk	D1696A
IDE 240 MB Hard Disk	D1697A
IDE 170 MB Hard Disk	D2330A
IDE 170 MB Hard Disk	D2330B
IDE 210 MB Hard Disk	D2387A
IDE 450 MB Hard Disk	D2884A
IDE 340 MB Hard Disk	D2890A
IDE 540 MB Hard Disk	D2891A
IDE 270 MB Hard Disk	D2894A
SCSI 430 MB Hard Disk	D1699A
CD-ROM Drive	D2886A/B

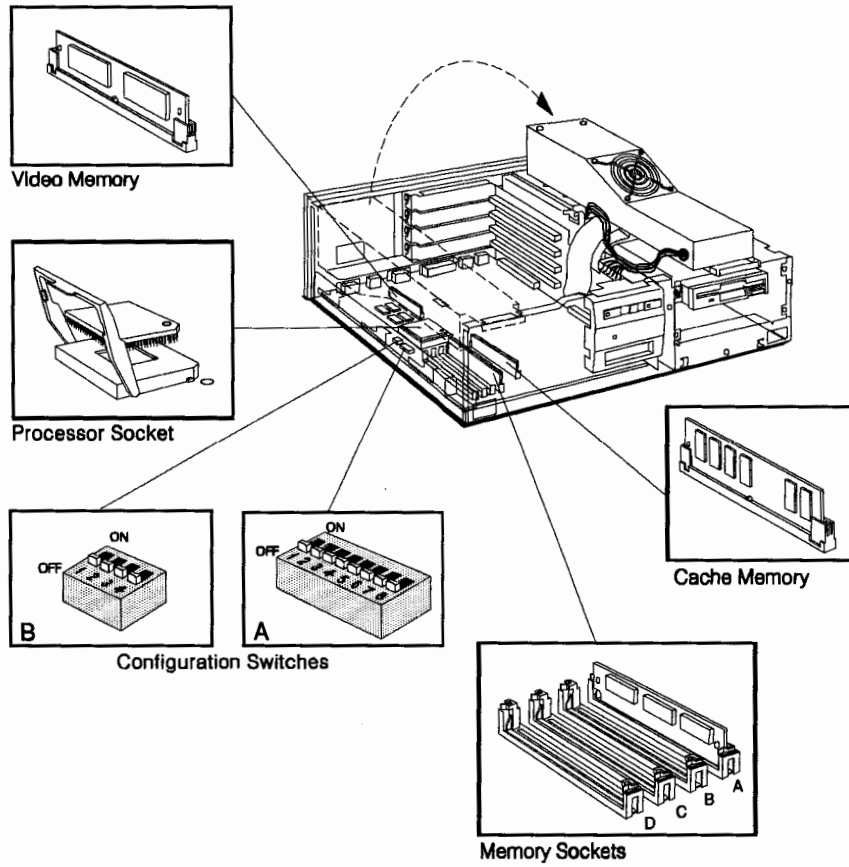
Datacomm and LAN Boards

Serial Parallel Board	24540B
Dual Serial Board	24541B
Ethertwist PC Link Adapter	27245A
Ethertwist Adapter/16	27247A
Ethertwist Adapter/16	27247B
HP ThinLAN Board	27250A
Token-Ring Adapter	D2378A
Coaxial LAN Adapter Board	D2746A

Medium-Profile 
Desktop Vectras

HP Vectra 486XM PC Series 7-3

System Board, BIOS, and Memory



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HP Vectra 486XM PC Series

486XM PC Switch Block SW-A

Switch	Function		Default
1	OFF	Mouse interrupt IRQ12—enabled	OFF
	ON	Mouse interrupt IRQ12—disabled (disable mouse if an accessory board uses IRQ12)	
2	OFF	Video interrupt IRQ9—disabled	OFF
	ON	Video interrupt IRQ9—enabled	
3	OFF	Integrated Ultra VGA controller—enabled	OFF
	ON	Integrated Ultra VGA Controller—disabled (disable built-in video if another video board is used)	
4	OFF	Passwords—enabled	OFF
	ON	Passwords—disabled (erased)	
5	OFF	EEPROM stored configuration information—valid	OFF
	ON	EEPROM stored configuration information—erased	
6	OFF	Security mode—disabled	OFF
	ON	Security mode—configuration cannot be changed using Setup	
7	OFF	Flash ROM updates—enabled	OFF
	ON	Flash ROM updates—disabled	
8	OFF	Not used	OFF

486XM PC Switch Block SW-B

Switch	Name	Function	
1	Reserved	Not used (OFF)	
2	IO399	Sets the super I/O controller's ¹ I/O port addresses (hex): OFF: 398–399 (default) ON: 26E–26F	
3	MHZ-2	OFF	OFF
4	MHZ-1	OFF	ON
		25 MHz	33 MHz
MHZ-1 and MHZ-2 set the speed of the processor's external clock—Set to 25 MHz for Overdrive/25 (50 MHz internal clock) and 33 MHz for Overdrive/33 (66 MHz internal clock). Setting a speed higher than the processor's rated bus speed could damage the processor			

1 Super I/O controller: the integrated parallel port controller, serial port controller, flexible disk controller, and IDE hard disk interface

HP Vectra 486XM PC Series

Setup and BIOS History

Setup version "D.xx.xx" is used on Vectra 486XM PCs.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra 486XM PC Series HP Vectra 486XM PC Series				
W.04.01	June 93	First release	Available on HP PC Internal BBS	N/A

Second-Level Cache Memory

HP Vectra 486XM PC has a second-level cache memory socket. A 128-KB second-level cache memory module or a 256-KB second-level cache memory module may be installed.

Video Memory

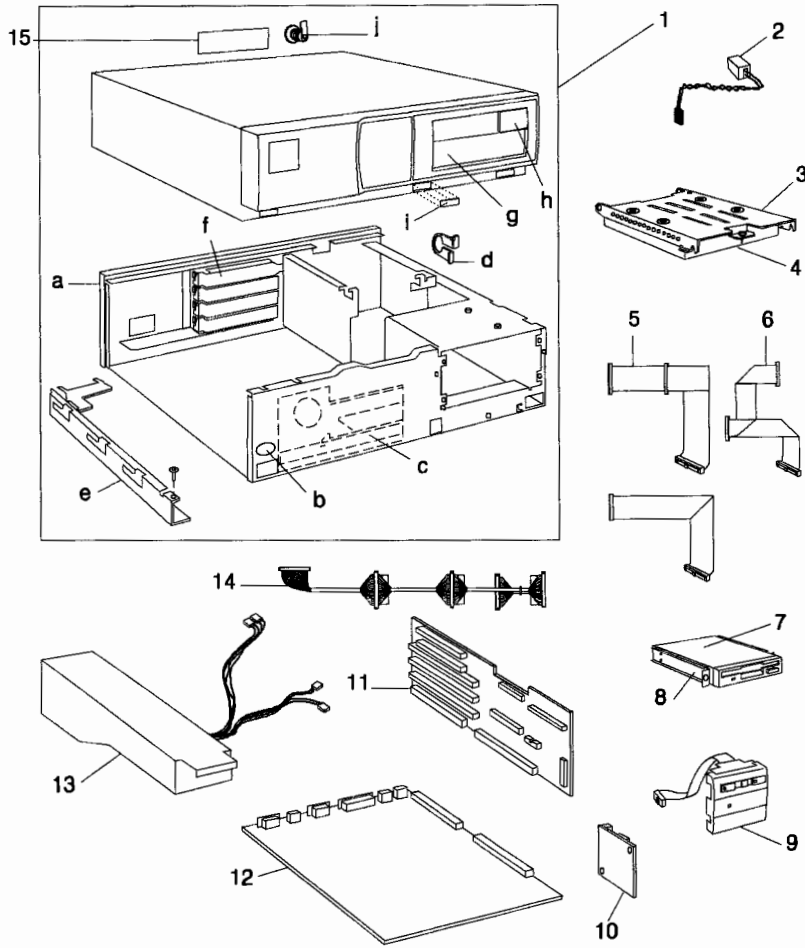
The PC is supplied with 1 MB of video memory for 1280×1024 in 256 colors. An additional 1-MB video memory module can be installed in a video memory socket (to make a total of 2 MB) for 1280×1024 in 64 K colors.


Main Memory

HP Vectra 486XM PC has four sockets on the system board labeled A, B, C, and D. Main memory modules can be installed in *any combination* in *any of the four sockets* up to a maximum of 64 MB.

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Part Numbers



Medium-Profile Desktop Vectras 

HP Vectra 486XM PC Series

Parts List for HP Vectra 486XM PC Series

Item	Description	Repl. Part Number	Exchange Part Number list
1	Box Assembly:	5063-4597	-
	a. Rear Bezel	5041-2589	
	b. Bumper Foot		
	c. System Board Guide		
	d. Security Bracket		
	e. Side panel		
	f. I/O Panel Blank		
	g. Filler Panel 5.25-inch	5041-2578	-
	h. Filler Panel 1.75-inch	5063-0877	-
	i. Infrared Filter/Cap ¹		
	j. Cover lock Assembly	5062-5590	-
	Rear Bezel (Serial/LAN)	5041-2589	-
2	Battery	1420-0513	-
3	3.5-inch, h-h, Tray (5 pack) for non-supported hard disk drives	Order product number D2037A	
4	Hard Disk Drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
5	Hard Disk Cable (IDE drive)	5182-0311	-
6	Flexible Disk Drive Cable	5182-1089	-
7	Flexible Disk Drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
8	Mounting Rails for 3.5-inch non-HP Disk Drives	5063-0309	-
9	Status (Control) Panel	5063-0876	-
10	Infrared Assembly	5063-0850	-
11	Backplane Assembly	See PC's parts list	
12	System Board	See PC's parts list	
13	Power Supply Assembly	See PC's parts list	
14	Hard Disk Cable, round (SCSI)	5181-0397	-
	Hard Disk Cable, flat (SCSI)	5181-1045	-
15	Serial Label	5181-0395	-
	Mounting Rails for 5.25-inch non-HP Disk Drives	Order product number D2880A	

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1 The XM PCs have a filter P/N 5042-0504 for the integrated infrared adapter.

7-8 HP Vectra 486XM PC Series

Medium-Profile
Desktop Vectras 


Vectra 486XM PC Series

Parts List for HP Vectra 486XM PC Series

Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated IDE disk and Ultra VGA 2 controllers, and integrated Ethernet):		
Vectra 486s/33XM	D2902-63001	D2902-69001
Vectra 486/33XM	D2912-63001	D2912-69001 ¹
Vectra 486/50XM	D2912-63001	D2912-69001 ¹
Vectra 486/66XM	D2912-63001	D2912-69001 ¹
Backplane Assembly	5063-0849	-
Power Supply Assembly 75 W	5063-0888	-
LAN Adapters:		
Coaxial Adapter Board (D2746A)	D2746-63001	-
Math Coprocessor:		
487SX-33	non-HP	-
Processor:		
486DX-33	1820-7615	-
486DX2-50	1821-0303	-
486DX2-66	1821-0859	-
Cache Memory Modules:		
128-KB 2nd Cache Memory Module (D2943A)	5063-0879	-
256-KB 2nd Cache Memory Module (D2944A)	5063-0880	-
Main Memory Modules:		
2-MB Main Memory Module kit	D2381-63001	-
4-MB Main Memory Module kit (36-bit)	1818-4703	D2156-69001
4-MB Main Memory Module (32-bit)	5182-1033	-
8-MB Main Memory Module kit (36-bit)	1818-4702	D2152-69001
8-MB Main Memory Module (32-bit)	5063-0890	-
16-MB Main Memory Module kit (36-bit)	D2676-83001	-
Video Memory Modules:		
1-MB Video Memory Module kit (D2942A)	5063-0881	-
Nameplate:		
HP Vectra 486s/33XM Logo	5041-2588	-
HP Vectra 486/33XM Logo	5041-2596	-
HP Vectra 486/50XM Logo	5041-2597	-
HP Vectra 486/66XM Logo	5041-2598	-
Support Manuals		Part Number
Familiarization Guide		D29xxA + 49A-90001
Technical Reference Manual: Hardware and BIOS		5961-4589

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1 These replacement assemblies are supplied without a processor chip.

Medium-Profile 
Desktop Vectras

HP Vectra 486XM PC Series 7-9

Vectra 486XM PC Series

Part Numbers for HP Utility Diskettes

Description	Rev	Date Code	Part #	Info.
Windows & DOS Video Drivers	A.01.05	3345	5063-4534	Refer to HP Internal BBS
OS/2 Video Drivers	A.01.00	3321		
Lan Drivers for HP Integrated Ethernet Interface	A.02.02	3345	5063-4535	

Notes: _____

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HP Vectra 486M & MI PC Series

Models and Accessories

HP Vectra 486M & MI PC Series Models

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	LAN Interface	
Vectra 486M & MI PC Series							
HP Vectra 486/25M PC (CPL: 6/93 ▶)							
D2851A	1.44 MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	4 MB	None	
D2855A		120 MB (D1696A)					
D2852A		170 MB (D2330A)					
D2853A		240 MB (D1697A)					
HP Vectra 486s/33M PC (CPL: 06/93 ▶)							
D2861A	1.44 MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	4 MB	None	
D2865A		120 MB (D1696A)					
D2862A		170 MB (D2330A)					
D2863A		240 MB (D1697A)					
HP Vectra 486/33M PC (CPL: 06/93 ▶)							
D2871A	1.44 MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	4 MB	None	
D2872A		170 MB (D2330A)			240 MB (D1697A)		8 MB
D2872B ¹							4 MB
D2873A							8 MB
D2873B ¹							

¹ CPL date for the D2872B and D2873B models is 11/93 ▶

Medium-Profile 
Desktop Vectras

HP Vectra 486M & MI PC Series 8-1

HP Vectra 486M & MI PC Series

HP Vectra 486M & MI PC Series Models (continued)

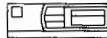
Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	LAN Interface
HP Vectra 486/66M PC (CPL: 11/93 ▶)						
D2892A	1.44 MB (D2035A)	240 MB (D1697A)	Integrated IDE controller	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	8 MB	None
D2893A		450 MB (D2884A)				
HP Vectra 486/25MI PC (CPL: 06/93 ▶)						
D2857A	1.44 MB (D2035A)	170 MB (D2330A)	Integrated IDE controller	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	4 MB	Integrated Ethernet
D2857B		240 MB (D1697A)				
D2859B ¹						
HP Vectra 486s/33MI PC (CPL: 06/93 ▶)						
D2867A	1.44 MB (D2035A)	170 MB (D2330A)	Integrated IDE controller	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	4 MB	Integrated Ethernet
HP Vectra 486/33MI PC (CPL: 06/93 ▶)						
D2877A	1.44 MB (D2035A)	170 MB (D2330A)	Integrated IDE controller	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	4 MB	Integrated Ethernet
D2877B		240 MB (D1697A)			8 MB	

¹ Includes: HP OpenView PC Client software and D2886A CD-ROM kit

Supported Accessories

512-KB Video Memory Upgrade kit	D2713A
2-MB Main Memory Upgrade kit (486M & MI PCs)	D2381A
4-MB Main Memory Upgrade kit (486M & MI PCs)	D2156A
8-MB Main Memory Upgrade kit (486M & MI PCs)	D2152A
16-MB Main Memory Upgrade kit (486M & MI PCs)	D2676A
<i>Setting Up Your PC</i> and <i>Using Your PC</i> manuals	D2850A

8-2 HP Vectra 486M & MI PC Series

Medium-Profile Desktop Vectras 

HP Vectra 486M & MI PC Series

Coprocessor upgrades:

486M & MI PC with 487SX-25 Math Coprocessor Non-HP
 486M & MI PC with 487SX-33 Math Coprocessor Non-HP

Processor upgrades:

486M & MI Processor Upgrade to 486DX-33 (33 MHz) D2169A

Input Devices

Mouse (PS/2, Microsoft) C1413A
 Keyboard C1405B



Video Displays

Monochrome Display D1192A/B
 Ultra VGA Color Display 17-inch D1193A
 Super VGA Color Display 14-inch D1194A
 Ergo Super VGA Color Display 15-inch D1195A
 Ergo Ultra VGA Color Display 15-inch D1196A
 Color VGA Display D1197A
 Ultra VGA 1600 Display D1199A
 Monochrome VGA 14-inch Display D2801A/B
 Entry-Level SVGA 14-inch Display D2802A
 Super VGA 1024i 14-inch Display D2804A
 Ergo 1024 14-inch Display D2805A
 Ergo Ultra VGA 15-inch Display D2806A
 Ultra VGA 1280 17-inch Display D2807A
 Super VGA 14-inch Display (Low Emissions) D2814A

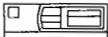
Multimedia Products

HP Sound DSP 16 D2941A
 HP Integrated Office D2887A

Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch D2035A
 Flexible Disk 1.2 MB 5-1/4 inch D2881A
 IDE 120 MB Hard Disk D1696A
 IDE 240 MB Hard Disk D1697A
 IDE 170 MB Hard Disk D2330A
 IDE 170 MB Hard Disk D2330B
 IDE 210 MB Hard Disk D2387A
 IDE 450 MB Hard Disk D2884A
 IDE 340 MB Hard Disk D2890A
 SCSI 430 MB Hard Disk D1699A
 CD-ROM Drive D2886A/B

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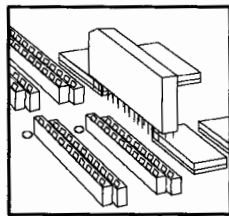
Medium-Profile 
 Desktop Vectras

HP Vectra 486M & MI PC Series

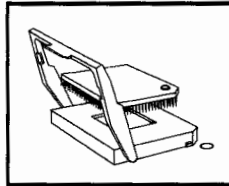
Datacomm and LAN Boards

Serial Parallel Board	24540B
Dual Serial Board	24541B
Ethertwist PC Link Adapter	27245A
Ethertwist Adapter/16	27247A
Ethertwist Adapter/16	27247B
HP ThinLAN Board	27250A
Token-Ring Adapter	D2378A
Coaxial LAN Adapter Board	D2746A

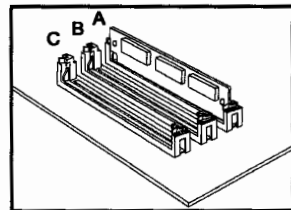
System Board, BIOS, and Memory



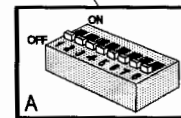
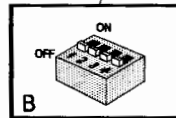
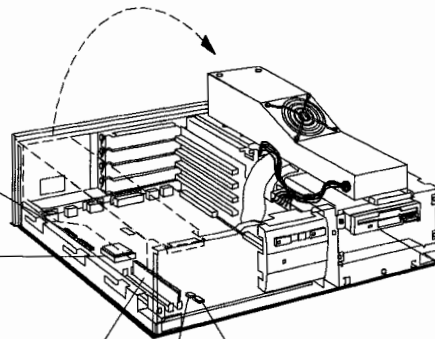
Video Memory
(four sockets)



Processor Socket



Memory Sockets



Configuration Switches

8



HP Vectra 486M & MI PC Series

System Board Switch Block SW-A

Switch	Function		Default
1	OFF	Mouse interrupt IRQ12—enabled	OFF
	ON	Mouse interrupt IRQ12—disabled (disable mouse if an accessory board uses IRQ12)	
2	OFF	Video interrupt IRQ9—disabled	OFF
	ON	Video interrupt IRQ9—enabled	
3	OFF	Integrated Ultra VGA controller—enabled	OFF
	ON	Integrated Ultra VGA Controller—disabled (disable built-in video if another video board is used)	
4	OFF	Passwords—enabled	OFF
	ON	Passwords—disabled (erased)	
5	OFF	EEPROM stored configuration information—valid	OFF
	ON	EEPROM stored configuration information—erased	
6	OFF	Security mode—disabled	OFF
	ON	Security mode—configuration cannot be changed using Setup	
7	OFF	Flash ROM updates—enabled	OFF
	ON	Flash ROM updates—disabled	
8	OFF	Not used	OFF

System Board Switch Block SW-B

Switch	Name	Function	
1	Reserved	Not used (OFF)	
2	IO399	Sets the super I/O controller's ¹ I/O port addresses (hex): OFF: 398–399 (default) ON: 26E–26F	
3	MHZ-2	OFF	OFF
4	MHZ-1	OFF	ON
		25 MHz	33 MHz
MHZ-1 and MHZ-2 set the speed of the processor's external clock—Set to 25 MHz for Overdrive/25 (50 MHz internal clock) and 33 MHz for Overdrive/33 (66 MHz internal clock). Setting a speed higher than the processor's rated bus speed could damage the processor			

¹ Super I/O controller: the integrated parallel port controller, serial port controller, flexible disk controller, and IDE hard disk interface

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Medium-Profile 
Desktop Vectras

HP Vectra 486M & MI PC Series 8-5

HP Vectra 486M & MI PC Series

Setup and BIOS History

Setup version "D.xx.xx" in used on Vectra 486M & MI PCs.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra 486M & MI PC Series HP Vectra 486M & MI PC Series				
V.04.04	April 93	First release	Available on HP PC Internal BBS	N/A

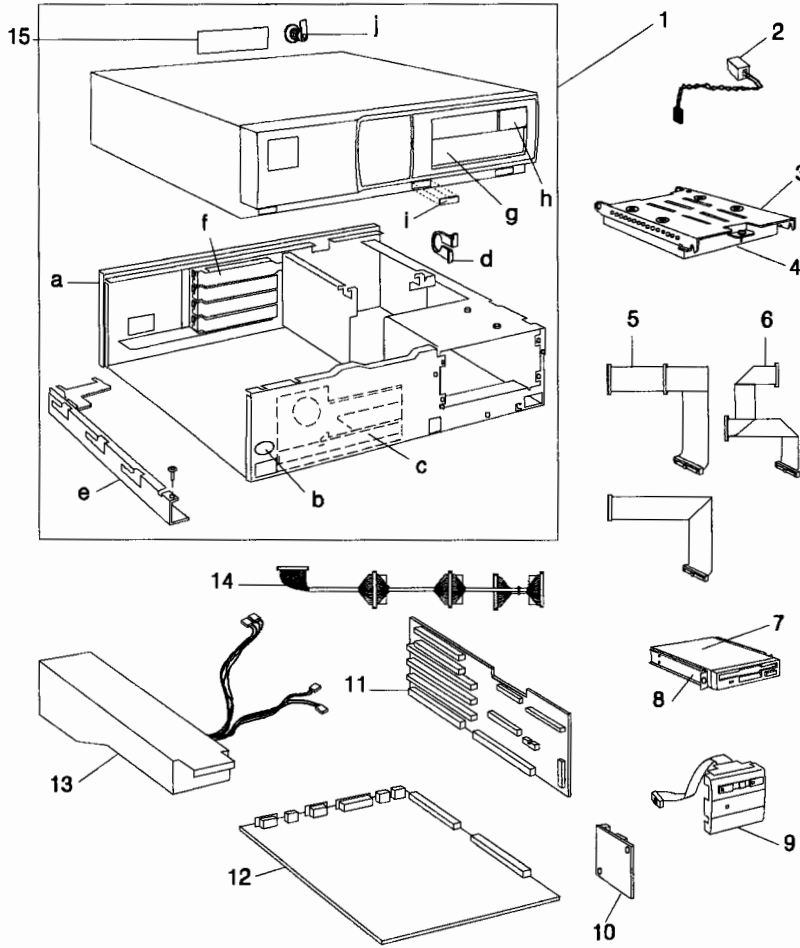
Video Memory

The PC is supplied with 512 KB of video memory for 1024×768 in 16 colors. An additional 512 KB of video memory can be installed in four video sockets (to make a total of 1 MB) for 1024×768 in 256 colors. If additional video memory is added, all four sockets must be filled.


Main Memory

HP Vectra 486M & MI PCs have three sockets on the system board labeled A, B, and C. Main memory modules can be installed in *any combination in any of the three sockets* up to a maximum of 48 MB.

Part Numbers



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Medium-Profile Desktop Vectras 

HP Vectra 486M & MI PC Series

Parts List for HP Vectra 486M & MI PC Series

Item	Description	Repl. Part Number	Exchange Part Number list
1	Box Assembly: a. Rear Bezel b. Bumper Foot c. System Board Guide d. Security Bracket e. Side panel f. I/O Panel Blank g. Filler Panel 5.25-inch h. Filler Panel 1.75-inch i. Infrared Cap j. Cover lock Assembly	5063-4597 5041-2578 5063-0877 5042-0505 5062-5590	- - - - -
	486 MI Rear Bezel (Serial/LAN)	5041-2589	
	486 M Rear Bezel (Dual Serial)	5042-0510	
2	Battery	1420-0513	-
3	3.5-inch, h-h, Tray (5 pack) for non-supported hard disk drives	Order product number D2037A	
4	Hard Disk Drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
5	Hard Disk Cable (IDE drive)	5182-0311	-
6	Flexible Disk Drive Cable	5182-1089	-
7	Flexible Disk Drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
8	Mounting Rails for 3.5-inch non-HP Disk Drives	5063-0309	-
9	Status (Control) Panel	5063-0876	-
10	Infrared Assembly	5063-0850 ¹	-
11	Backplane Assembly	See PC's parts list	
12	System Board	See PC's parts list	
13	Power Supply Assembly	See PC's parts list	
14	Hard Disk Cable, round (SCSI)	5181-0397	-
	Hard Disk Cable, flat (SCSI)	5181-1045	-
15	Serial Label	5181-0395	-
	Mounting Rails for 5.25-inch non-HP Disk Drives	Order product number D2880A	

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¹ This assembly is not supported by the HP Vectra 486M & MI PCs.

Vectra 486M & MI PC Series

Parts List for HP Vectra 486M & MI PC Series

Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated IDE disk and Ultra VGA controllers, and integrated Ethernet on MI models):		
Vectra 486/25M	-	D2751-69003
Vectra 486/25MI	-	D2755-69003
Vectra 486s/33M	-	D2761-69003
Vectra 486s/33MI	-	D2765-69003
Vectra 486/33M	D2771-63003 ¹	D2771-69003
Vectra 486/33MI	D2775-63003 ¹	D2775-69003
Backplane Assembly	5063-0849	-
Power Supply Assembly 75 W	5063-0888	-
LAN Adapters:		
Coaxial Adapter Board (D2746A)	D2746-63001	-
Math Coprocessor:		
487SX-25	non-HP	-
487SX-33	non-HP	-
Processor:		
486SX-25	5063-4561	-
486SX-33	5063-4554	-
486DX-33	1820-7615	-
Main Memory Modules:		
2-MB Main Memory Module kit	D2381-63001	-
4-MB Main Memory Module kit (36-bit)	1818-4703	D2156-69001
4-MB Main Memory Module (32-bit)	5182-1033	-
8-MB Main Memory Module kit (36-bit)	1818-4702	D2152-69001
8-MB Main Memory Module (32-bit)	5063-0890	-
16-MB Main Memory Module kit	D2676-83001	-
Video Memory Modules:		
512-KB Video Memory kit (D2713A)	D2713-83001	-
Nameplate:		
HP Vectra 486/25M Logo	5041-2593	-
HP Vectra 486/25MI Logo	5042-0501	-
HP Vectra 486s/33M Logo	5041-2594	-
HP Vectra 486s/33MI Logo	5042-0502	-
HP Vectra 486/33M Logo	5041-2595	-
HP Vectra 486/33MI Logo	5042-0503	-
Support Manuals		Part Number
Familiarization Guide		D28xxA + 49A-90001
Technical Reference Manual: Hardware and BIOS		5961-4524

¹ These replacement assemblies are supplied without a processor chip.

Medium-Profile 
Desktop Vectras

HP Vectra 486M & MI PC Series 8-9

HP Vectra N2 PC Series

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	Integ. LAN	L 2 Cache
HP Vectra N2/33s PC (CPL: 06/94 ▶)							
D3141A	1.44 MB (D2035A)	None	Integrated Fast IDE controller on local bus	Integrated Ultra VGA (1 MB, 60 ns)	8 MB	None	Opt.
D3142A		210 MB (D2387A)					
D3180A		340 MB (D2890A)					
HP Vectra N2/33si PC (CPL: 03/94 ▶)							
D3143A	1.44 MB (D2035A)	210 MB (D2387A)	Integrated Fast IDE controller on local bus	Integrated Ultra VGA (1 MB, 60 ns)	8 MB	Yes	Opt.
HP Vectra N2/50 PC (CPL: 06/94 ▶)							
D3144A	1.44 MB (D2035A)	None	Integrated Fast IDE controller on local bus	Integrated Ultra VGA (1 MB, 60 ns)	8 MB	None	Opt.
D3145A		210 MB (D2387A)					
D3181A		340 MB (D2890A)					
HP Vectra N2/50i PC (CPL: 03/94 ▶)							
D3146A	1.44 MB (D2035A)	210 MB (D2387A)	Integrated Fast IDE controller on local bus	Integrated Ultra VGA (1 MB, 60 ns)	8 MB	Yes	Opt.

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HP Vectra N2 PC Series

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	Integ. LAN	L 2 Cache
Vectra N2 PC Series							
HP Vectra N2 4/25e PC (CPL: 06/94 ▶)							
D3186A	1.44 MB (D2035A)	None	Integrated Fast IDE controller on local bus	Integrated Ultra VGA (1 MB, 60 ns)	4 MB	Yes	None
D3187A		106 MB					
D3188A		170 MB (D2330B)					
Vectra N2 PC Series							
HP Vectra N2 4/25ei PC (CPL: 06/94 ▶)							
D3189A	1.44 MB (D2035A)	170 MB (D2330B)	Integrated Fast IDE controller on local bus	Integrated Ultra VGA (1 MB, 60 ns)	4 MB	Yes	None
HP Vectra N2 4/66 PC (CPL: 06/94 ▶)							
D3148A	1.44 MB (D2035A)	None	Integrated Fast IDE controller on local bus	Integrated Ultra VGA (1 MB, 60 ns)	8 MB	None	Opt.
D3149A		340 MB (D2890A)					

Supported Accessories

512 KB Video Memory Upgrade Kit	D3169A
128 KB Cache Memory Upgrade Kit	D3168A
256 KB Cache Memory Upgrade Kit	D2944A
4 MB Main Memory Upgrade Kit	D2974A
8 MB Main Memory Upgrade Kit	D2975A
16 MB Main Memory Upgrade Kit	D2297A
32 MB Main Memory Upgrade Kit	D2298A
<i>Vectra N2 User's Guide</i>	D3140A

HP Vectra N2 PC Series

Video Displays

Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A



Multimedia Products

HP Sound DSP 16	D2941A
HP Integrated Office	D2887A

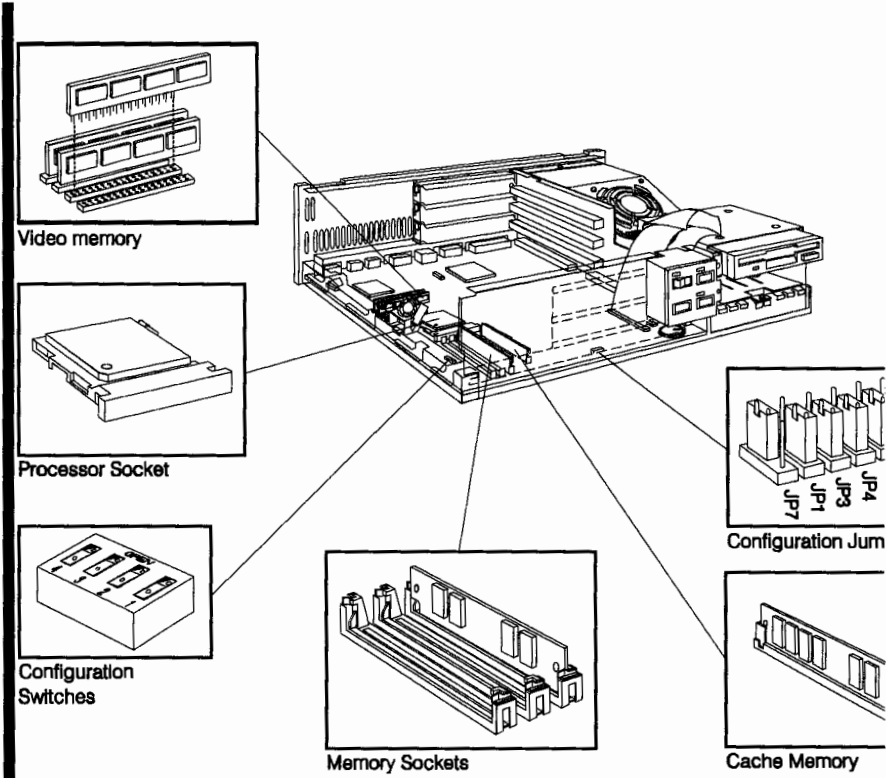
Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch	D2035A
Flexible Disk 1.2 MB 5-1/4 inch	D2881A
IDE 170 MB Hard Disk	D2330B
IDE 210 MB Hard Disk	D2387A
IDE 450 MB Hard Disk	D2884A
IDE 340 MB Hard Disk	D2890A
IDE 540 MB Hard Disk	D2891A
IDE 270 MB Hard Disk	D2894A
1 GB SCSI-2 Hard Disk Drive	D2076B
CD-ROM Drive	D2886B

Input Devices

Keyboard	C1405B
HP Logitech-type Mouse	C3751A

System Board, BIOS, and Memory



N2 Configuration Jumpers

Jumper Setting		Function	Default
JP1	1-2	PENTIUM Overdrive: Level-one cache write through mode.	2-3
	2-3	PENTIUM Overdrive: Level-one cache write back mode.	
JP2	9-10	Select IRQ 7 for LPT	9-10
	11-12	Select IRQ 5 for LPT	
JP3 ¹	1-2	Select 33 MHz processor speed	
	2-3	Select 25 MHz processor speed	
JP4	1-2	Select > 33 MHz processor speed	2-3
	2-3	Select 25/33 MHz processor speed	
JP7	1-2	VESA ID bit (CPU speed < = 33 MHz)	1-2
	2-3	VESA ID bit (CPU speed > 33 MHz)	
JP8 ¹	1-2	IntelDX4 processor	
	2-3	Other processor	

¹ Default setting dependent on model

N2 System Board Switches

Switch #		Function	Default
1 SECUR	CLOSED	Enables security mode to prevent changes to the PC's configuration	CLOSED
	OPEN	Disables security mode to allow changes to the PC's configuration	
2 VGAEN	OPEN	Enables VGA	OPEN
	CLOSED	Disables VGA	
3 CONFIG	OPEN	Retain the configuration stored in CMOS	OPEN
	CLOSED	Clear the configuration stored in CMOS Switch to CLOSED if you need to clear the PC's configuration information, for example, if the configuration is corrupted.	
4 PSWRD	OPEN	Enables the passwords to be set and stored in CMOS	OPEN
	CLOSED	Disables the passwords Switch to CLOSED if you need to clear the current password.	

HP Vectra N2 PC Series

IRQs and I/O Addresses

IRQ	Function	I/O Port Hex
IRQ 3	Serial Port B (COM2) or LAN	3F8-3FF
IRQ 4	Serial Port A (COM1) or LAN	2F8-2FF
IRQ 6	Flexible Disk Controller	3F0-3F7
IRQ 7 (5) ¹	Parallel Port 1 (LPT1)	378-37F
IRQ 14	IDE Hard Disk Controller	1F0-1F7
-	Video controller	3B0-3DF

1 Numbers in brackets indicate alternate IRQ selected by jumper on the system board. See the Configuration Jumper table for details.

Setup and BIOS History

The HP BIOS includes a SETUP program. See the HP Vectra N2 Familiarization guide for details.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
HP Vectra N2 PC Series				
GB.04.03	June 94	First release	N/A	N/A

Second-Level Cache Memory

HP Vectra N2 PCs have one cache memory socket, allowing a 128 KB or 256 KB second-level cache memory kit to be installed.

Video Memory

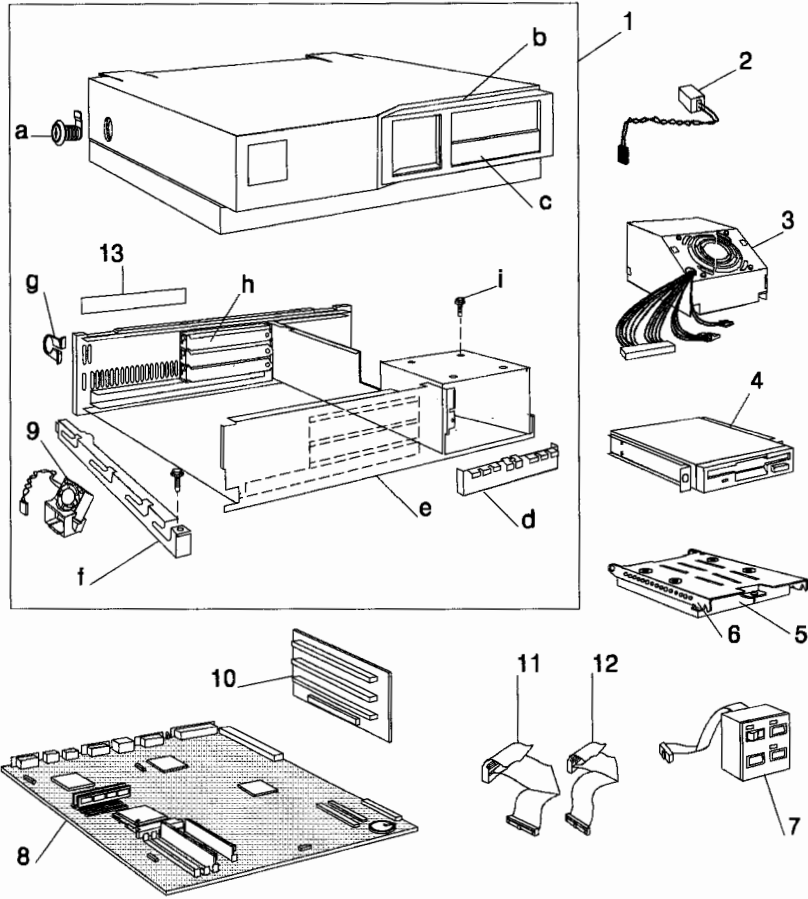
The PC is supplied with 1 MB of video memory for 1024×768 in 256 colors. An additional 1 MB of video memory (two 512KB video memory modules) can be installed in the video memory sockets (to make a total of 2 MB for 1024×768 in 64 K colors).

Main Memory

HP Vectra N2 PC has three sockets on the system board, and are supplied with 4-MB or 8-MB main memory standard, depending on the model. 4-MB, 8-MB, 16-MB, and 36-MB, 36-bit main memory modules can be installed in *any combination* in the two sockets up to a maximum of 96 MB.

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Part Numbers



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HP Vectra N2 PC Series

Parts List for HP Vectra N2 PC Series

Item	Description	Repl. Part Number	Exchange Part Number list
1	Box Assembly: a. Cover Lock Assembly b. Bezel Insert c. Filler Panel d. Hard Drive RFI Assembly e. Chassis Assembly f. Side Panel g. Security Bracket h. I/O Panel i. Screw, TORX/Flat, 6-32 or Screw, Machine, 6-32 Pilot Point	5063-5714 5062-5590 5041-1062 5041-2554 5062-2694 5062-2681 5001-4238 5001-6869 45935-00004 2680-0311 2360-0514	-
2	3 V Battery 4.5 V Battery (optional accessory)	1420-0314 ¹ 1420-0513	-
3	Power Supply Assembly	5063-5719	-
4	Flexible Disk Drive, 3.5-inch	D2035-63004	See disk drive parts list in <i>Accessory Service Handbook</i>
5	Hard Disk Drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
6	3.5-inch, h-h, Tray (5 pack) for non-supported hard disk drives	Order product number D2037A	
7	Status (Control) Panel	5063-5715	-
8	System Board	See PC's parts list	
9	Optional Fan	5063-5716	-
10	Backplane Assembly	5036-5717	-
11	Flexible Disk Drive Cable	5182-1087	-
12	Hard Disk Cable (IDE drive)	5182-1086	-
13	Rear Bezel Label	5042-0558	-

¹ Replace the battery with a Panasonic/Rayovac BR2325 battery, available from most local stores, or its equivalent HP battery using this number from your dealer or HP Sales and Service Office. Return the old battery to the supplier.

Vectra N2 PC Series

Parts List for HP Vectra N2 PC Series

Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated IDE disk and Ultra VGA + controllers): ¹	D3151-63001 ¹	D3151-69001
	D3153-63001 ¹	D3153-69001
Processor:		
486SX-25	5063-4561	-
486SX-33	5063-4554	-
486DX2-50	5063-4583	-
486DX2-66	5063-4584	-
Second Level Cache Memory Modules:		
128-KB Cache Memory Module kit (D3168A)	D3168-63001	-
256-KB Cache Memory Module kit (D2944A)	5063-0880	-
Main Memory Modules: (70 ns)		
4-MB Main Memory Module kit, 36-bit (D2974A)	D2974-63001	
8-MB Main Memory Module kit, 36-bit (D2975A)	D2975-63001	
16-MB Main Memory Module kit, 36-bit (D2297A)	D2297-63001	D2297-69001
32-MB Main Memory Module kit, 36-bit (D2298A)	D2298-63001	D2298-69001
Video Memory Modules:		
512-KB Video Memory kit (D3169A)	D3169-83001	-
Nameplate:		
HP Vectra N2 4/25 Logo	5042-0588	-
HP Vectra N2 4/25i Logo	5042-0589	-
HP Vectra N2 4/33s Logo	5042-0527	-
HP Vectra N2 4/33si Logo	5042-0528	-
HP Vectra N2 4/50 Logo	5042-0529	-
HP Vectra N2 4/50i Logo	5042-0539	-
HP Vectra N2 4/66 Logo	5042-0531	-
Support Manuals:		Part Number
Familiarization Guide		D314x + 49A-90001
Technical Reference Manual: Hardware and BIOS		None ²

1 These assemblies are supplied without main memory modules

2 Electronic file only.

Part Numbers for HP Utility Diskettes

Description	Rev	Date Code	Part #	Info.
Windows & DOS Video Drivers			5063-4532	Kit

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Medium-Profile 
Desktop Vectras

HP Vectra N2 PC Series 9-9

HP Vectra 486N & NI (D27xxA) PC Series

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	LAN Interface
Vectra 486N & NI (D27xxA) PC Series						
HP Vectra 486/25N (D27xxA) PC (CPL: 04/93 ▶)						
D2751A	1.44 MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	4 MB	None
D2752A		120 MB (D1696A)				
D2752B		170 MB (D2330B)				
D2753A		240 MB (D1697A)				
HP Vectra 486s/33N (D27xxA) PC (CPL: 04/93 ▶)						
D2761A	1.44 MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	4 MB	None
D2762A		120 MB (D1696A)				
D2762B		170 MB (D2330B)				
D2763A		240 MB (D1697A)				
HP Vectra 486/33N (D27xxA) PC (CPL: 04/93 ▶)						
D2771A	1.44 MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	4 MB	None
D2772A		120 MB (D1696A)				
D2772B		170 MB (D2330B)				
D2773A		240 MB (D1697A)				

HP Vectra 486N & NI (D27xxA) PC Series

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	LAN Interface
HP Vectra 486/66N (D27xxA) PC (CPL: 04/93 ▶)						
D2793A	1.44 MB (D2035A)	240 MB (D1697A)	Integrated IDE controller	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	4 MB	None
HP Vectra 486/25NI (D27xxA) PC (CPL: 04/93 ▶)						
D2755A	1.44MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA + (512KB, upgradeable to 1MB)	4MB	Integrated Ethernet
D2756A ¹		120 MB (D1696A)				
D2756B ¹		170 MB (D2330B)				
D2757A ²		120 MB (D1696A)				
D2757B ²		170 MB (D2330B)				
HP Vectra 486s/33NI (D27xxA) PC (CPL: 04/93 ▶)						
D2765A	1.44MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA + (512KB, upgradeable to 1MB)	4MB	Integrated Ethernet
D2766A ¹		120MB (D1696A)				
D2767A ²						
HP Vectra 486/33NI (D27xxA) PC (CPL: 04/93 ▶)						
D2775A	1.44MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA + (512KB, upgradeable to 1MB)	4MB	Integrated Ethernet
D2776A ¹		120MB (D1696A)				
D2776B ¹		170 MB (D2330B)				
D2777A ²		120MB (D1696A)				
D2777B ²		170MB (D2330B)				

1 D2756A, D2756B, D2766A, D2776A, and D2776B include Microsoft® Windows for Workgroups

2 D2757A, D2757B, D2767A, D2777A, and D2777B include Microsoft® Windows

HP Vectra 486N & NI (D27xxA) PC Series

Supported Accessories

512-KB Video Memory Upgrade kit	D2713A
2-MB Main Memory Upgrade kit	D2381A
4-MB Main Memory Upgrade kit	D2156A
8-MB Main Memory Upgrade kit	D2152A
16-MB Main Memory Upgrade kit	D2676A
<i>Setting Up Your PC</i> and <i>Using Your PC</i> manuals	D2711A

Coprocessor upgrades:

486/25N & NI (D27xxA) PC with 487SX-25 Coprocessor	Non-HP ¹
486s/33N & NI (D27xxA) PC with 487SX-33 Coprocessor	Non-HP ¹

Processor upgrades:

Processor Upgrade to 486DX-33 (33 MHz)	D2169A ¹
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¹ Order fan part number 5063-0813 if upgrading either a D275xA or D276xA.

Input Devices

Mouse (PS/2, Microsoft)	C1413A
Keyboard	C1405B

Video Displays

Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

HP Vectra 486N & NI (D27xxA) PC Series

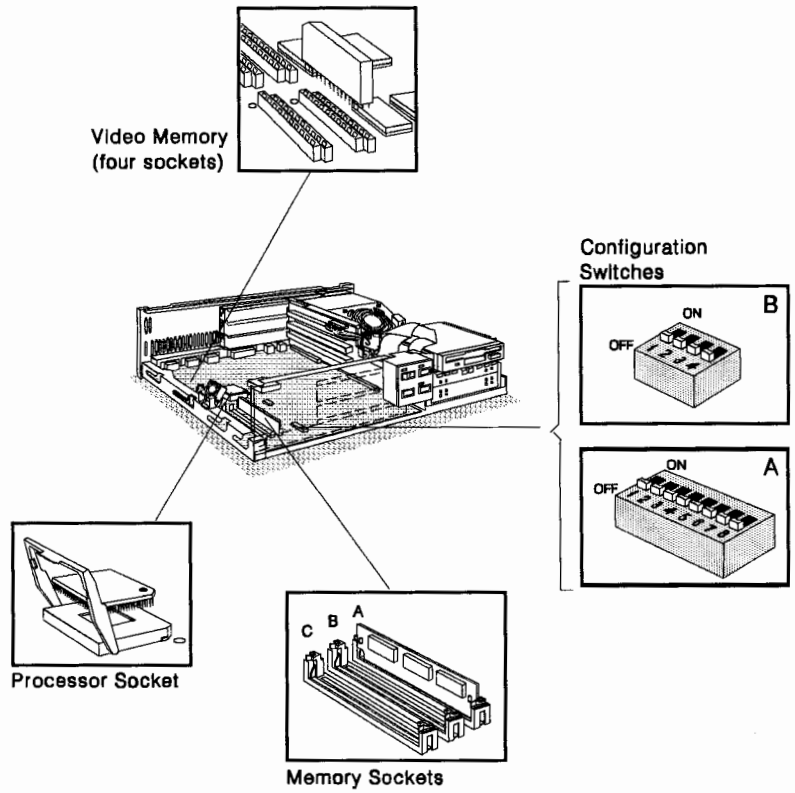
Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch	D2035A
IDE 120 MB Hard Disk	D1696A
IDE 240 MB Hard Disk	D1697A
IDE 170 MB Hard Disk	D2330A
IDE 170 MB Hard Disk	D2330B
IDE 210 MB Hard Disk	D2387A
IDE 450 MB Hard Disk	D2884A
IDE 340 MB Hard Disk	D2890A
SCSI 430 MB Hard Disk	D1699A

Datacomm and LAN Boards

Serial Parallel Board	24540B
Dual Serial Board	24541B
Ethertwist PC Link Adapter	27245A
Ethertwist Adapter/16	27247A
Ethertwist Adapter/16	27247B
HP ThinLAN Board	27250A
Token-Ring Adapter	D2378A
Coaxial LAN Adapter Board	D2746A

System Board, BIOS, and Memory



HP Vectra 486N & NI (D27xxA) PC Series

System Board Switch Block SW-A

Switch	Function		Default
1	OFF	Mouse interrupt IRQ12—enabled	OFF
	ON	Mouse interrupt IRQ12—disabled (disable mouse if an accessory board uses IRQ12)	
2	OFF	Video interrupt IRQ9—disabled	OFF
	ON	Video interrupt IRQ9—enabled	
3	OFF	Integrated Ultra VGA controller—enabled	OFF
	ON	Integrated Ultra VGA Controller—disabled (disable built-in video if another video board is used)	
4	OFF	Passwords—enabled	OFF
	ON	Passwords—disabled (erased)	
5	OFF	EEPROM stored configuration information—valid	OFF
	ON	EEPROM stored configuration information—erased	
6	OFF	Security mode—disabled	OFF
	ON	Security mode—configuration cannot be changed using Setup	
7	OFF	Flash ROM updates—enabled	OFF
	ON	Flash ROM updates—disabled	
8	OFF	Not used	OFF

System Board Switch Block SW-B

Switch	Name	Function	
1	Reserved	Not used (OFF)	
2	IO399	Sets the super I/O controller's ¹ I/O port addresses (hex): OFF: 398–399 (default) ON: 26E–26F	
3	MHZ-2	OFF	OFF
4	MHZ-1	OFF	ON
		25 MHz	33 MHz
MHZ-1 and MHZ-2 set the speed of the processor's external clock—Set to 25 MHz for Overdrive/25 (50 MHz internal clock) and 33 MHz for Overdrive/33 (66 MHz internal clock). Setting a speed higher than the processor's rated bus speed could damage the processor			

1 Super I/O controller: the integrated parallel port controller, serial port controller, flexible disk controller, and IDE hard disk interface

HP Vectra 486N & NI (D27xxA) PC Series

Setup and BIOS History

Setup version "D.xx.xx" is used on Vectra 486N & NI, PCs.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra 486N & NI (D27xxA) PC Series HP Vectra 486N & NI (D27xxA) PC Series				
V.04.04	April 93	First release	—	N/A
V.04.08	May 94	Current release	Available on HP PC Internal BBS	N/A

Video Memory

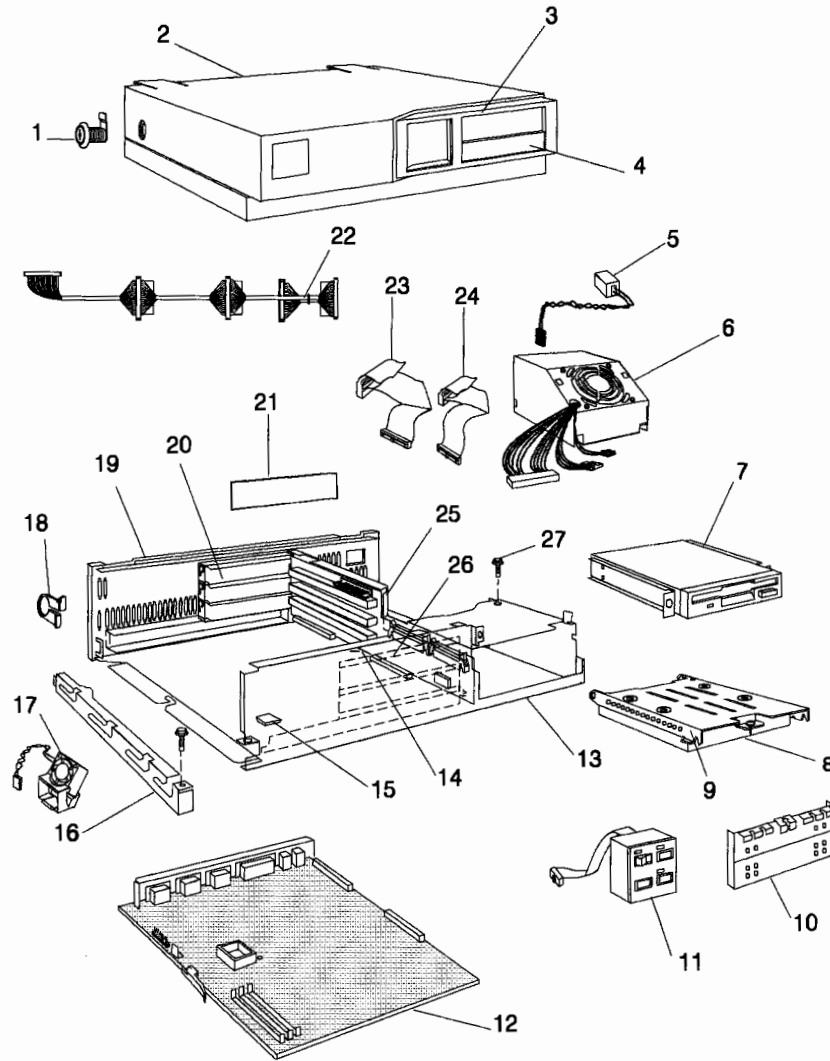
The PC is supplied with 512 KB of video memory for a resolution of up to 1024×768 in 16 colors. An additional 512 KB of video memory can be installed in four video sockets (to make a total of 1 MB) for a resolution of up to 1024×768 in 256 colors. If additional video memory is added, all four sockets must be filled.

Main Memory

HP Vectra 486N & NI (D27xxA) PCs have three sockets on the system board labeled A, B, and C. Main memory modules can be installed in *any combination in any of the three sockets* up to a maximum of 48 MB.

HP Vectra 486N & NI (D27xxA) PC Series

Part Numbers



HP Vectra 486N & NI (D27xxA) PC Series

Parts List for HP Vectra 486N & NI (D27xxA) PC Series

Item	Description	Repl. Part Number	Exchange Part Number
1	Cover Lock Assembly	5062-5590	-
2	Top Cover-Bezel Assembly (includes items 1, 3, & 4)	5062-2682	-
3	Bezel Insert	5041-1062	-
4	Filler Panel	5041-2554	-
5	Battery	1420-0513	-
6	Power Supply Assembly	5063-4538	-
7	Flexible Disk Drive	See <i>Accessory Service Handbook</i>	
	Mounting Rails for 3.5-inch non-HP Disk Drives	5063-0309	-
8	Hard Disk Drive	See <i>Accessory Service Handbook</i>	
9	3.5-inch, h-h, Tray (5 pack) for non-supported hard disk drives	Order product number D2037A	
10	Hard Drive RFI Assembly	5062-2694	-
11	Status (Control) Panel	5063-0815	-
12	System Board	See PC's parts list	
13	Chassis Assembly (Rear Bezel, Bumper Foot, Serial Label, Board Guide, CPU Guide, and Security Bracket)	5062-2681	-
14	System Board Guide	5041-1063	-
15	Bumper Foot	5181-0394	-
16	Side Panel	5001-4238	-
17	Fan—on D277xA & D279xA only ¹	5063-0813	-
18	Security Bracket	5001-6869	-
19	Rear Bezel	5062-2680	-
20	I/O Panel, Blank	45935-00004	-
21	Serial Label	5181-0395	-
22	Hard Disk Cable (SCSI drive)	5181-0397	-
23	Short Flexible Disk Drive Cable, 3.5-inch disk	5181-9742	-
24	Short Hard Disk Cable (IDE drive)	5181-0385	-
25	Backplane Assembly	5063-0814	-
26	Board Guide Assembly	5041-1070	-
27	Screw, TORX/Flat, 6-32 or	2680-0311	-
	Screw, Machine 6-32 Pilot Point	2360-0514	-

1 No fan used on 486/25N or 486s/33N (D275xA or D276xA).

HP Vectra 486N & NI (D27xxA) PC Series

Parts List for HP Vectra 486N & NI (D27xxA) PC Series

Description	Repl. P/N	Exchange P/N
System Board (integrated IDE disk, Ultra VGA + controllers, and Ethernet on NI models):		
Vectra 486/25N	-	D2751-69003
Vectra 486/25NI	-	D2755-69003
Vectra 486s/33N	-	D2761-69003
Vectra 486s/33NI	-	D2765-69003
Vectra 486/33N	D2771-63003 ¹	D2771-69003
Vectra 486/33NI	D2775-63003 ¹	D2775-69003
Vectra 486/50N	D2771-63003 ¹	D2771-69003
Vectra 486/66N	D2771-63003 ¹	D2771-69003
LAN Adapters:		
Coaxial Adapter Board (D2746A)	D2746-63001	-
Math Coprocessor:		
487SX-25	non-HP	-
487SX-33	non-HP	-
Processor:		
486SX-25	5063-4561	-
486SX-33	5063-4554	-
486DX-33	1820-7615	-
486DX2-50	5063-4583	-
486DX2-66	5063-4584	-
Main Memory Modules:		
2-MB Main Memory Module kit	D2381-63001	-
4-MB Main Memory Module kit (36-bit)	1818-4703	D2156-69001
4-MB Main Memory Module (32-bit)	5182-1033	-
8-MB Main Memory Module kit (36-bit)	1818-4702	D2152-69001
8-MB Main Memory Module (32-bit)	5063-0890	-
16-MB Main Memory Module kit	D2676-83001	-
Video Memory Modules:		
512-KB Video Memory kit (D2713A)	D2713-83001	-
Nameplate:		
HP Vectra 486/25N Logo	5041-2565	-
HP Vectra 486/25NI Logo	5182-0324	-
HP Vectra 486s/33N Logo	5041-2599	-
HP Vectra 486s/33NI Logo	5182-0326	-
HP Vectra 486/33N Logo	5041-2566	-
HP Vectra 486/33NI Logo	5182-0328	-
HP Vectra 486/50N Logo	5041-2571	-
HP Vectra 486/66N Logo	5041-2569	-

1 New D2771-63003 and D2775-63003 system boards do not have a processor

HP Vectra 486N & NI (D27xxA) PC Series

Parts List for HP Vectra 486N & NI (D27xxA) PC Series (continued)

Description	Repl. P/N	Exchange P/N
Support Manuals:		Part Number
Familiarization Guide		D27xxA + 49A-90001
Technical Reference Manual: Hardware and BIOS		5961-4524

Part Numbers for HP Utility Diskettes

Description	Rev	Date Code	Part #	Info.
Vectra 486N & NI Kits (3.5-inch disks only):				
Windows & DOS Video Drivers	A.01.03	3338	Refer to HP Internal BBS	Kit
OS/2 Video Drivers	A.01.00	3301		
Lan Drivers for HP Integrated Ethernet Interface	A.02.00	3395		

Notes: _____

HP Vectra 386/33N & NI (D27xxA) PC Series

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	LAN Interface
Vectra 386/33N & NI PC Series						
HP Vectra 386/33N PC (CPL: 02/93 ▶)						
D2701A	1.44 MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	2 MB	None
D2702A		85 MB (D2329A)			4 MB	
D2707A¹					2 MB	
HP Vectra 386/33NI PC (CPL: 02/93 ▶)						
D2703A	1.44 MB (D2035A)	None	Integrated IDE controller	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	2 MB	Integrated Ethernet
D2704A²		85 MB (D2329A)			4 MB	
D2712A³						

1 D2707A includes D1197A color VGA display

2 D2704A includes MS-Windows for Workgroups software

3 D2712A includes MS-Windows software

Supported Accessories

512-KB Video Memory Upgrade kit	D2713A
2-MB Main Memory Upgrade kit	D2714A
8-MB Main Memory Upgrade kit	D2715A
<i>Setting Up Your PC</i> and <i>Using Your PC</i> manuals	D2711A

System Board upgrades:

Upgrade to 486N Kit	D2716A
Upgrade to 486NI Kit	D2718A

HP Vectra 386/33N & NI (D27xxA) PC Series

Coprocessor upgrade:

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Upgrade with Cyrix 387SL

Non-HP

Video Displays

Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch	D2035A
IDE 120 MB Hard Disk	D1696A
IDE 240 MB Hard Disk	D1697A
IDE 85 MB Hard Disk	D2329A
IDE 170 MB Hard Disk	D2330A
SCSI 430 MB Hard Disk	D1699A

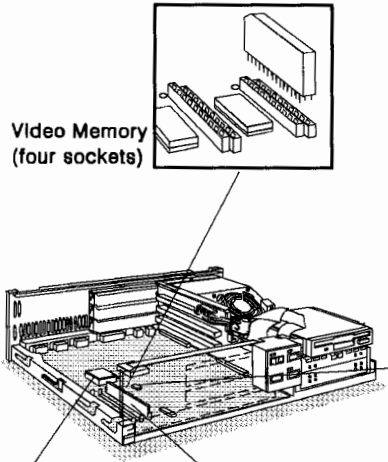
Datacomm and LAN Boards

Serial Parallel Board	24540B
Dual Serial Board	24541B
Ethertwist PC Link Adapter	27245A
Ethertwist Adapter/16	27247A
Ethertwist Adapter/16	27247B
HP ThinLAN Board	27250A
Token-Ring Adapter	D2378A
Coaxial LAN Adapter Board	D2746A

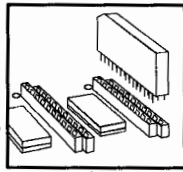
Input Devices

Mouse (PS/2, Microsoft)	C1413A
Keyboard	C1405B

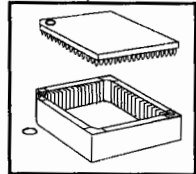
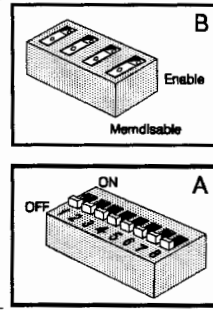
System Board, BIOS, and Memory



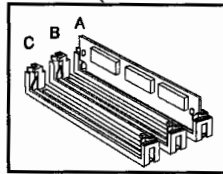
Video Memory
(four sockets)



Configuration
Switches



Coprocesor
Socket



Memory
Sockets

HP Vectra 386/33N & NI (D27xxA) PC Series

System Board Switch Block SW-A

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Switch		Function	Default
1	OFF	Mouse interrupt IRQ12—enabled	OFF
	ON	Mouse interrupt IRQ12—disabled (disable mouse if an accessory board uses IRQ12)	
2	OFF	Video interrupt IRQ9—disabled	OFF
	ON	Video interrupt IRQ9—enabled	
3	OFF	Integrated Ultra VGA controller—enabled	OFF
	ON	Integrated Ultra VGA Controller—disabled (disable built-in video if another video board is used)	
4	OFF	Passwords—enabled	OFF
	ON	Passwords—disabled (erased)	
5	OFF	EEPROM stored configuration information—valid	OFF
	ON	EEPROM stored configuration information—erased	
6	OFF	Security mode—disabled	OFF
	ON	Security mode—configuration cannot be changed using Setup	
7	OFF	Flash ROM updates—enabled	OFF
	ON	Flash ROM updates—disabled	
8	OFF	Not used	OFF

System Board Switch Block SW-B

Switch	Name	Function	Default
1	ENABLE	Enables and disables (MEMDISABLE) the soldered 2 MB of main memory Set all four switches to MEMDISABLE if you install 16 MB of main memory.	ENABLE
2	MEMDISABLE		
3			
4			

Setup and BIOS History

Setup version "D.xx.xx" is used on Vectra 386/33N & NI PCs.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra 386N & NI (D27xxA) PC Series HP Vectra 386N & NI (D27xxA) PC Series				
U.04.01	Feb 93	First release	—	—
U.04.02		Second release	Available on HP PC Internal BBS	N/A

Video Memory

The PC is supplied with 512 KB of video memory for a resolution of up to 1024×768 in 16 colors. An additional 512 KB of video memory can be installed in four video sockets (to make a total of 1 MB) for a resolution of up to 1024×768 in 256 colors. If additional video memory is added, all four sockets must be filled.

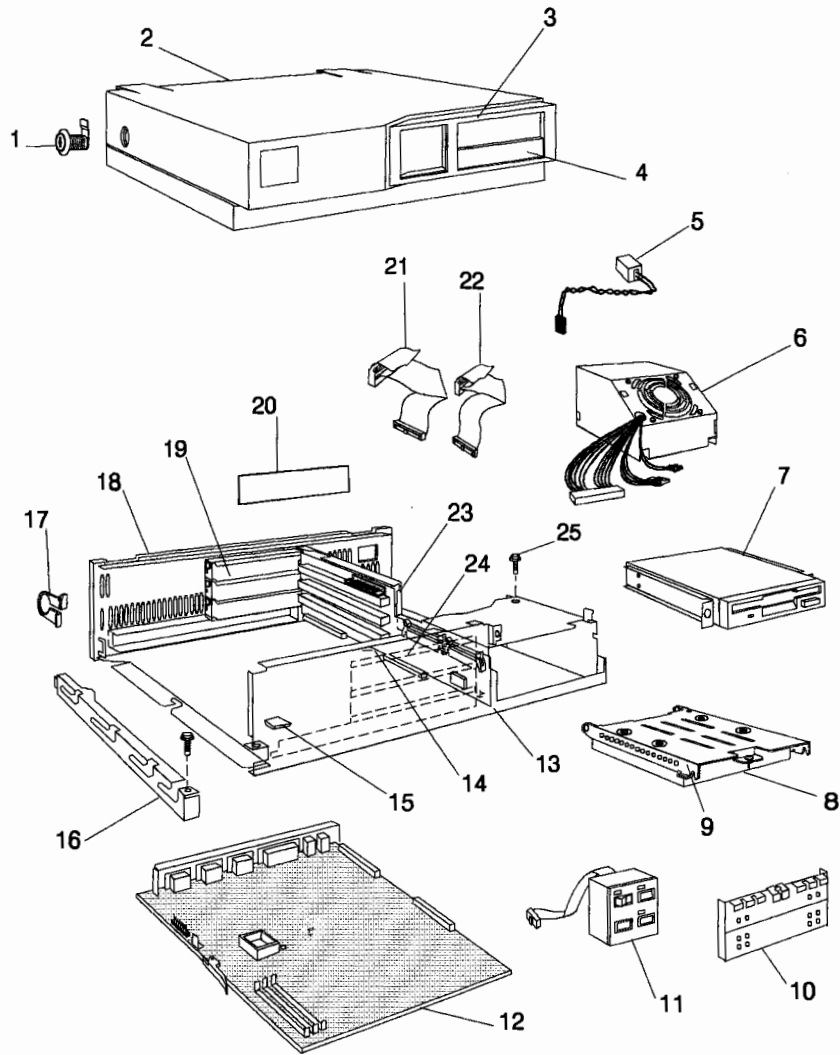
Main Memory

HP Vectra 386/33N & NI PCs have 2 MB of main memory soldered on the system board, and two banks of sockets on the system board labeled A and B. Each bank contains two sockets (numbered 0 and 1). Main memory modules can be installed, in pairs, up to a maximum of 16 MB.

The soldered 2 MB must be disabled if 16 MB of main memory is installed.

For a TOTAL mem of:	Install main memory modules in these banks:				Set Switch Block SW-B to:
	A		B		
2 MB	Soldered on the system board				ENABLE
4 MB	1 MB	1 MB	-	-	
6 MB	1 MB	1 MB	1 MB	1 MB	
10 MB	4 MB	4 MB	-	-	
12 MB	1 MB	1 MB	4 MB	4 MB	
16 MB	4 MB	4 MB	4 MB	4 MB	
					MEMDISABLE

11 Part Numbers



HP Vectra 386/33N & NI (D27xxA) PC Series

Parts List for HP Vectra 386/33N & NI PC Series

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Item	Description	Repl. Part Number	Exchange Part Number
1	Cover Lock Assembly	5062-5590	-
2	Top Cover-Bezel Assembly (includes items 1, 3, & 4)	5062-2682	-
3	Bezel Insert	5041-1062	-
4	Filler Panel	5041-2554	-
5	Battery	1420-0513	-
6	Power Supply Assembly	5063-4538	-
7	Flexible Disk Drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
	Mounting Rails for 3.5-inch non-HP Disk Drives	5063-0309	-
8	Hard Disk Drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
9	3.5-inch, h-h, Tray (5 pack) for non-supported hard disk drives	Order product number D2037A	
10	Hard Drive RFI Assembly	5062-2694	-
11	Status (Control) Panel	5063-0815	-
12	System Board	See PC's parts list	
13	Chassis Assembly (Rear Bezel, Bumper Foot, Serial Label, Board Guide, CPU Guide, and Security Bracket)	5062-2681	-
14	System Board Guide	5041-1063	-
15	Bumper Foot	5181-0394	-
16	Side Panel	5001-4238	-
17	Security Bracket	5001-6869	-
18	Rear Bezel	5062-2680	-
19	I/O Panel, Blank	45935-00004	-
20	Serial Label	5181-0395	-
21	Short Flexible Disk Drive Cable, 3.5-inch disk	5181-9742	-
22	Short Hard Disk Cable (IDE drive)	5181-0385	-
23	Backplane Assembly	5063-0814	-
24	Board Guide Assembly	5041-1070	-
25	Screw, TORX/Flat, 6-32 or	2680-0311	-
	Screw, Machine 6-32 Pilot Point	2360-0514	-

HP Vectra 386/33N & NI (D27xxA) PC Series

Parts List for HP Vectra 386/33N & NI PC Series

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Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated IDE disk and Ultra VGA + controllers, and integrated Ethernet on NI models:		
Vectra 386/33N System Board	D2701-63001	D2701-69001
Vectra 386/33NI System Board	D2703-63001	D2703-69001
LAN Adapters:		
Coaxial Adapter Board (D2746A)	D2746-63001	-
Processor: 386SX-33	Processor not removable	
Math Coprocessor: 387SX-33	Non-HP	
Main Memory Modules:		
1-MB Main Memory Module (60 ns)	D2714-83001	-
4-MB Main Memory Module (60 ns)	D2715-83001	-
Video Memory Modules:		
512-KB Video Memory kit (D2713A)	D2713-83001	-
Nameplate:		
HP Vectra 386/33N Logo	5181-9790	-
HP Vectra 386/33NI Logo	5181-9791	-
Support Manuals:		Part Number
Familiarization Guide		D27xxA + 49A-90001
Technical Reference Manual: Hardware and BIOS		5961-4523

Part Numbers for HP Utility Diskettes (3.5-inch disks only):

Description	Rev	Date Code	Part #	Info.
Windows & DOS Video Drivers	A.01.03	3338	Refer to HP Internal BBS	Kit
OS/2 Video Drivers	A.01.00	3301		
Lan Drivers for HP Integrated Ethernet Interface	A.02.00	3395		

Notes: _____



HP Vectra 486N (D26xxA) PC Series

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Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	LAN Interface	
Vectra 486N (D26xxA) PC Series							
HP Vectra 486/25N (D26xxA) PC (CPL: 10/92; discontinued: 07/93)							
D2610A	None	None	Integrated IDE Interface	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	4 MB	None	
D2611A	1.44 MB D2035A	85 MB D2329A				Token-Ring board (HP D2378A)	
D2612A							
D2613A							
D2614A LAN		85 MB D2329A					Ethernet board (HP D27247B)
D2615A LAN							

HP Vectra 486N (D26xxA) PC Series Models

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	LAN Interface
HP Vectra 486/33N (D26xxA) PC (CPL: 10/92; discontinued: 07/93)						
D2620A	None	None	Integrated IDE Interface	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	4 MB	None
D2621A	1.44 MB	85 MB D2329A				
D2622A	D2035A					
D2623A		170 MB D2330A				
D2624A LAN		85 MB D2329A				Token-Ring board (HP D2378A)
D2625A LAN						Ethernet board (HP D27247B)
HP Vectra 486/50N (D26xxA) PC (CPL: 10/92; discontinued: 07/93)						
D2631A	1.44 MB	None	Integrated IDE Interface	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	4 MB	None
D2633A	D2035A	170 MB D2330A				
HP Vectra 486/66N (D26xxA) PC (CPL: 10/92; discontinued: 07/93)						
D2681A	1.44 MB	None	Integrated IDE Interface	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	4 MB	None
D2683A	D2035A	170 MB D2330A				

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Supported Accessories

512-KB Video Memory Upgrade kit	D2326A
2-MB Main Memory Upgrade kit	D2381A
4-MB Main Memory Upgrade kit	D2156A
8-MB Main Memory Upgrade kit	D2152A
16-MB Main Memory Upgrade kit	D2676A
<i>Setting Up Your HP Vectra 486N PC manual and Using Your HP Vectra 486N PC manual</i>	D2675A

Coprocessor upgrade: (a processor fan 5063-0813 must be installed)

486/25N (D26xxA) PC with 487SX-25 Math Coprocessor Non-HP

HP Vectra 486N (D26xxA) PC Series Models

Processor upgrade:

Processor Upgrade to 486DX-33 (33 MHz) D2169A

Video Displays

Monochrome Display	D1192A/B	
Ultra VGA Color Display 17-inch	D1193A	
Super VGA Color Display 14-inch	D1194A	
Ergo Super VGA Color Display 15-inch	D1195A	
Ergo Ultra VGA Color Display 15-inch	D1196A	
Color VGA Display	D1197A	
Ultra VGA 1600 Display	D1199A	
Monochrome VGA 14-inch Display	D2801A/B	
Entry-Level SVGA 14-inch Display	D2802A	
Super VGA 1024i 14-inch Display	D2804A	
Ergo 1024 14-inch Display	D2805A	
Ergo Ultra VGA 15-inch Display	D2806A	
Ultra VGA 1280 17-inch Display	D2807A	
Super VGA 14-inch Display (Low Emissions)	D2814A	

Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch	D2035A	
IDE 120 MB Hard Disk	D1696A	
IDE 240 MB Hard Disk	D1697A	
IDE 85 MB Hard Disk	D2329A	
IDE 170 MB Hard Disk	D2330A	
IDE 170 MB Hard Disk	D2330B	
IDE 210 MB Hard Disk	D2387A	
IDE 450 MB Hard Disk	D2884A	
IDE 340 MB Hard Disk	D2890A	
SCSI 430 MB Hard Disk	D1699A	

Datacomm and LAN Boards

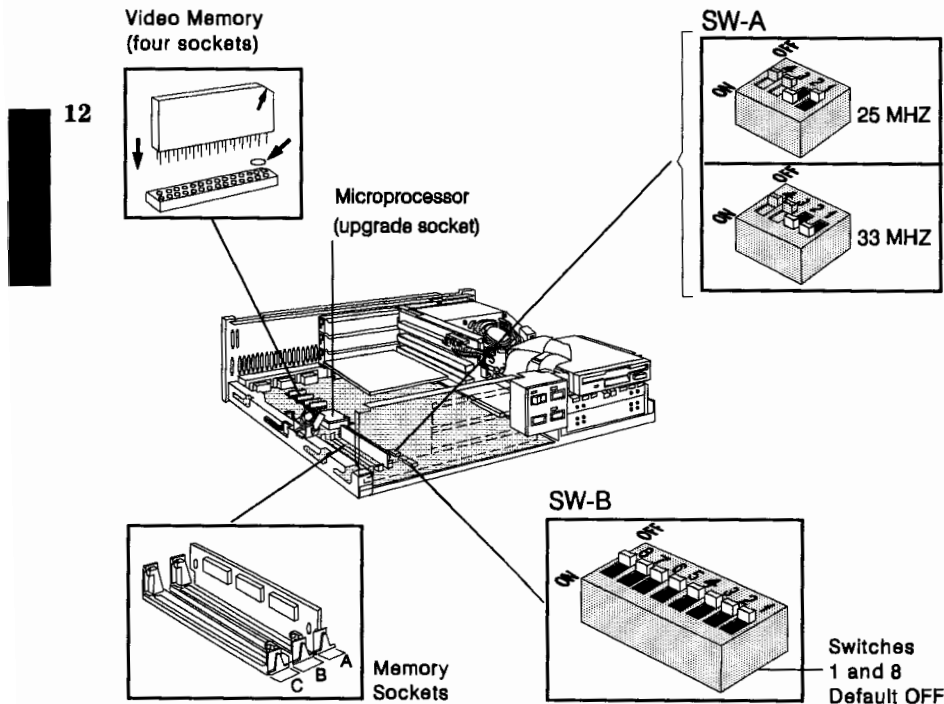
Serial Parallel Board	24540B	
Dual Serial Board	24541B	
Ethertwist PC Link Adapter	27245A	
Ethertwist Adapter/16	27247A	
Ethertwist Adapter/16	27247B	
HP ThinLAN Board	27250A	
Token-Ring Adapter	D2378A	
Coaxial LAN Adapter Board	D2746A	

Input Devices

Mouse (PS/2, Microsoft)	C1413A	
Keyboard	C1405B	

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System Board, BIOS, and Memory



System Board Switches - SW-A

Switch #	Function	Default	
1	MHZ-1	Selects the speed of the processor's clock (see Frequency Selection table below)	
2	MHZ-2		
3	OFF	Sets the super I/O controller I/O port address to 398-399 (hex).	OFF
	ON	Sets the super I/O controller ¹ I/O port addresses to 26E-26F (hex).	
4	OFF	System ROM can be updated using HPROMinit diskette.	OFF
	ON	System ROM cannot be updated.	

¹ Super I/O controller: the integrated parallel port controller, serial port controller, flexible disk controller, and IDE hard disk interface

HP Vectra 486N (D26xxA) PC Series

Frequency Selection (SW-A(1) & SW-A(2))

MHZ-1	MHZ-2	Processor External Clock Speed	Used on
OFF	ON	25 MHz	HP Vectra 486/25N and 486/50N
ON	ON	33 MHz	HP Vectra 486/33N and 486/66N

System Board Switches - SW-B

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Switch #		Function	Default
1	OFF	Mouse interrupt IRQ 12—enabled	OFF
	ON	Mouse interrupt IRQ 12—disabled (disable mouse if an accessory board uses IRQ 12)	
2	OFF	Video interrupt IRQ 9—disabled	OFF
	ON	Video interrupt IRQ 9—enabled	
3	OFF	Built-in VGA controller—enabled	OFF
	ON	Built-in VGA Controller—disabled (disable built-in video if another video board is used)	
4	OFF	Passwords—enabled	OFF
	ON	Passwords—disabled (erased)	
5	OFF	EEPROM stored config information—valid	OFF
	ON	EEPROM stored config information—erased	
6	OFF	Security mode—disabled	OFF
	ON	Security mode—configuration cannot be changed using Setup	
7	OFF	If only 512KB of video is available	OFF
	ON	If the second 512KB of video memory is installed	
8	OFF	The first microprocessor—enabled	OFF
	ON	If a second microprocessor is installed	

HP Vectra 486N (D26xxA) PC Series

Setup and BIOS History

Setup version "D.xx.xx" is used on Vectra 486N PCs.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra 486N (D26xxA) PC Series HP Vectra 486N (D26xxA) PC Series				
T.04.02	Aug 92	First release	—	D.03.00
T.04.03	Dec 92	Second release	5010-8722 ¹	
T.04.04	April 93	Third release	Available on HP PC Internal BBS	

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1 HPROMinit backup diskette (US Version) for Vectra 486N PC Series

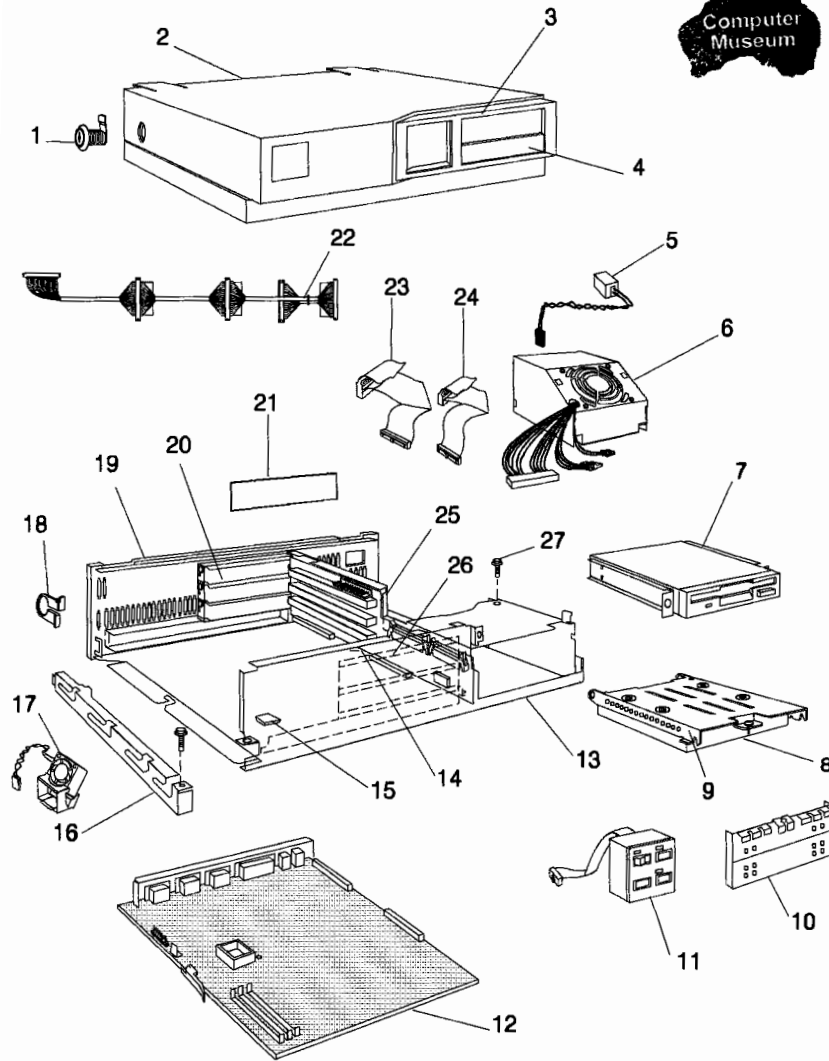
Video Memory

The HP Vectra 486N (D26xxA) PC Series is supplied with 512 KB of video RAM for 1024×768 in 16 colors. An additional 512 KB of video RAM can be installed in four video sockets (to make a total of 1 MB) for 1024×768 in 256 colors. If additional video memory is added, all four sockets must be filled.

Main Memory

The HP Vectra 486N (D26xxA) PC Series has three sockets for main memory modules (labeled A, B, and C). The modules can be installed in *any combination* in *any of the three sockets*.

Part Numbers



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HP Vectra 486N (D26xxA) PC Series

Parts List for HP Vectra 486N (D26xxA) PC Series

Item	Description	Repl. Part Number	Exchange Part Number
1	Cover Lock Assembly	5062-5590	-
2	Top Cover-Bezel Assembly (includes items 1, 3, & 4)	5062-2682	-
3	Bezel Insert	5041-1062	-
4	Filler Panel	5041-2554	-
5	Battery	1420-0513	-
6	Power Supply Assembly	5063-4538	-
7	Flexible Disk Drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
	Mounting Rails for 3.5-inch non-HP Disk Drives	5063-0309	-
8	Hard Disk Drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
9	3.5-inch, h-h, Tray (5 pack) for non-supported hard disk drives	Order product number D2037A	
10	Hard Drive RFI Assembly	5062-2694	-
11	Status (Control) Panel	5063-0815	-
12	System Board	See PC's parts list	
13	Chassis Assembly (Rear Bezel, Bumper Foot, Serial Label, Board Guide, CPU Guide, and Security Bracket)	5062-2681	-
14	System Board Guide	5041-1063	-
15	Bumper Foot	5181-0394	-
16	Side Panel	5001-4238	-
17	Fan—on 486N (D26xxA) and 486N & NI (D27xxA) only	5063-0813	-
18	Security Bracket	5001-6869	-
19	Rear Bezel	5062-2680	-
20	I/O Panel, Blank	45935-00004	-
21	Serial Label	5181-0395	-
22	Hard Disk Cable (SCSI drive)	5181-0397	-
23	Short Flexible Disk Drive Cable, 3.5-inch disk	5181-9742	-
24	Short Hard Disk Cable (IDE drive)	5181-0385	-
25	Backplane Assembly	5063-0814	-
26	Board Guide Assembly	5041-1070	-
27	Screw, TORX/Flat, 6-32 or Screw, Machine 6-32 Pilot Point	2680-0311	-
		2360-0514	-

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HP Vectra 486N (D26xxA) PC Series

Parts List for HP Vectra 486N (D26xxA) PC Series

Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated IDE disk and Ultra VGA + controllers):		
Vectra 486N Series PC	D2600-63001	D2600-69001
Processor:		
486SX-25	1821-0304	-
486SX-33	5063-0865	-
486DX-33	1820-7615	-
486DX2-50	1821-0303	-
486DX2-66	1821-0869	-
Math Coprocessor: 487SX-25	non-HP	-
Processor Upgrade kit:		
486DX-33	Order the replacement processor listed above	
OverDrive25 (486DX2-50)		
OverDrive33 (486DX2-66)		
Main Memory Modules:		
2-MB Main Memory Module kit	D2381-63001	-
4-MB Main Memory Module kit (36-bit)	1818-4703	D2156-69001
8-MB Main Memory Module kit (36-bit)	1818-4702	D2152-69001
16-MB Main Memory Module kit	D2676-83001	-
Video Memory Modules:		
512-KB Video Memory kit (D2326A)	4x 1818-5183	-
Nameplate:		
HP Vectra 486/25N Logo	5041-2565	-
HP Vectra 486s/33N Logo	5041-2599	-
HP Vectra 486/33N Logo	5041-2566	-
HP Vectra 486/50N Logo	5041-2571	-
HP Vectra 486/66N Logo	5041-2569	-
Support Manuals:		Part Number
Familiarization Guide		D267xA + 49A-90001
Technical Reference Manual: Hardware and BIOS		5960-5879

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HP Vectra 486N (D26xxA) PC Series

Part Numbers for HP Utility Diskettes

Description	Rev	Date Code	Part #	Info.
3.5-inch disk Utilities Kit Includes:	A.01.00 A.04.01 A.01.00	- 3308 3304	Available on HP PC Internal BBS	Utilities Kit Video Disk DOS Video Disk OS/2
3.5-inch disk Start Up Kit (English version) Includes:	- T.04.03 A.00.00	- 3249 3231	Available on HP PC Internal BBS	Start up Kit HPROMInit Disk Guided Tour Disk

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Notes: _____

HP Vectra 386N (D24xxx) PC Series

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
Vectra 386/16, 386/20N, and 386/25N PC Series HP Vectra 386/16N PC (CPL: 10/91; discontinued: 12/92)					
D2470A	None	None	Integrated IDE Interface	Integrated Super VGA (256 KB)	2 MB
D2471A LAN					
D2472A	1.44 MB	52 MB			
D2473A LAN	D2035A	D1694A			
D2474A		None			
From June 92, the following 386/16N products have new model numbers					
D2471B LAN ¹	None	None	Integrated IDE Interface	Integrated Super VGA (256 KB)	2 MB
D2473B LAN ¹	1.44 MB D2035A	52 MB D1694A			
HP Vectra 386/20N PC (CPL: 10/91; discontinued: 02/93)					
D2480A	None	None	Integrated IDE Interface	Integrated Super VGA (256KB)	2MB
D2481A LAN					
D2482A	1.44MB	52MB			
D2483A LAN	D2035A	D1694A			
D2484A		120MB D1696A			
D2486A		None			

1 Models D2471B, D2473B, D2481B, and D2483B include an Ethernet LAN board (HP 27245A) and Vectra boot ROM (which supports Novell Netware and LAN Manager 2.1). Models D2471B and D2473B are not available in the US.

HP Vectra 386N (D24xxx) PC Series

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
From June 92, the following 386/20N products have new model numbers					
D2481B LAN ¹	None	None	Integrated IDE Interface	Integrated Super VGA (256KB)	2MB
D2483B LAN ¹	1.44MB D2035A	52MB D1694A			
HP Vectra 386/25N PC (CPL: 06/92; discontinued: 03/93)					
D2490A	None	None	Integrated IDE Interface	Integrated Super VGA (256KB)	4MB
D2491A LAN ²					
D2492A	1.44MB D2035A	85MB D2329A			
D2493A LAN ²					
D2494A		170MB D2330A			
D2495A		None			
D2496A					
D2497A LAN ³		85MB D2329A			
D2498A		40MB D2328 -60003			

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1 Models D2471B, D2473B, D2481B, and D2483B include an Ethernet LAN board (HP 27245A) and Vectra boot ROM (which supports Novell Netware and LAN Manager 2.1).

Models D2471B and D2473B are not available in the US.

2 Models D2491A—not available in US—and D2493A include an Ethernet LAN board (HP 27247B)

3 Model D2497A includes a Token-Ring LAN Adapter board (HP D2378A)

Supported Accessories

2-MB Main Memory Upgrade (2×1-MB modules) kit	D2406A
8-MB Main Memory Upgrade (2×4-MB modules) kit	D2404A
387SX-16 Math Coprocessor-Vectra 386/16N	D1453A
387SX-20 Math Coprocessor-Vectra 386/20N	D2403A
387SL Math Coprocessor-Vectra 386N	D2408A
Vectra LAN Boot ROM (pack of 6)	D2407B
<i>Setting Up and Using Your HP 386/N-Series PC Manual</i>	D2405B

HP Vectra 386N (D24xxx) PC Series

System Board upgrades:

386N PC Series Upgrade to 486/25N (D26xxA) PC	D2619A
386N PC Series Upgrade to 486/33N (D26xxA) PC	D2629A
386N PC Series Upgrade to 486/50N (D26xxA) PC	D2609A
386N PC Series Upgrade to 486/66N (D26xxA) PC	D2689A

Video Displays

Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch	D2035A
IDE 52 MB Hard Disk	D1694A
IDE 120 MB Hard Disk	D1696A
IDE 240 MB Hard Disk	D1697A
IDE 85 MB Hard Disk	D2329A
IDE 170 MB Hard Disk	D2330A

Datacomm and LAN Boards

Serial Parallel Board	24540B
Dual Serial Board	24541B
Modem 1200 baud	24550A
Modem 2400 baud	24551A
Ethertwist PC Link Adapter	27245A
Ethertwist Adapter/16	27247A
Ethertwist Adapter/16	27247B
HP ThinLAN Board	27250A
Token-Ring Adapter	D2378A

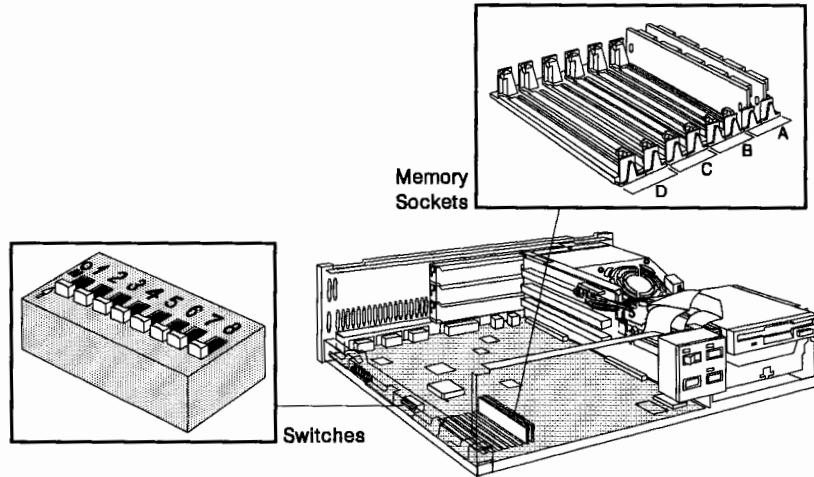
Input Devices

Mouse (PS/2, Microsoft)	C1413A
Keyboard	C1405B

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System Board, BIOS, and Memory

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System Board Switches

Switch #	Function		Default
1	OFF	Mouse interrupt IRQ 12—enabled	OFF
	ON	Mouse interrupt IRQ 12—disabled (disable mouse if an accessory board uses IRQ 12)	
2	OFF	Video interrupt IRQ 9—disabled	OFF
	ON	Video interrupt IRQ 9—enabled	
3	OFF	Built-in VGA controller—enabled	OFF
	ON	Built-in VGA Controller—disabled (disable built-in video if another video board is used)	
4	OFF	Passwords—enabled	OFF
	ON	Passwords—disabled (erased)	
5	OFF	EEPROM stored config information—valid	OFF
	ON	EEPROM stored config information—erased	
6	OFF	Security mode—disabled	OFF
	ON	Security mode—forced (configuration cannot be changed using Setup)	
7 & 8	OFF	Reserved (leave at factory default setting)	OFF

HP Vectra 386N (D24xxx) PC Series

Setup and BIOS History

Setup version "D.xx.xx" is used on Vectra 386N PCs.

BIOS Ver.	Date	Description	Klt Part No.	Min Setup
Vectra 386N (D24xxx) PC Series HP Vectra 386N (D24xxx) PC Series				
L.03.04	Sep 91	First release (for 386/16N and 20N).	-	D.01.00
L.03.05	Sep 91	Fixes third-party drive read/write problems (for 386/16N and 20N.)	-	
L.03.06	Jan 92	Fixes LED status and Administration Password problems. Adds support for 1024 cylinder drives (for 386/16N and 20N.)	-	
L.03.07	June 92	Adds support for 386/25N and SCSI BIOS shadowing, and fixes Mitsubishi memory module errors.	5062-2696 ¹	D.02.00
L.03.08	Oct 92	Fixes Bad memory config. errors code 20CA on 386/25N	-	
L.03.09	Nov 92	Fixes parallel port errors on 386/25N	5063-0842	

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¹ For boot ROM part numbers and revision history, refer to table below.

LAN Boot ROM Revisions-Part Numbers

Description	Rev	Date	Part #	Info.
First release. Supports Novell Netware on Ethernet	A.01.00	Sept 92	5062-2673	For Vectra 386/16N, 386/20N and 386s/20
Adds LAN Manager	A.02.00	Apr 92	5063-2697	For Vectra 386N (D24xxx) PC Series and 386s/20
Adds Novell Netware, LAN Manager, IBM PC Server, and IBM Server for Token-Ring	A.03.00	Aug 92	5063-0828	For Vectra 386N (D24xxx) PC Series and 386s PC Series

HP Vectra 386N (D24xxx) PC Series

Main Memory

The PC has eight sockets for main memory modules. Each pair of sockets (labeled A, B, C, and D) forms a bank.

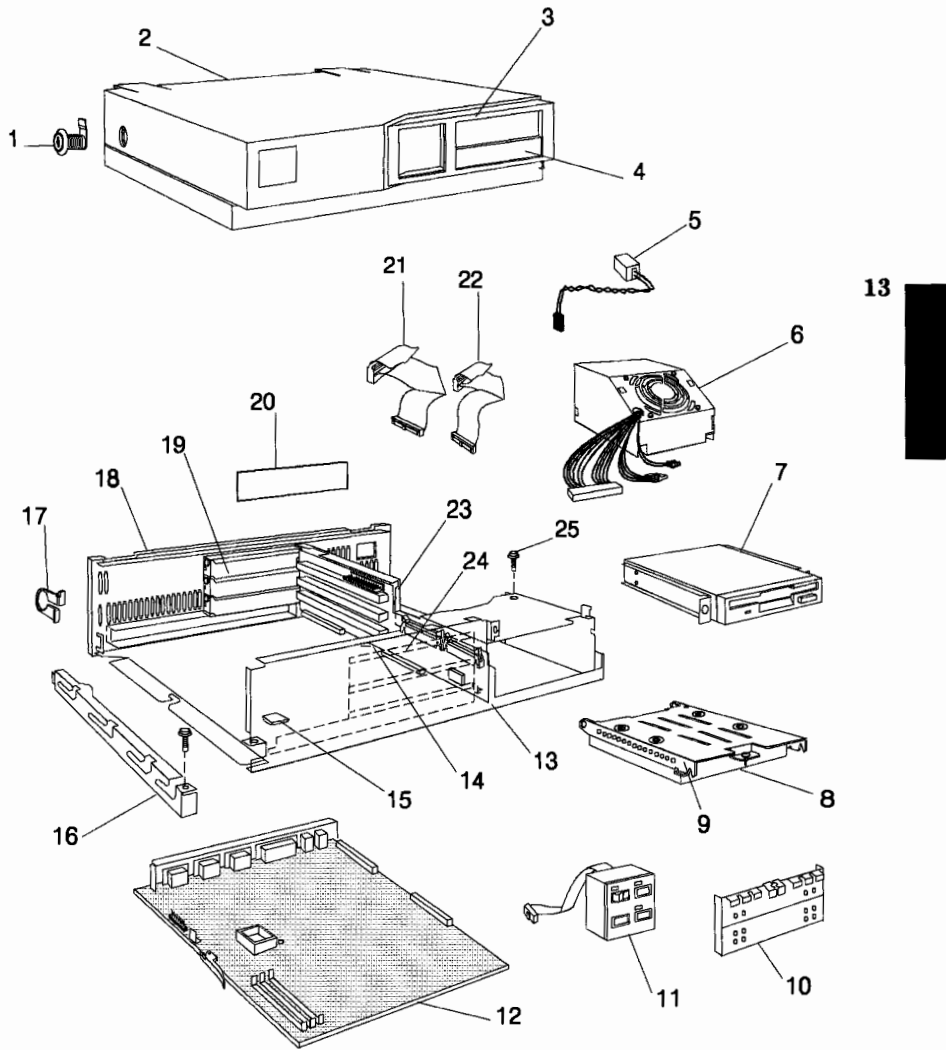
Main Memory Configuration

For a TOTAL mem of:	Install Main Memory Modules in These Banks (each bank has two sockets):				Using This Kit(s)	
	A	B	C	D	386/16N 386/20N	386/25N
2 MB	2×1 MB				Standard	-
4 MB	2×1 MB	2×1 MB			One 2-MB kit	Standard
6 MB	2×1 MB	2×1 MB	2×1 MB		Two 2-MB kits	One 2-MB Kit
8 MB	2×1 MB	2×1 MB	2×1 MB	2×1 MB	Three 2-MB kits	Two 2-MB kits
10 MB	2×1 MB	2×4 MB			One 8-MB kit	-
12 MB	2×1 MB	2×1 MB	2×4 MB		One 2-MB kit and one 8-MB kit	One 8-MB kit
14 MB	2×1 MB	2×1 MB	2×1 MB	2×4 MB	Two 2-MB kits and one 8-MB kit	One 2-MB kit and one 8-MB kit
16 MB ¹	2×4 MB	2×4 MB			Two 8-MB kits	Two 8MB kits

¹ Remove the original 1-MB memory modules in banks A and B.

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Part Numbers



HP Vectra 386N (D24xxx) PC Series

Parts List for HP Vectra 386/16N, 386/20N, and 386/25N PC Series

Item	Description	Repl. Part Number	Exchange Part Number
1	Cover Lock Assembly	5062-5590	-
2	Top Cover-Bezel Assembly (includes items 1, 3, & 4)	5062-2682	-
3	Bezel Insert	5041-1062	-
4	Filler Panel	5041-2554	-
5	Battery	1420-0513	-
6	Power Supply Assembly	5063-0844	-
7	Flexible Disk Drive (3.5-inch)	D2035-63004	
	Mounting Rails for 3.5-inch non-HP Disk Drives	5063-0309	-
8	Hard Disk Drive (standard) ¹		
	42 MB (D2328-6000x)	D1694-60003	D1694-69001
	52 MB	D1694-60003	D1694-69001
	85 MB	D2329-60003	D2329-69001
	120 MB	D1696-60007	D1696-69003
170 MB	D2330-60003	D2330-69001	
9	3.5-inch, h-h, Tray (5 pack) for non-supported hard disk drives	Order product number D2037A	
10	Hard Drive RFI Assembly	5062-2694	-
11	Status (Control) Panel	5063-0815	-
12	System Board	See PC's parts list	
13	Chassis Assembly (Rear Bezel, Bumper Foot, Serial Label, Board Guide, CPU Guide, and Security Bracket)	5062-2681	-
14	System Board Guide	5041-1063	-
15	Bumper Foot	5181-0394	-
16	Side Panel	5001-4238	-
17	Security Bracket	5001-6869	-
18	Rear Bezel	5062-2680	-
19	I/O Panel, Blank	45935-00004	-
20	Serial Label	5181-0395	-
21	Short Flexible Disk Drive Cable, 3.5-inch disk	5181-9742	-
22	Short Hard Disk Cable (IDE drive)	5181-0385	-
23	Backplane Assembly	5063-0814	-
24	Board Guide Assembly	5041-1070	-
25	Screw, TORX/Flat, 6-32 or	2680-0311	-
	Screw, Machine 6-32 Pilot Point	2360-0514	-

¹ For optional disk drive information, see the *Accessory Service Handbook*.

HP Vectra 386N (D24xxx) PC Series

Parts List for HP Vectra 386/16N, 386/20N, and 386/25N PC Series

Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated IDE disk and Super VGA controllers):		
Vectra 386/16N System Board	D2470-63002	D2470-69001
Vectra 386/20N System Board	D2480-63002	D2480-69001
Vectra 386/25N System Board	D2490-63002	D2490-69001
Processor: 386SX	Processor not removable	
Math Coprocessor:		
387SL (Vectra 386/16N, 286/20N, 386/25N PCs)	D2408-83001	-
Main Memory Modules:		
1-MB Main Memory Module	5062-2670	-
4-MB Main Memory Module	5062-2671	-
BIOS ROM Kit	5063-0842	-
LAN Boot ROM Kit	5063-0828	-
Nameplate:		
HP Vectra 386/16N Logo	5041-1060	-
HP Vectra 386/20N Logo	5041-1072	-
HP Vectra 386/25N Logo	5041-2562	-
Support Manuals:		Part Number
Familiarization Guide (Dealer version: D248xA + 49A-61)		D248xA + 49B-90001
Technical Reference Manual: Hardware and BIOS		5959-7793

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Part Numbers for HP Utility Diskettes - (3.5-inch disks only)

Description	Rev	Date Code	Part #	Info.
Setup Disk	B.00.00	3211	Available via HP PC Internal BBS (bulletin board)	
Super VGA Disk	D.00.00	3238		
EtherTwist LAN Disk	E.00.00	3226		

Notes: _____

HP Vectra 386N (D24xxx) PC Series

Notes: _____

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HP Vectra XU PC Series

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM	Integ. LAN	L 2 Cache
Vectra XU PC Series							
HP Vectra XU 5/90 PC (CPL: 07/94 ▶)							
D3085A	1.44 MB	None	Integrated SCSI-2/IDE Interface	Integrated Ultra VGA + (2 MB)	8 MB	Yes	256 KB ¹
D3086A	D2035A	270 MB (D2385A)					
D3087A		540 MB (D2386A)					
HP Vectra XU 5/90C PC (CPL: 07/94 ▶)							
D3091A	1.44 MB D2035A	540 MB (D2386A)	Integrated SCSI-2/IDE Interface	Matrox Graphics Accelerator (2 MB, upgradeable to 4 MB)	16 MB	Yes	256 KB ²
D3092A		1 GB (D2076B)					
D3094A		540 MB (D2891A)					

1 Asynchronous Cache

2 Burst Synchronous Cache

HP Vectra XU PC Series

Supported Accessories

Main Memory upgrades:

4-MB Main Memory Upgrade kit	D2974A
8-MB Main Memory Upgrade kit	D2975A
16-MB Main Memory Upgrade kit	D2297A
32-MB Main Memory Upgrade kit	D2298A
Setup Kit (<i>Getting Started</i> and <i>Setting Up</i> manuals)	D3080A

Processor upgrades:

Pentium/90 Dual Processor upgrade	D3096A
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Video Displays

Monochrome Display	D2081A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Multimedia Products

HP Sound DSP 16	D2941A
HP Integrated Office	D2887A

Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch	D2035A
Flexible Disk 1.2 MB 5-1/4 inch	D2036A
IDE 540 MB Hard Disk	D2891A
IDE 270 MB Hard Disk	D2894A
SCSI 1 GB Hard Disk	D2076B
CD-ROM Drive	D2886A/B
CD-ROM Drive	D2992A

Input Devices

Mouse	C3751A
Keyboard	C1405B
Keyboard	C3754A

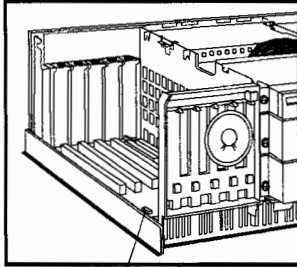
14



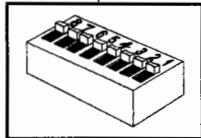
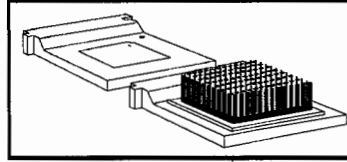
System Board, BIOS, and Memory



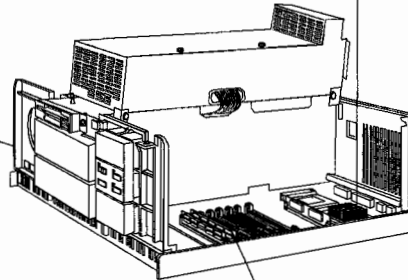
Accessory Boards



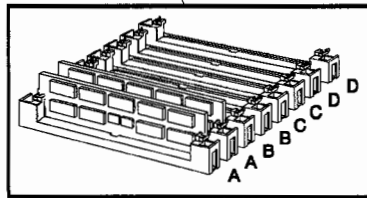
Processor Sockets



System Board Switches



Memory Sockets



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Cache Memory

The PC has 256 KB of integrated level-two cache memory.

HP Vectra XU PC Series

Switch:	Use this switch to:
2 <i>PSWRD</i>	Enable or clear (and disable) User and System Administrator passwords stored in EEPROM: <ul style="list-style-type: none"> ■ OFF to enable passwords ■ ON to clear passwords. <p>Switch ON if you need to clear the current passwords.</p>
3 <i>SECUR</i>	Disable or enable security mode. Security mode prevents changes to the PC's configuration using the PC's SETUP program: <ul style="list-style-type: none"> ■ OFF to disable security mode ■ ON to enable security mode. <p>Switch ON if you don't want anyone to change the PC's configuration.</p>
4 <i>CONFG</i>	Retain or clear the configuration stored in EEPROM: <ul style="list-style-type: none"> ■ OFF to retain configuration ■ ON to clear configuration. <p>Switch ON if you need to clear the PC's configuration information, for example if the configuration is corrupted.</p>
5	Reserved.
8	Reserved.

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Switch 1	Switch 6	Switch 7	External/Internal Bus Speed
OFF	OFF	OFF	60/90 (DEFAULT)
OFF	OFF	ON	50/75
OFF	ON	OFF	40/60
OFF	ON	ON	66.66/100
ON	OFF	OFF	60/120
ON	OFF	ON	50/100
ON	ON	OFF	40/80
ON	OFF	ON	66.66/133

Note

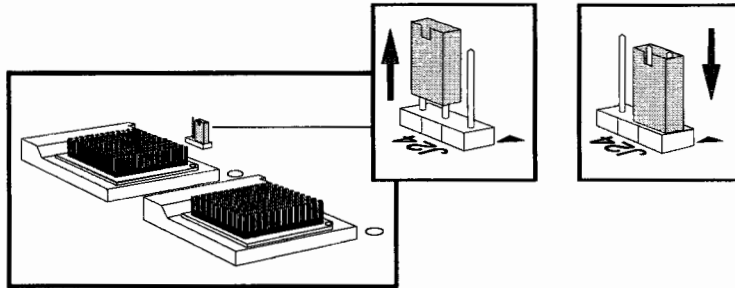


Switch 1 sets the External/Internal Bus Speed ratio. The default setting is OFF (ratio of 2:3). A ratio of 1:2 is set by setting switch 1 to ON.



Installing a Dual Processor

The position of jumper J24 must be changed as shown below when a second Pentium processor is installed.



Setup and BIOS History

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BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra XU PC Series HP Vectra XU PC Series				
Displayed in Setup	July 94	First release	Available on HP PC BBS	

Main Memory

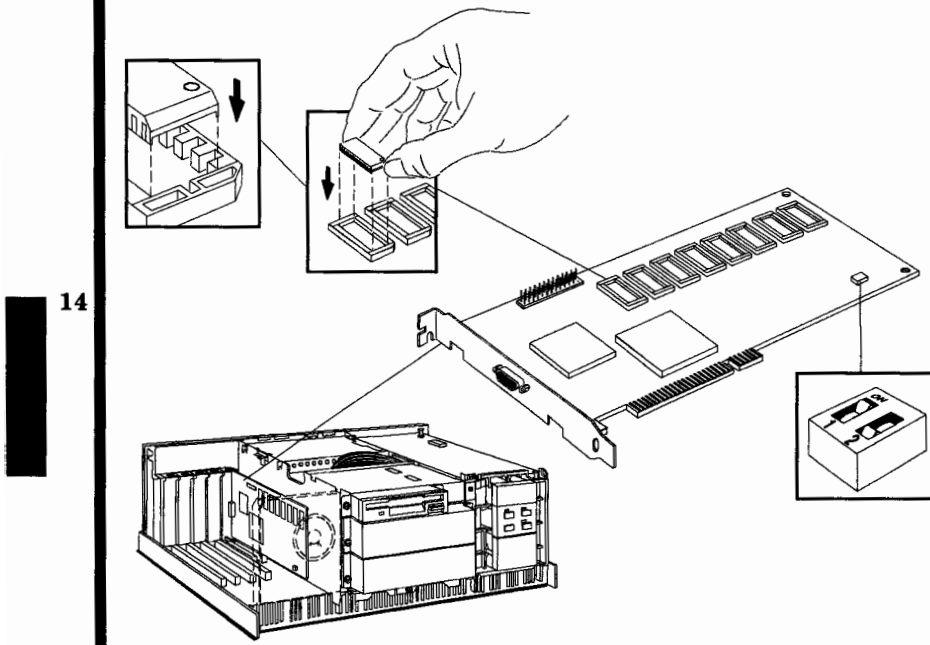
The HP Vectra XU Series PC has eight sockets for main memory modules. Sockets are grouped into four banks of paired sockets labeled A to D. Memory modules can be installed in any combination of equally-sized pairs (for example, two 4 MB modules in bank A) up to a maximum of 256 MB.

Video Memory

The HP Vectra XU 5/90 PC Series has an integrated video controller and is supplied with 2 MB of video memory for a resolution up to 1280x1024 in 256 colors.

Matrox PCI Video Board

The HP Vectra XU 5/90C PC Series is supplied with a Matrox PCI Video board. The Matrox board is supplied with 2 MB of video memory for a resolution up to 1600×1200 in 256 colors. It can be upgraded to 4 MB for a resolution up to 1600×1200 in 64 K colors (order Matrox Video RAM kit D3095A).



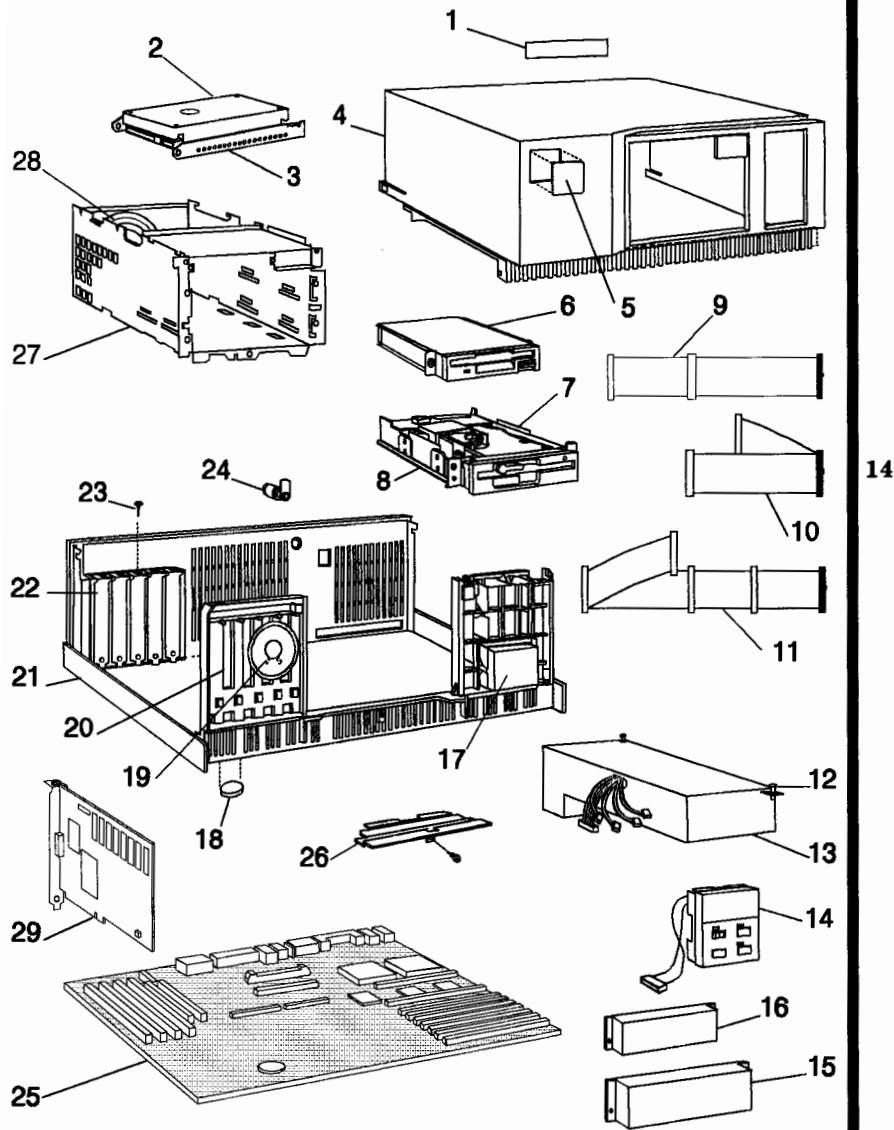
Note



You must change the switch settings on the Matrox board after installing more Video memory. Set Switch 2 to OFF, as shown above.



Part Numbers



HP Vectra XU PC Series

Parts List for HP Vectra XU PC Series

Item	Description	Repl. P/N	Exchange P/N
	Box Assembly:	5063-5735	—
4	Top Cover-Bezel Assembly		
20	Board Guide Assembly		
21	Base Assembly		
27	Bridge/Lid Assembly		
	PCI Card Guide		
1	Serial Label	—	—
2	Internal Hard Disk Drive (with tray)	See disk drive parts list in <i>Accessory Service Handbook</i>	
3	3.5-inch, h-h, Tray (5 pack) for non-HP hard disk drives	Order D2037A (bottom & rear positions) D2198A (front) includes HDD activity light	
5	Nameplate (logo)	See PC's parts list	
6	Top External Flexible Disk Drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
	Mounting Rails for 3.5-inch non-HP Disk Drives	5063-0309	—
7	Middle External Flexible Disk Drive	See disk drive parts list	
8	5.25-inch, h-h, Tray (5 pack) for non-HP, flexible disk and tape drives	Order product number D2199A (updated version of D2038A)	
9	Flexible Disk Drive Cable, 3.5 & 5.25-inch	5182-1097	—
10	Hard Disk Cable (IDE drive)	5181-0392	—
11	Hard Disk Cable (SCSI drive)	5063-5742	—
	SCSI Disk Activity Light Cable (supplied with SCSI drive)	5181-5684	—
12	Snap Fastener	1390-0882	—
13	Power Supply Assembly (120W)	5063-4569	—
14	Status (Control) Panel	5062-5600	—
15	Filler Panel, 5.25-inch	5062-5597	—
16	Filler Panel, 3.5-inch	5062-5595	—
17	Control Panel Filler Assembly	5063-0303	—
18	Bumper Foot	5042-0548	—
19	Speaker Assembly	02620-60016	—
22	I/O panel, Blank	45935-00004	—
23	Screw, 6-32 Pilot Point	0624-0727	—
24	Keylock Assembly	5062-5599	—
25	System Board	See PC's parts list	
26	Retainer Assembly (Bottom Disk)	5001-6853	—
28	Fan Assembly	5063-0307	—
29	Matrox Video Board	5063-4587	—

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HP Vectra XU PC Series

Parts List for HP Vectra XU PC Series

Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated SCSI-2, IDE, and Ultra VGA controller):		
Vectra XU System Board	D3801-63001	D3081-69001
Matrox Accessories:		
Matrox Video RAM kit (D3095A)	5063-4588	
Processors:		
Pentium™ (P54C/90)	5063-4586	—
Pentium™ (P54CM/90 - dual)	5063-5741	—
Cache Memory Modules:		
256 KB Level-Two (Burst Synchronous)	5063-4585	—
256 KB Level-Two (Asynchronous)	5063-4572	—
Main Memory Modules:		
4-MB Main Memory Module	D2974-63001	—
8-MB Main Memory Module	D2975-63001	—
16-MB Main Memory Module	D2297-63001	D2297-69001
32-MB Main Memory Module	D2298-63001	D2298-69001
BIOS ROM Kit		
BIOS Update disks ¹		—
Nameplate:		
HP Vectra XU 5/90C Logo	5042-0585	—
HP Vectra XU 5/90 Logo	5042-0598	—
Support Manuals:		Part Number
Familiarization Guide		D308xA + 49A-90001
Technical Reference Manual: Hardware and BIOS		5962-3417 ²

1 BIOS update disks available on the HP PC BBS

2 Electronic File only.

Part Numbers for HP Utility Diskettes

Description	Rev	Date Code	Part #	Info.
Vectra XU PC Series Kits (3.5-inch disks only):				
Integrated Video Drivers			5063-4573	
LAN Disk kit			5063-4574	
SCSI Disk kit			5063-5743	

HP Vectra XU PC Series

Notes: _____

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HP Vectra 486U PC Series

Models and Accessories

Deskside Vectra Models

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
Vectra 486U PC Series					
HP Vectra 486/25U PC (CPL: 06/92 ▶)					
D2266A	1.44MB	None	Integrated IDE Interface	Integrated Ultra VGA + (512KB, upgradeable to 1MB)	4MB
D2268A ¹	D2035A	120MB			
D2268B ²		D1696A			
D2269A ¹	D2035A	240MB			
D2269B ²		D1697A			
HP Vectra 486/33U PC (CPL: 06/92 ▶)					
D2272A	1.44MB	None	Integrated IDE Interface	Integrated Ultra VGA + (512KB, upgradeable to 1MB)	4MB
D2274A ¹	D2035A	120MB			
D2274B ²		D1696A			
D2275A ¹	D2035A	240MB			
D2275B ²		D1697A			
HP Vectra 486/50U PC (CPL: 06/92 ▶)					
D2278A	1.44MB	None	Integrated IDE Interface	Integrated Ultra VGA + (512KB, upgradeable to 1MB)	4MB
D2280A ¹	D2035A	240MB			
D2280B ²		D1697A			
D2281A		430MB D1699A	SCSI-2 Host Adapter D1681A		

1 Discontinued:1/93

2 Models D22xxB include DOS 5.0, Windows 3.1, and HP Dashboard

HP Vectra 486U PC Series

Deskside Vectra Models (continued)

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
HP Vectra 486/66U PC (CPL: 10/92)					
D2284A	1.44MB	None	Integrated IDE Interface	Integrated Ultra VGA + (512KB, upgradeable to 1MB)	4MB
D2286A¹ D2286B²	D2035A	240MB D1697A			
D2287A			430MB D1699A	SCSI-2 Host Adapter D1681A	

1 Discontinued:1/93

2 Models D22xxB include DOS 5.0, Windows 3.1, and HP Dashboard

Supported Accessories

2MB Main Memory Upgrade kit	D2381A
8MB Main Memory Upgrade kit	D2152A
512KB Video Memory Upgrade kit	D2326A
Setup Kit (setting up manual and diskettes)	D2071A

System Board/Processor Upgrade Kits

System Board upgrades:

386s PC or 486s/20 PC System Board Upgrade to 486/25U	D2173A
386s PC or 486s/20 PC System Board Upgrade to 486/33U	D2174A
386s PC or 486s/20 PC System Board Upgrade to 486/50U	D2175A
386s PC or 486s/20 PC System Board Upgrade to 486/66U	D2176A

Processor upgrade:

486U Processor Upgrade to 486DX/33 (33 MHz)	D2169A
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Input Devices

Mouse (PS/2, Microsoft)	C1413A
Keyboard	C1405B

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HP Vectra 486U PC Series

Video Displays

Monochrome Display	D1181A/W/G
VGA Color Display	D1182A/B
Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Multifunction Controller Boards

HP EISA SCSI-2 Host Adapter	D1681A
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Multimedia Products

HP Sound DSP 16	D2941A
HP Integrated Office	D2887A

Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch	D2035A
Flexible Disk 1.2 MB 5-1/4 inch	D2036A
IDE 52 MB Hard Disk	D1694A
IDE 120 MB Hard Disk	D1696A
IDE 240 MB Hard Disk	D1697A
IDE 85 MB Hard Disk	D2329A
IDE 170 MB Hard Disk	D2330A
SCSI 430 MB Hard Disk	D1699A
SCSI 535 MB Hard Disk	D2075A
SCSI 1035 MB Hard Disk	D2076A

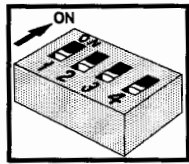
Datacomm and LAN Boards

Token-Ring Adapter	D2378A
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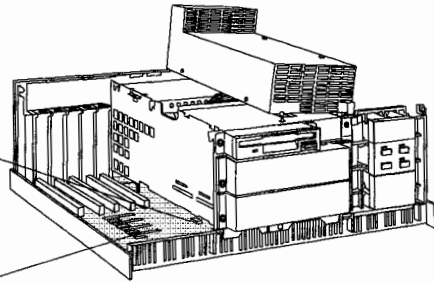
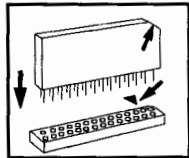
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System Board, BIOS, and Memory

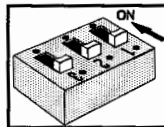
Video Switches



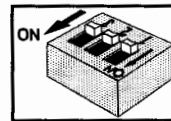
Video Sockets



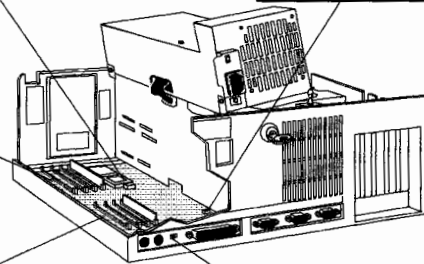
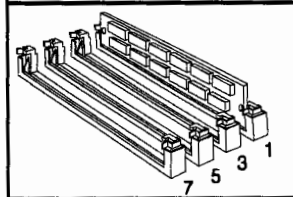
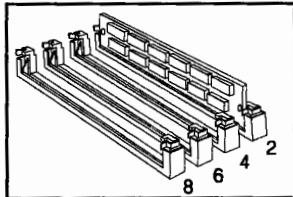
CPU Switches



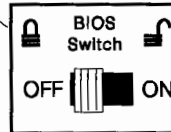
Configuration Switches



Memory Sockets



ON = Enable BIOS Upgrade from Diskette to EEPROM
OFF = Disable BIOS Upgrade



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HP Vectra 486U PC Series

HP Vectra 486U PC Series System Board Switches

Video Switches		
Switch #	Function	Default
1	OFF	Specifies 512KB Video Memory installed
	ON	Specifies 1MB Video Memory installed
2/3	OFF	Reserved—do not use
	ON	Reserved—do not use
4	OFF	Enables built-in video
	ON	Disables built-in video
Configuration Switches		
Switch #	Function	Default
1	OFF	Enables configuration (validates configuration in memory)
	ON	Clears configuration (invalidates configuration in memory)
2	OFF	Enables password
	ON	Clears password
3	OFF	Unlocks configuration (allows changes)
	ON	Locks configuration (prevents changes)
BIOS Switch		
Switch #	Function	Default
1	OFF	Locks BIOS (no write)
	ON	Unlocks BIOS (writable)—should always be locked except to update
CPU Switches—see next table		
Switch #	Function	Default
1	OFF	Sets upgrade socket for 487SX type pinout
	ON	Sets upgrade socket for 486DX/DX2 type pinout
2	OFF	Enables Primary Processor except when an SX type processor is installed in the upgrade socket
	ON	Disables Primary processor
3	OFF	25 MHz Local Bus Speed
	ON	33 MHz Local Bus speed

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- 1 Leave in the ON position except when making configuration changes
- 2 CPU Switch 3 determines the speed for both processor sockets (switches 1 & 2 determine the active processor).

HP Vectra 486U PC Series

CPU Switches-settings for Processor Upgrades

To install this upgrade processor:	Set the CPU Switches to:			You will have upgraded this computer to:
	1	2	3	
487SX Coprocessor (Vectra 486/25U only)	OFF	OFF	OFF	Vectra 486/25U with coprocessor
486DX-33	ON	ON	ON	Vectra 486/33U
486DX2-50 (A80486DX2-50)	ON	ON	OFF	Vectra 486/50U
486DX2-66 (A80486DX2-66)	ON	ON	ON	Vectra 486/66U
SX OverDrive/25 (ODP 486SX-25)	OFF	ON	OFF	Vectra 486/50U
SX OverDrive/33 (ODP 486SX-33)	OFF	ON	ON	Vectra 486/66U
DX OverDrive/25 (ODPR 486DX-25)	ON	ON	OFF	Vectra 486/50U
DX OverDrive/33 (ODPR 486DX-33)	ON	ON	ON	Vectra 486/66U
DX Overdrive/33 ODP 486DX-33	OFF	ON	ON	Vectra 486/66U

Setup and BIOS History

- 15 SAM version "C.xx.xx" is used on Vectra 486U PCs.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra 486U PC Series				
HP Vectra 486U PC Series				
P.04.00	Jun 92	First release	Available on HP PC BBS	SAM ¹
P.04.02	Jun 92	Fixes disk and hang problems		version
P.04.04	Feb 93	Fixes security problems		C.00.02

1 System Administration Manager on Vectra 486S and 486U PC Series'.

Video Memory

The HP Vectra 486U PC Series is supplied with 512KB of video RAM for 1024×768 in 16 colors. An additional 512KB of video RAM can be installed in four video sockets (to make a total of 1MB Video Memory). If additional memory is added, all four sockets must be filled.



Main Memory

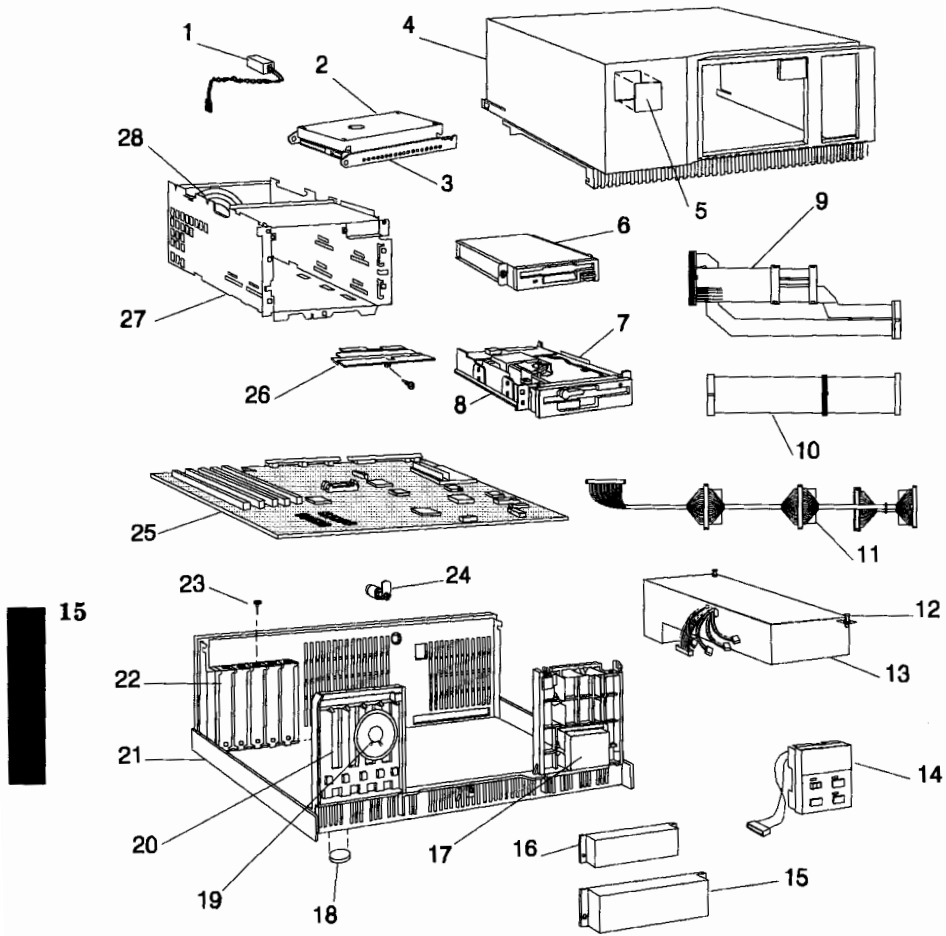
The HP Vectra 486U Series PC has eight sockets for memory modules (labeled 1 through to 8). The modules must be installed as shown in the memory configuration table.

HP Vectra 486U PC Series Memory Configuration

For a TOT. MEM. of:	Install Memory Modules in These Banks:							
	1	2	3	4	5	6	7	8
4MB	2MB	2MB						
8MB	2MB	2MB	2MB	2MB				
12MB	2MB	2MB	2MB	2MB	2MB	2MB		
16MB or 16MB	2MB 8MB	2MB 8MB					2MB	2MB
20MB	8MB	8MB	2MB	2MB				
24MB	8MB	8MB	2MB	2MB	2MB	2MB		
28MB	8MB	8MB	2MB	2MB	2MB	2MB	2MB	2MB
32MB	8MB	8MB	8MB	8MB				
36MB	8MB	8MB	8MB	8MB	2MB	2MB		
40MB	8MB	8MB	8MB	8MB	2MB	2MB	2MB	2MB
48MB	8MB	8MB	8MB	8MB	8MB	8MB		
52MB	8MB	8MB	8MB	8MB	8MB	8MB	2MB	2MB
64MB	8MB	8MB	8MB	8MB	8MB	8MB	8MB	8MB

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Part Numbers



Vectra 486U PC Series Parts

Parts List for HP Vectra 486U PC Series

Item	Description	Repl. Part Number	Exchange Part Number
1	Battery (optional on 486U)	1420-0513	-
2	Internal Hard Disk Drive (with tray)	See <i>Accessory Service Handbook</i>	
3	3.5-inch, h-h, Tray (5 pack) for non-HP hard disk drives	Order product number D2037A	
4	Top Cover-Bezel Assembly	5062-5593	-
5	Nameplate (logo)	See PC's parts list	
6	Top External Flexible Disk Drive	See <i>Accessory Service Handbook</i>	
	Mounting Rails for 3.5-inch non-HP Disk Drives	5063-0309	-
7	Middle External Flexible Disk Drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
8	5.25-inch, h-h, Tray (5 pack) for non-HP, flexible disk and tape drives	Order product number D2038A	
9	Flexible Disk Drive Cable, 3.5 & 5.25-inch	5181-0391	-
10	Hard Disk Cable (IDE drive)	5181-0392	-
11	Hard Disk Cable (SCSI drive) SCSI Disk Activity Light Cable (supplied with SCSI drive)	5181-0397	-
		5181-5684	-
12	Snap Fastener	1390-0882	-
13	Power Supply Assembly	5063-0339	-
14	Status (Control) Panel	5062-5600	-
15	Filler Panel, 5.25-inch	5062-5597	-
16	Filler Panel, 3.5-inch	5062-5595	-
17	Control Panel Filler Assembly	5063-0303	-
18	Bumper Foot	5181-0394	-
19	Speaker Assembly	02620-60016	-
20	Board Guide Assembly	5041-1066	-
21	Base	5062-5592	-
22	I/O panel, Blank	45935-00004	-
23	Screw, 6-32 Pilot Point	0624-0727	-
24	Keylock Assembly	5062-5599	-
25	System Board	See PC's parts list	
26	Retainer Assembly (Bottom Disk)	5001-6853	-
27	Bridge/Lid Assembly	5063-0306	-
28	Fan Assembly	5063-0307	-

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Vectra 486U PC Series Parts

Parts List for HP Vectra 486U PC Series

Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated IDE disk and Ultra VGA controller):		
Vectra 486/25U System Board	D2266-63001	D2266-69001
Vectra 486/33U System Board	D2272-63001	D2272-69001
Vectra 486/50U System Board	D2272-63001	D2272-69001
Vectra 486/66U System Board	D2272-63001	D2272-69001
Disk Controller Boards (slot 4):		
HP EISA SCSI-2 Host Adapter (D1681A)	1150-1920	1150-1921
Processors:		
486DX 33 MHz	1820-7615	-
486SX 25 MHz	1821-0304	-
486DX2 50 MHz	1821-0303	-
486DX2 66 MHz	1821-0859	-
Processor Filter Board (486/66U)	D2284-60002	-
Coprocessor: 487SX 25 MHz (486/25U)	No HP part available	
DRAM Memory Modules:		
2 MB Memory Module	D2381-63001	-
8 MB RAM Memory Module (36 bit)	1818-4702	D2152-69001
VRAM Memory Modules:		
512 KB kit (D2326A)	4x 1818-5183	-
BIOS ROM Kit		
BIOS Update disks ¹	1818-5434	-
Nameplate:		
HP Vectra 486/25U Logo	5041-6376	-
HP Vectra 486/33U Logo	5041-6377	-
HP Vectra 486/50U Logo	5041-6372	-
HP Vectra 486/66U Logo	5041-6373	-
Heatsink (486/50U & 486/66U only)	1205-0855	-
Heatsink Clip	1205-0854	-
8742 Keyboard Controller	1821-0269	-
Support Manuals:		Part Number
Familiarization Guide (Dealer Version: D2266A + 49-0)		D2266A + 49A-60001
Technical Reference Manual: Hardware and BIOS		D2168-90001

1 BIOS update disks available on HP PC BBS



HP Vectra 486s/20 PC

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
Vectra 486s PC					
HP Vectra 486s/20 PC (CPL: 11/91; discontinued: 03/93)					
D2260A	1.44 MB D2035A	None	Integrated IDE Interface	Ultra VGA Board D2325A	4 MB
D2261A	1.2 MB D2036A				
D2262A	1.44 MB D2035A	120 MB D1696A			
D2263A		240 MB D1697A			
Vectra 486s PC (continued)					
HP Vectra 486s/20 PC (CPL: 11/91; discontinued: 03/93)					
D2264A	1.44 MB D2035A	430 MB D1699A	SCSI-2 Host Adapter D1681A	Ultra VGA Board D2325A	4 MB
D2265A Turbo ¹		120 MB D1696A	Integrated IDE Interface		

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¹ Model D2265A includes a 487SX math coprocessor

Supported Accessories

1-MB Main Memory Upgrade kit	D2150A
2-MB Main Memory Upgrade kit	D2381A
4-MB Main Memory Upgrade kit	D2156A
8-MB Main Memory Upgrade kit	D2152A
Setup Kit (setting up manual and diskettes)	D2165A
486s/20 PC OverDrive/20 Processor Upgrade (40 MHz)	D2170A ²
System Board Upgrade Kits (see 486U PCs)	

²Upgrade BIOS to M.03.01 before installing OverDrive processor

Full-Height Desktop Vectras 

HP Vectra 486s/20 PC 16-1

HP Vectra 486s/20 PC

Video Displays

Monochrome Display	D1181A/W/G
VGA Color Display	D1182A/B
Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Video Boards

HP Ultra VGA Board	D2325A/B
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Multifunction Controller Boards

HP EISA SCSI-2 Host Adapter	D1681A
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Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch	D2035A
Flexible Disk 1.2 MB 5-1/4 inch	D2036A
IDE 52 MB Hard Disk	D1694A
IDE 120 MB Hard Disk	D1696A
IDE 240 MB Hard Disk	D1697A
IDE 85 MB Hard Disk	D2329A
IDE 170 MB Hard Disk	D2330A
SCSI 430 MB Hard Disk	D1699A
SCSI 535 MB Hard Disk	D2075A
SCSI 1035 MB Hard Disk	D2076A

Datacomm and LAN Boards

Token-Ring Adapter	D2378A
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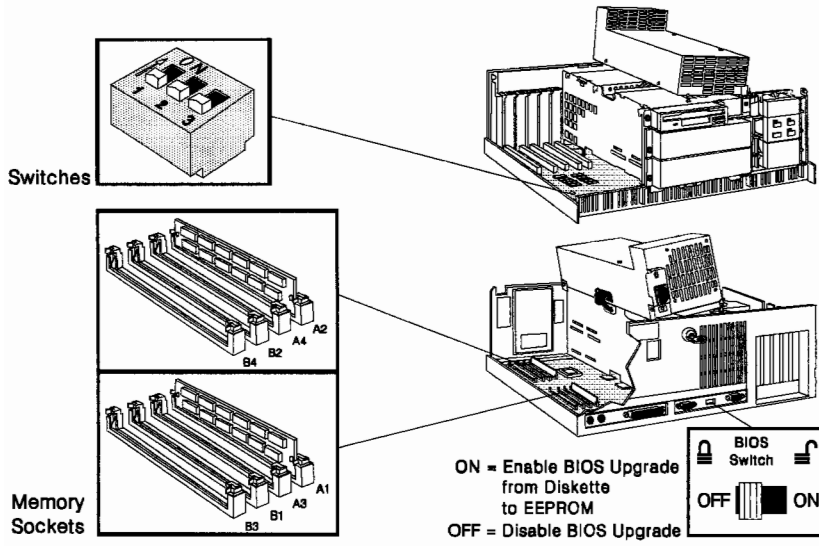
Input Devices

Mouse (PS/2, Microsoft)	C1413A
Keyboard	C1405B

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System Board, BIOS, and Memory



HP Vectra 486s/20 PC System Board Switches

Switch #		Function	Default
1	OFF	CMOS stored config information—valid	OFF
	ON	CMOS stored config information—erased	
2	OFF	Power-on password—enabled	OFF
	ON	Power-on password—disabled	
3	OFF	Security mode—enabled	OFF
	ON	Security mode—disabled	

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HP Vectra 486s/20 PC

Setup and BIOS History

SAM version "B.xx.xx" is used on Vectra 486s/20 PC.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra 486s PC HP Vectra 486s/20 PC				
M.03.00	Oct 91	First release	1818-5383	SAM ¹ version B.00.01
M.03.01	Jun 92	Fixes disk and hang problems		

1 System Administrator Manager on Vectra 486s/20 and 486U PC Series

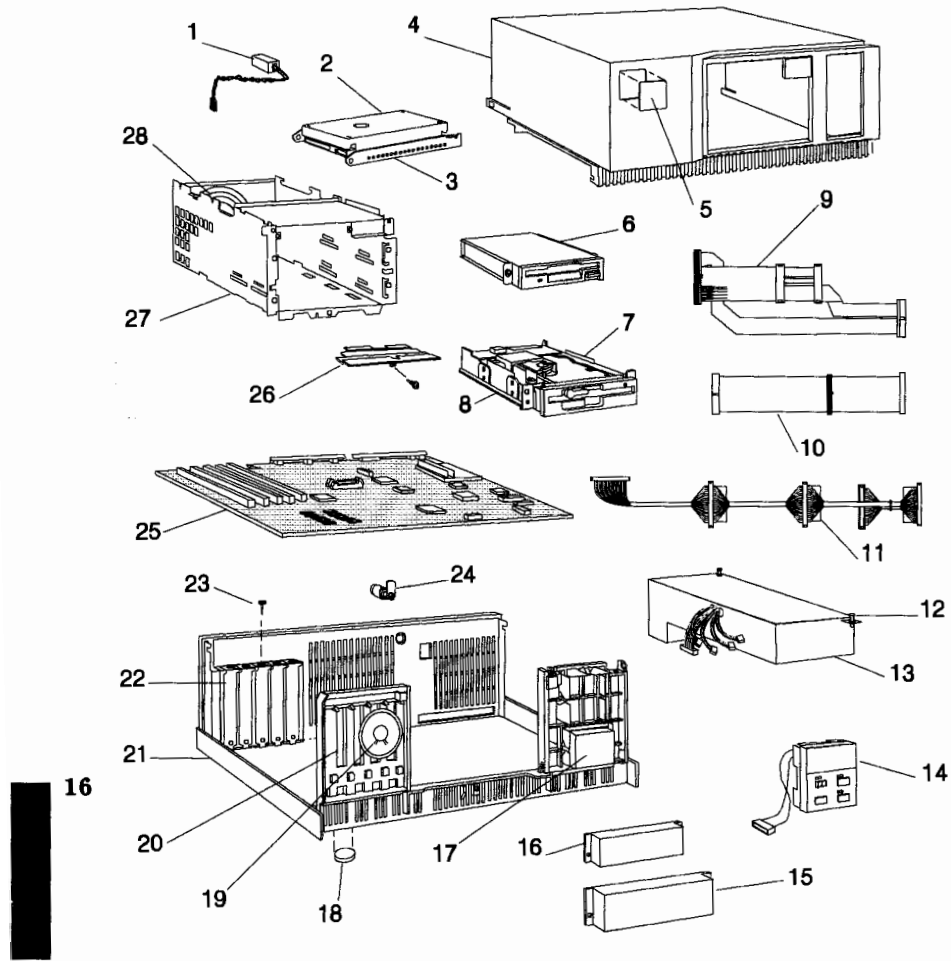


Main Memory

TOTAL mem of:	Install Memory Modules in:	Using These modules:
4 MB	A1, A2	Two 2-MB modules (standard)
6 MB	A1, A2 B1, B2	Two 2-MB modules and two 1-MB modules
8 MB or 8 MB	A1, A2, B1, B2, B3, B4 A1, A2, A3, A4	Two 2-MB modules and four 1-MB modules Four 2-MB modules
10 MB	A1, A2, A3, A4, B1, B2	Four 2-MB modules and two 1-MB modules
12 MB or 12 MB or 12 MB ¹	A1, A2, A3, A4, B1, B2 A1, A2, A3, A4, B1, B2, B3, B4 A1, A2 B1, B2	Six 2-MB modules Four 2-MB modules and four 1-MB modules Two 4-MB modules and two 2-MB modules
16 MB or 16 MB ¹	A1, A2, A3, A4, B1, B2, B3, B4 A1, A2 B1, B2, B3, B4	Eight 2-MB modules Two 4-MB modules and four 2-MB modules
20 MB ¹ or 20 MB ¹	A1, A2, A3, A4 B1, B2 A1, A2, B1, B2	Four 4-MB modules and two 2-MB modules Two 8-MB modules and two 2-MB modules
24 MB ¹ or 24 MB ¹ or 24 MB ²	A1, A2, A3, A4 B1, B2, B3, B4 A1, A2 B1, B2, B3, B4 A1, A2, A3, A4, B1, B2	Four 4-MB modules and four 2-MB modules Two 8-MB modules and four 2-MB modules Six 4-MB modules
32 MB ² or 32 MB ²	A1, A2, A3, A4, B1, B2, B3, B4 A1, A2 B1, B2, B3, B4	Eight 4-MB modules Two 8-MB modules and four 4-MB modules
36 MB ¹	A1, A2, A3, A4 B1, B2	Four 8-MB modules and two 2-MB modules
40 MB or 40 MB ²	A1, A2, A3, A4, B1, B2, B3, B4 A1, A2, A3, A4 B1, B2,	Eight 8-MB modules Four 8-MB modules and two 4-MB modules
48 MB ² or 48 MB ²	A1, A2, A3, A4 B1, B2, B3, B4 A1, A2, A3, A4, B1, B2	Four 8-MB modules and four 4-MB modules Six 8-MB modules
64 MB ²	A1, A2, A3, A4, B1, B2, B3, B4	Eight 8-MB modules

- 1 Move the original 2-MB modules in A1 and A2 to another bank.
- 2 Remove the original 2-MB modules in A1 and A2.

Part Numbers



HP Vectra 486s/20 PC

Parts List for HP Vectra 486s/20 PC

Item	Description	Repl. P/N	Exchange P/N
1	Battery	1420-0513	-
2	Internal Hard Disk Drive (with tray)	See disk drive parts list in <i>Accessory Service Handbook</i>	
3	3.5-inch, h-h, Tray (5 pack) for non-HP hard disk drives	Order D2037A (bottom & rear positions) D2198A (front) includes HDD activity light	
4	Top Cover-Bezel Assembly	5062-5593	-
5	Nameplate (logo)	See PC's parts list	
6	Top External Flexible Disk Drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
	Mounting Rails for 3.5-inch non-HP Disk Drives	5063-0309	-
7	Middle External Flexible Disk Drive	See disk drive parts list	
8	5.25-inch, h-h, Tray (5 pack) for non-HP, flexible disk and tape drives	Order product number D2199A (updated version of D2038A)	
9	Flexible Disk Drive Cable, 3.5 & 5.25-inch	5181-0391	-
10	Hard Disk Cable (IDE drive)	5181-0392	-
11	Hard Disk Cable (SCSI drive) SCSI Disk Activity Light Cable (supplied with SCSI drive)	5181-0397	-
		5181-5684	-
12	Snap Fastener	1390-0882	-
13	Power Supply Assembly	5063-0339	-
14	Status (Control) Panel	5062-5600	-
15	Filler Panel, 5.25-inch	5062-5597	-
16	Filler Panel, 3.5-inch	5062-5595	-
17	Control Panel Filler Assembly	5063-0303	-
18	Bumper Foot	5181-0394	-
19	Speaker Assembly	02620-60016	-
20	Board Guide Assembly	5041-1066	-
21	Base	5062-5592	-
22	I/O panel, Blank	45935-00004	-
23	Screw, 6-32 Pilot Point	0624-0727	-
24	Keylock Assembly	5062-5599	-
25	System Board	See PC's parts list	
26	Retainer Assembly (Bottom Disk)	5001-6853	-
27	Bridge/Lid Assembly	5063-0306	-
28	Fan Assembly	5063-0307	-



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HP Vectra 486s/20 PC

Parts List for HP Vectra 486s/20 PC

Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated IDE disk controller):		
Vectra 486S/20 System Board	D2260-63001	D2260-69001
Video Board (slot 5): Ultra VGA (D2325A/B)	D2325-63009	-
Disk Controller Boards (slot 4):		
HP EISA SCSI Host Adapter (D1681A)	1150-1920	1150-1921
Processor: 486SX 20 MHz	1820-8911	-
Processor Upgrade:		
OverDrive/20 (486 DX2/40) upgrade kit	D2170A	-
Coprocessor: 487SX 20 MHz	1820-8912	-
Main Memory Modules:		
1-MB Main Memory Module	1818-4709	D2150-69001
2-MB Main Memory Module	D2381-63001	-
4-MB Main RAM Memory Module	1818-4703	D2156-69001
8-MB Main RAM Memory Module (36-bit)	1818-4702	D2152-69001
BIOS ROM Kit	1818-5383	-
BIOS Update (Utility kit)	D2165-60001	-
Nameplate: HP Vectra 486s/20 Logo	5041-1064	-
Support Manuals:		Part Number
Familiarization Guide (Dealer version: D2260-49A-0)		D2260 + 49A-60001
Technical Reference Manual: Hardware and BIOS		D2166-90001

Part Numbers for HP Utility Diskettes

Description	Rev	Date Code	Part #	Info.
3.5-inch disk SAM, EISA-CONFIG HPUpdate, BIOS ver	B.00.02	-	D2165-60001	Kit
	M.03.01	-		
5.25-inch disk SAM, EISA-CONFIG HPUpdate			D2165-60002	Kit

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HP Vectra 386s PC Series

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
Vectra 386s PCs					
HP Vectra 386s/20 PC (CPL: 02/92; discontinued: 12/92)					
D2512A	1.44 MB D2035A	52 MB D1694A	Integrated IDE Interface	Integrated Super VGA (256 KB, upgradeable to 512 KB)	2 MB
D2513A		120 MB D1696A			
D2514A	1.44 MB D2035A	None			
D2515A	1.2 MB D2036A				
HP Vectra 386s/25 PC (CPL: 06/92; discontinued: 04/93)					
D2570A	1.2 MB D2036A	85 MB D2329A	Integrated IDE Interface	Integrated Super VGA (256 KB, upgradeable to 512 KB)	4 MB
D2571A		170 MB D2330A			
D2572A	1.44 MB D2035A	85 MB D2329A			2 MB
D2574A		None			
D2575A	1.2 MB D2036A				4 MB
D2578A	1.44 MB D2035A	85 MB D2329A			
D2579A		170 MB D2330A			

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HP Vectra 386s PC Series

Supported Accessories

256-KB Video Memory Upgrade kit (8×32KB modules)	D2383B
2-MB Main Memory Upgrade (2×1MB modules) kit	D2406A
8-MB Main Memory Upgrade (2×4MB modules) kit	D2404A
387SX-20 Math Coprocessor-Vectra 386s/20 only	D2403A
387SL Math Coprocessor-Vectra 386s/20 & 386s/25	D2408A
Vectra LAN Boot ROM (pack of 6)	D2407B
<i>Setting Up Your HP Vectra 386s Manual</i>	D2565B
System Board Upgrade Kits (see 486U PC Series)	

Video Displays

Monochrome Display	D1181A/W/G
VGA Color Display	D1182A/B
Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Multifunction Controller Boards

HP ISA SCSI-2 Host Adapter Board	D1682A
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Mass Storage

Flexible Disk 1.44 MB 3-1/2 inch	D2035A
Flexible Disk 1.2 MB 5-1/4 inch	D2036A
IDE 52 MB Hard Disk	D1694A
IDE 120 MB Hard Disk	D1696A
IDE 240 MB Hard Disk	D1697A
IDE 85 MB Hard Disk	D2329A
IDE 170 MB Hard Disk	D2330A
SCSI 430 MB Hard Disk	D1699A

Datacomm and LAN Boards

Token-Ring Adapter	D2378A
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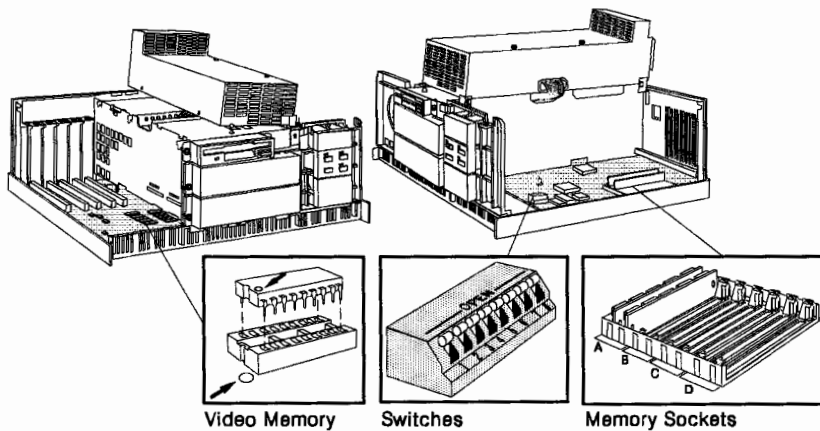
Input Devices

Mouse (PS/2, Microsoft)	C1413A
Keyboard	C1405B

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System Board, BIOS, and Memory



System Board Switches

Switch # ¹	Function	Default
1	OFF Mouse interrupt IRQ 12—enabled	OFF
	ON Mouse interrupt IRQ 12—disabled (disable mouse if an accessory board uses IRQ 12)	
2	OFF Video interrupt IRQ 9—disabled	OFF
	ON Video interrupt IRQ 9—enabled	
3	OFF Built-in VGA controller—enabled	OFF
	ON Built-in VGA Controller—disabled (disable built-in video if another video board is used)	
4	OFF Passwords—enabled	OFF
	ON Passwords—disabled (erased)	
5	OFF EEPROM stored config information—valid	OFF
	ON EEPROM stored config information—erased	
6	OFF Security mode—disabled	OFF
	ON Security mode—forced (configuration cannot be changed using Setup)	
7 & 8	OFF <i>Reserved</i> (leave at factory default setting)	OFF

¹ Switch: OFF = OPEN; ON = CLOSED

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HP Vectra 386s PC Series

Setup and BIOS History

Setup version "D.xx.xx" is used on Vectra 386s PCs.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra 386s PC HP Vectra 386s PC				
N.03.00	Nov 91	First release	D2512-83001	D.01.00
N.03.01	Apr 92	Adds memory initialization delay to correct RAM error when using Mitsubishi memory modules	D2512-83002	
N.03.02	July 92	Adds support for 386s/25	5063-0822	D.02.01
N.03.04	Nov 92	—	5063-0860	D.02.01

LAN Boot ROM Revisions-Part Numbers

Description	Rev	Date	Part #	Info.
First release. Supports Novell Netware on Ethernet	A.01.00	Sept 92	5062-2673	For Vectra 386/16N, 386/20N and 386s/20
Adds LAN Manager	A.02.00	Apr 92	5063-2697	For Vectra 386N (D24xxx) PC Series and 386s/20
Adds Novell Netware, LAN Manager, IBM PC Server, and IBM Server for Token-Ring	A.03.00	Aug 92	5063-0828	For Vectra 386N (D24xxx) PC Series and 386s PC Series



Video Memory

The PC is supplied with 256 KB of video RAM. An additional 256 KB of video RAM can be installed in eight video sockets (to make a total of 512 KB video memory). Four of the video sockets are located under the disk drive bridge.

Main Memory

The PC has eight sockets for main memory modules. Each pair of sockets (labeled A, B, C, and D) forms a bank.

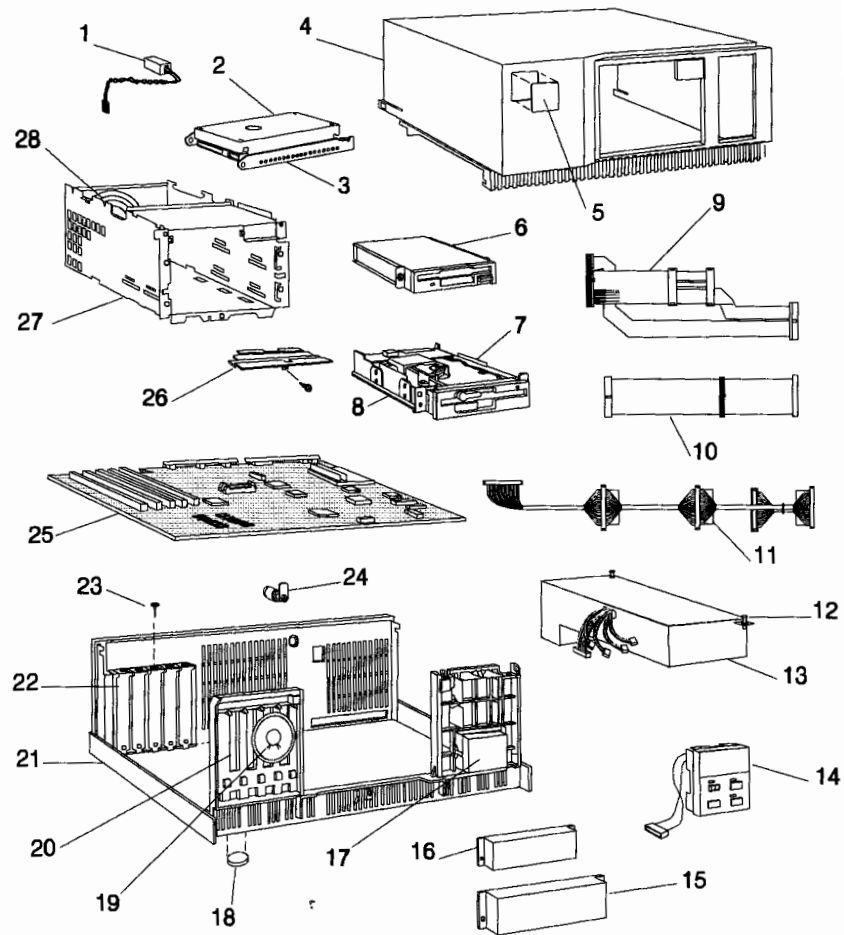
Main Memory Configuration

For a TOTAL mem of:	Install main memory modules in these banks (each bank has two sockets):								Using This Kit(s)
	A	A	B	B	C	C	D	D	
2MB	1MB	1MB							Standard
4MB	1MB	1MB	1MB	1MB					One 2MB kit
6MB	1MB	1MB	1MB	1MB	1MB	1MB			Two 2MB kits
8MB	1MB	1MB	1MB	1MB	1MB	1MB	1MB	1MB	Three 2MB kits
10MB	1MB	1MB	4MB	4MB					One 8MB kit
12MB	1MB	1MB	1MB	1MB	4MB	4MB			One 2MB kit and one 8MB kit
14MB	1MB	1MB	1MB	1MB	1MB	1MB	4MB	4MB	Two 2MB kits and one 8MB kit
16MB	4MB	4MB	4MB	4MB					Two 8MB kits ¹

1 Remove the original 2MB (2x1MB modules) from bank A



Part Numbers



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HP Vectra 386s PC Series

Parts List for HP Vectra 386s PC

Item	Description	Repl. P/N	Exchange P/N
1	Battery	1420-0513	-
2	Internal Hard Disk Drive (with tray)	See disk drive parts list in <i>Accessory Service Handbook</i>	
3	3.5-inch, h-h, Tray (5 pack) for non-HP hard disk drives	Order D2037A (bottom & rear positions) D2198A (front) includes HDD activity light	
4	Top Cover-Bezel Assembly	5062-5593	-
5	Nameplate (logo)	See PC's parts list	
6	Top External Flexible Disk Drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
	Mounting Rails for 3.5-inch non-HP Disk Drives	5063-0309	-
7	Middle External Flexible Disk Drive	See disk drive parts list in <i>Accessory Service Handbook</i>	
8	5.25-inch, h-h, Tray (5 pack) for non-HP, flexible disk and tape drives	Order product number D2199A (updated version of D2038A)	
9	Flexible Disk Drive Cable, 3.5 & 5.25-inch	5181-0391	-
10	Hard Disk Cable (IDE drive)	5181-0392	-
11	Hard Disk Cable (SCSI drive)	5181-0397	-
	SCSI Disk Activity Light Cable (supplied with SCSI drive)	5181-5684	-
12	Snap Fastener	1390-0882	-
13	Power Supply Assembly	5063-0339	-
14	Status (Control) Panel	5062-5600	-
15	Filler Panel, 5.25-inch	5062-5597	-
16	Filler Panel, 3.5-inch	5062-5595	-
17	Control Panel Filler Assembly	5063-0303	-
18	Bumper Foot	5181-0394	-
19	Speaker Assembly	02620-60016	-
20	Board Guide Assembly	5041-1066	-
21	Base	5062-5592	-
22	I/O panel, Blank	45935-00004	-
23	Screw, 6-32 Pilot Point	0624-0727	-
24	Keylock Assembly	5062-5599	-
25	System Board	See PC's parts list	
26	Retainer Assembly (Bottom Disk)	5001-6853	-
27	Bridge/Lid Assembly	5063-0306	-
28	Fan Assembly	5063-0307	-

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HP Vectra 386s PC Series

Parts List for HP Vectra 386s PC

Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated IDE disk and Super VGA controller):		
Vectra 386s/20 System Board	D2512-63005	D2512-69005
Vectra 386s/25 System Board	D2573-63005	D2573-69005
Disk Controller Boards (slot 4):		
HP ISA SCSI Host Adapter (D1682A)	1150-1887	1150-1887
D1682A SCSI Board Jumpers	1258-0209	-
Processor: 386SX 20 MHz and 386SX 25 MHz	Processors not removable	
Coprocessor:		
387SL (Vectras 386s/20 and 386s/25)	D2408-83001	-
Main Memory Modules:		
1-MB Main Memory Module	5062-2670	-
4-MB Main Memory Module	5062-2671	-
Video Memory Modules: 256-KB kit (D2383B)	8x 1818-5235	-
BIOS ROM Kit	5063-0822	-
LAN Boot ROM Kit	5063-0828	-
Nameplate:		
HP Vectra 386s/20 Logo	5041-2552	-
HP Vectra 386s/25 Logo	5041-2574	-
Support Manuals:		Part Number
Familiarization Guide		D2951 + 49B-90001
Technical Reference Manual: Hardware and BIOS		D2512-90001

Part Numbers for HP Utility Diskettes

Description	Rev	Date Code	Part #	Info.
3.5-inch disk kit	C.00.00	3224	Available on HP PC Internal BBS	Kit Setup Disk Video Disk
	B.00.00	3224		
	D.00.00	3238		
5.25-inch disk kit	C.00.00	3224	Available on HP PC Internal BBS	Kit Setup Disk Video Disk
	B.00.00	3224		
	D.00.00	3238		



HP Vectra 486ST PC Series

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
Vectra 486ST PCs					
HP Vectra 486/33ST PC (CPL: 10/92; discontinued: 11/93)					
D2635A	1.44 MB D1667A	None	Integrated IDE Interface	Integrated Ultra VGA + (512 KB, upgradeable to 1 MB)	4 MB
D2636A		240 MB D2643A			
D2637A		430 MB D2644A	SCSI-2 D2649A ¹		16 MB
D2638A		1000 MB D2645A			
D2646A²		430 MB D2644A			

¹ Same as the D1681A but includes the Vectra ST PC's SCSI terminated cable.

² These models include Novell Netware 3.11, DOS 5.0, HP Ethertwist EISA LAN Adapter. D2646A = 20 users, D2647A = 50 users, D26438A = 100 users.



HP Vectra 486ST PC Series

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
HP Vectra 486/66ST PC (CPL: 10/92 discontinued: 11/93)					
D2639A	1.44 MB	None	Integrated IDE Interface	Integrated Ultra VGA + (512 KB upgradeable to 1 MB)	4 MB
D2640A	D1667A	240 MB D2643A ¹			
D2641A		430 MB D2644A	SCSI-2 D2649A ²		16 MB
D2642A		1000 MB D2645A			
D2647A ³					
D2648A ³					

1 Same as the D1697A but includes the mounting hardware for use in the Vectra ST PC

2 Same as the D1681A but includes the Vectra ST PC's SCSI terminated cable.

3 These models include Novell Netware 3.11, DOS 5.0, HP Ethertwist EISA LAN Adapter. D2646A = 20 users, D2647A = 50 users, D2648A = 100 users.

Supported Accessories

512-KB Video Memory Upgrade kit	D2326A
2-MB Main Memory Upgrade kit	D2381A
8-MB Main Memory Upgrade kit	D2152A
Setup Kit (non-SCSI, includes manuals and diskettes)	D2635-90027
Setup Kit (SCSI, includes manuals and diskettes)	D2637-90007

Processor Upgrade:

486ST Processor Upgrade to OverDrive/33 (486DX2-66)	D2172A
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Mass Storage

Flexible Disk 360 KB 5-1/4 inch	45811A
Flexible Disk 1.2 MB 5-1/4 inch	45812A
Flexible Disk 1.44 MB 3-1/2 inch	D1667A
Flexible Disk 1.44 MB 3-1/2 inch	D2035A
IDE 240 MB Hard Disk	D2643A
SCSI 430 MB Hard Disk	D1699A
SCSI 430 MB Hard Disk	D2644A
SCSI 1000 MB Hard Disk	D2645A
SCSI 1000 MB Hard Disk	D2653A
SCSI 535 MB Hard Disk	D2075A
SCSI 1035 MB Hard Disk	D2076A

Multifunction Controller Boards

HP EISA SCSI-2 Host Adapter	D1681A
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Datacomm and LAN Boards

Token-Ring Adapter	D2378A
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HP Vectra 486ST PC Series

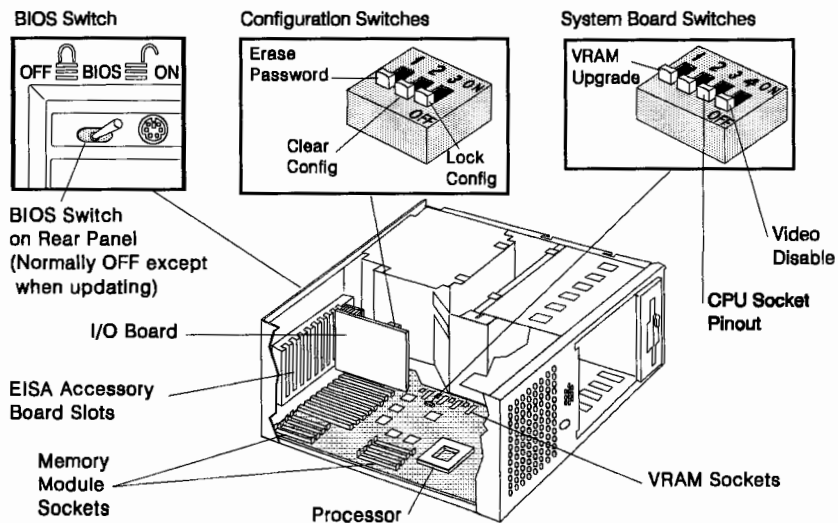
Input Devices

Mouse (PS/2, Microsoft)	C1413A
Keyboard	C1405A

Video Displays

Monochrome Display	D1181A/W/G
VGA Color Display	D1182A/B
Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

System Board, BIOS, and Memory



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HP Vectra 486ST PC Series

System Board Switches

System Board Switches			
Switch #	Function		Default
1	OFF	specifies 512 KB Video Memory installed	OFF
	ON	specifies 1 MB Video Memory installed	
2	OFF	Reserved—do not use	OFF
	ON	Reserved—do not use	
3	OFF	Sets processor socket pinout for: 486DX-33 486DX2-66 DX OverDrive/33 (ODPR 486DX-33)	OFF
	ON	Sets processor socket pinout for: SX OverDrive/33 (ODP 486SX-33) DX OverDrive/33 (ODP 486DX-33)	
4	OFF	Enables built-in video	OFF
	ON	Disables built-in video	
Configuration Switches			
Switch #	Function		Default
1	OFF	Enables password	OFF
	ON	Clears password	
2	OFF	Enables configuration (validates configuration in memory)	OFF
	ON	Clears configuration (invalidates configuration in memory)	
3	OFF	Unlocks configuration (allows changes)	OFF
	ON	Locks configuration (prevents changes)	
BIOS Switch			
Switch #	Function		Default
1	OFF	Locks BIOS (no write)	OFF
	ON	Unlocks BIOS (writable)—for updates	

Setup and BIOS History

SAM version "D.xx.xx" is used on Vectra 486ST PCs

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Vectra 486ST PC</div> HP Vectra 486ST PC				
R.01.00	Aug 92	First release	D2635-89011	SAM ¹ version R.01.00
R.04.01	Feb 93	Second release	Available on HP PC BBS	

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¹ System Administrator Manager on Vectra 486ST PCs

Video Memory

The HP Vectra 486ST PC Series is supplied with 512 KB of video memory for 1024x768 in 16 colors. An additional 512 KB of video memory can be installed in four video sockets (to make a total of 1 MB video memory). If additional video memory is added, all four sockets must be filled.

Main Memory

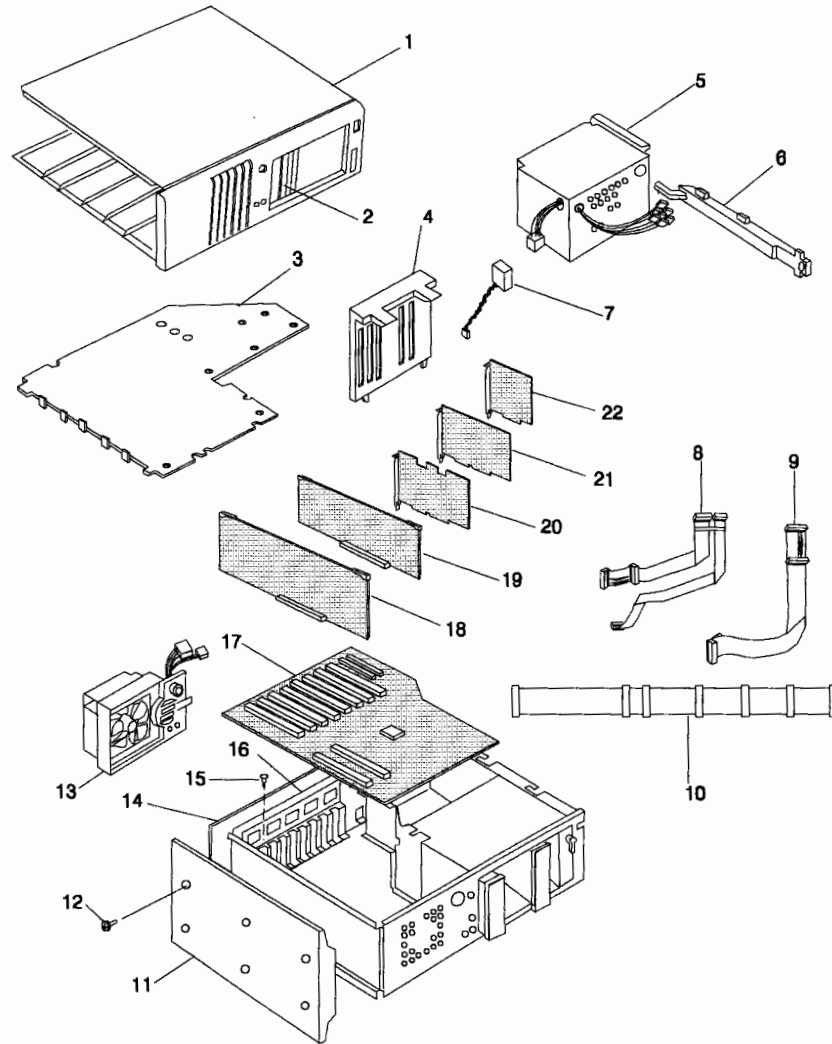
The HP Vectra 486ST PC Series have eight sockets for main memory modules (labeled 1 through to 8). The main memory modules must be installed as shown in the main memory configuration table.

Main Memory Configuration

For a TOTAL mem of:	Install Main Memory Modules in These Banks:							
	1	2	3	4	5	6	7	8
4 MB	2 MB	2 MB						
8 MB	2 MB	2 MB	2 MB	2 MB				
12 MB	2 MB	2 MB	2 MB	2 MB	2 MB	2 MB		
16 MB or 16 MB	2 MB	2 MB	2 MB	2 MB	2 MB	2 MB	2 MB	2 MB
20 MB	8 MB	8 MB	2 MB	2 MB				
24 MB	8 MB	8 MB	2 MB	2 MB	2 MB	2 MB		
28 MB	8 MB	8 MB	2 MB	2 MB	2 MB	2 MB	2 MB	2 MB
32 MB	8 MB	8 MB	8 MB	8 MB				
36 MB	8 MB	8 MB	8 MB	8 MB	2 MB	2 MB		
40 MB	8 MB	8 MB	8 MB	8 MB	2 MB	2 MB	2 MB	2 MB
48 MB	8 MB	8 MB	8 MB	8 MB	8 MB	8 MB		
52 MB	8 MB	8 MB	8 MB	8 MB	8 MB	8 MB	2 MB	2 MB
64 MB	8 MB	8 MB	8 MB	8 MB	8 MB	8 MB	8 MB	8 MB



Part Numbers



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HP Vectra 486ST PC Series

Parts List for HP Vectra 486/33ST and 486/66ST PCs

Item	Description	Repl. Part Number	Exchange Part Number
1	Top Cover	D2635-60014	-
2	Front Bezel Insert: Small Insert	D1612-40005	-
	Large Insert	D1612-40011	-
3	RFI Shield Assembly	D2635-60031	-
4	Board Guide	45945-40005	-
5	Power Supply	0950-2194	5062-6978
6	Power Switch Shaft	D1612-40008	-
7	Battery Pack	1420-0513	-
8	Hard Disk Cable: Hard Disk Cable (for 2nd ESDI/ST-506 drive)	5061-8981	-
	Hard Disk Cable (for IDE drive)	D2635-60024	-
9	Flexible Disk Drive Cable, 3.5 & 5.25-inch	5181-5623	-
10	Hard Disk Cable (SCSI drive) ¹	5062-5579	-
	Vectra 486ST Hard Disk Cable ² (SCSI drive)	D2635-60026	-

1 The SCSI disk activity light cable is built-into the computer

2 Terminated cable used for non-terminated devices



HP Vectra 486ST PC Series

Parts List for HP Vectra 486/33ST and 486/66ST PCs (continued)

Item	Description	Repl. Part Number	Exchange Part Number
11	Vectra 486ST Base	D2635-60021	-
12	10 - 32 Base Screws	2680-0099	-
13	Fan/Speaker/Keylock Assembly	D2635-60017	-
14	Rear Bezel Assembly	D2635-40005	-
15	Accessory Slot Screw	2680-0311	-
16	Chassis Assembly	D2635-60015	-
17	System Board	See PC's parts list	
18	Processor Board	See PC's parts list	
19	Memory Board	See PC's parts list	
20	Disk Controller Board	See PC's parts list	
	Datacomm Controller Boards:		
21	Parallel/Serial Board	See PC's parts list	
22	Mouse/Keyboard Board	See PC's parts list	

HP Vectra 486ST PC Series

Parts List for HP Vectra 486/33ST and 486/66ST PCs

Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated IDE disk and Ultra VGA + controller):		
Vectra 486ST System Board	D2635-68005	-
I/O Board	D2535-65023	-
Disk Controller Boards (slot 8):		
HP EISA SCSI Host Adapter (D2649A)	1150-1920	1150-1921
Processors:		
486 33 MHz (486/33ST)	1820-7615	-
486 66 MHz (486/66ST)	1821-0859	-
Main Memory Modules:		
2-MB Main Memory Module	D2381-63001	-
8-MB Main Memory Module (36-bit)	1818-4702	D2152-69001
Video Memory Modules:		
512-KB Video Memory kit (D2326A)	4x 1818-5183	-
BIOS ROM:		
	D2635-89011	
Nameplates:		
HP Vectra 486/33ST Logo	D2635-80013	-
HP Vectra 486/66ST Logo	D2635-80014	-
Support Manuals:		Part Number
Familiarization Guide		D2635+49A-90001
Technical Reference Manual: Hardware and BIOS		D2635-90002

Part Numbers for HP Utility Diskettes (3.5-inch disks only)

Description	Rev	Date Code	Part #	Info.
SAM, EISA-CONFIG, HPVIEW disk	D.01.00	-	Refer to HP Internal BBS	Kit
EXMODE, PRINTCFG disk				
HPUupdate disk	B.00.04			
DOS, NetWare utilities	Ver. 1-2	-	Refer to HP Internal BBS	Kit
Ultra VGA + drivers	A.01.01	-	Refer to HP Internal BBS	Kit

HP Vectra 486 & 486T PC Series

Models and Accessories

Deskside Vectra Models

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
Vectra 486 PCs					
HP Vectra 486 PC (CPL: 02/90; discontinued: 02/91)					
D2220A	1.2 MB 45812A	None	Integrated IDE Interface	None	2 MB
D2221A		152 MB D1446A	ESDI Controller Board D1664A		
D2222A		330 MB D1660A			
D2223A		670 MB D1661A			
Vectra 486T PCs					
HP Vectra 486/25T PC (CPL: 02/91; discontinued: 08/92)					
D2219C	1.44 MB D1667A	None	Integrated IDE Interface	None	4 MB
D2220C	1.2 MB 45812A				
D2221C	1.44 MB D1667A	168 MB D1680A	SCSI-2 Host Adapter D1681A		
D2222C		440 MB D1685A			
D2223C		670 MB D1686A			

Deskside Vectras



HP Vectra 486 & 486T PC Series 19-1

HP Vectra 486 & 486T PC Series

Deskside Vectra Models (continued)

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
HP Vectra 486/33T PC (CPL: 02/91; discontinued: 12/92)					
D2236A	1.44 MB D1667A	None	Integrated IDE Interface	None	4 MB
D2237A	1.2 MB 45812A				
D2238A	1.44 MB D1667A	168 MB D1680A	SCSI-2 D1681A		
D2239A		440 MB D1685A			
D2240A		1000 MB D1687A			

Supported Accessories

1-MB Main Memory Upgrade kit	D2150A
2-MB Main Memory Upgrade kit	D2381A
4-MB Main Memory Upgrade kit (Vectra 486/25T only)	D2151A
4-MB Main Memory Upgrade kit	D2156A
8-MB Main Memory Upgrade kit	D2152A
Setup Kit (setting up manual and diskettes)	D2161A

Video Displays

Monochrome Display	D1181A/W/G
VGA Color Display	D1182A/B
Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A



HP Vectra 486 & 486T PC Series

Input Devices

Mouse (PS/2, Microsoft)	C1413A
Keyboard	C1405B

Video Boards

HP Super VGA Board	D2382A
HP Ultra VGA Board	D2325A/B

Multifunction Controller Boards

HP ESDI High Performance Controller Board	D1664A
HP EISA SCSI-2 Host Adapter	D1681A
HP ISA SCSI-2 Host Adapter Board	D1682A

Mass Storage

Flexible Disk 360 KB 5-1/4 inch	45811A
Flexible Disk 1.2 MB 5-1/4 inch	45812A
Flexible Disk 1.44 MB 3-1/2 inch	D1667A
Flexible Disk 1.44 MB 3-1/2 inch	D2035A
ESDI 108 MB Hard Disk	D1445A
ESDI 152 MB Hard Disk	D1446A
ESDI 330 MB Hard Disk	D1660A
ESDI 670 MB Hard Disk	D1661A
ESDI 103 MB Hard Disk	D1674A
ESDI 155 MB Hard Disk	D1675A
ESDI 310 MB Hard Disk	D1676A
IDE 42 MB Hard Disk	D1665A
IDE 84 MB Hard Disk	D1666A
IDE 120 MB Hard Disk	D1679A
IDE 168 MB Hard Disk	D1680A
IDE Dual 168 MB Hard Drives	D1688A
SCSI 440 MB Hard Disk	D1685A
SCSI 670 MB Hard Disk	D1686A
SCSI 1000 MB Hard Disk	D1687A
SCSI 430 MB Hard Disk	D1699A



Datacomm and LAN Boards

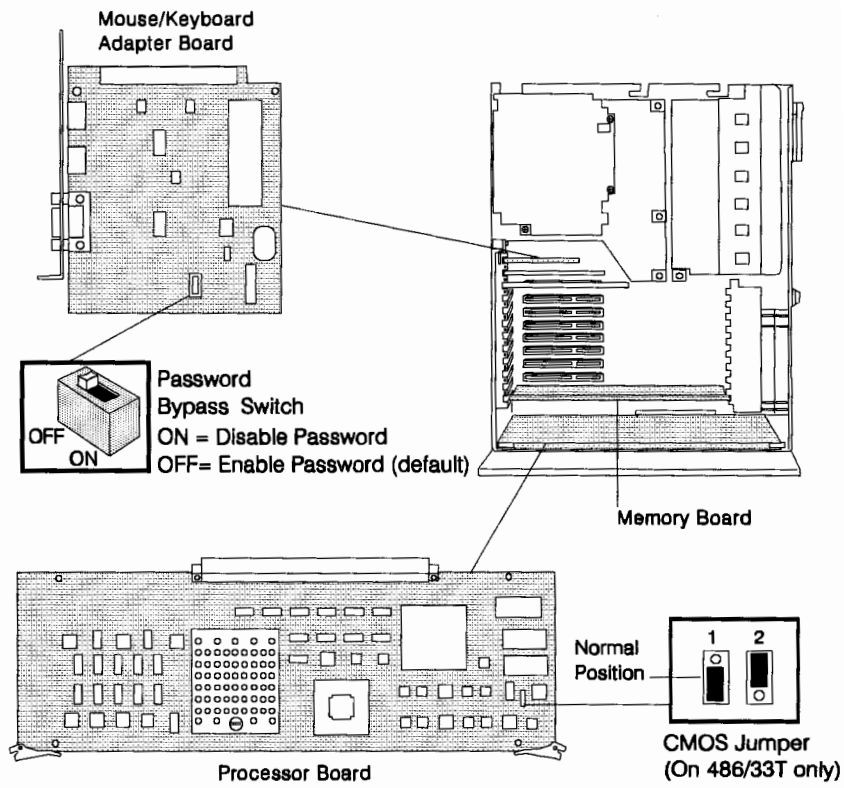
Serial Parallel Board	24540B
Dual Serial Board	24541B
Modem 1200 baud	24550A
Modem 2400 baud	24551A
Ethertwist PC Link Adapter	27245A
Ethertwist Adapter/16	27247A
Ethertwist Adapter/16	27247B
HP ThinLAN Board	27250A
Terminal Multiplexor	D2040A
Token-Ring Adapter	D2378A

Deskside Vectras



HP Vectra 486 & 486T PC Series 19-3

System Board, BIOS, and Memory



HP Vectra 486 & 486T PC Series

Password Bypass Switch

The password bypass switch is located on the mouse/keyboard adapter board.

Password Bypass Switch

Switch #		Function	Default
1	ON	Passwords—disabled To disable the password, set the switch to ON.	OFF
	OFF	Passwords—enabled To enable (or re-enable) the password, set the switch to OFF and run EASY CONFIG to enter a new password.	

HP Vectra 486/33T Processor Board Clear CMOS Jumper

The clear CMOS jumper is located on the Vectra 486/33T processor board.

Clear CMOS Jumper

Position		Function	Default
1	1	Preserves contents of CMOS To disable the password, set the switch to ON.	1
	2	Clears the CMOS To clear the contents of CMOS RAM: <ol style="list-style-type: none"> 1. Switch off the computer. 2. Move the jumper to position 2 for about 30 seconds. 3. Move the jumper back to position 1. 4. Switch on the computer. 5. Reconfigure computer with EASY CONFIG (use saved SCI file if available). 	

HP Vectra 486 & 486T PC Series

Setup and BIOS History

EASY CONFIG version "A.xx.xx" is used on Vectra 486T PCs.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra 486 & 486T PCs				
HP Vectra 486 and 486/25T PCs				
G.03.01	Feb 90	First release	-	EC ¹ version A.02.01
G.03.02	Jun 90	Support for HP D1679A & D1680A Support for VMI video board Fixes problems with IBM monochrome board, INT 15 Mouse drive and memory count which does not display on the correct row	-	
G.03.03	Sep 90	Provides fixes for: Banyan Vines/386 network software TI "Cezanne" Hi Res video board, Matrox video board & Western Digital 8514A Hi Res video board Western Digital Filecard	-	
G.03.04	-	Not available	-	
G.03.05	Feb 91	Supports larger than 528 MB volumes on 670 MB internal ESDI hard-disk. Fixes Quadtel EMM driver and Memory miss-compare POST errors due to incomplete EISA initialization	-	
G.03.06	May 91	Fixes boot failures during POST due to coprocessor hanging	D2226-83004	
G.03.07	Nov 91	Supports D1681A shipped from Nov 15, 91 and the new versions of HPMM.SYS and RELOCATE.SYS which does not load if DOS 5.0 is found.	D2226-83005	
G.03.09	Jun 92	Fixes problems associated with coprocessor, EISA ports, 8042 keyboard, and improves hard disk R/W Access.	D2226-83006	

1 EC: EASY CONFIG on Vectra 486T PCs

HP Vectra 486 & 486T PC Series

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
HP Vectra 486/387 PC				
K.03.01	Feb 91	Not available	-	EC ¹ version A.02.01
K.03.02	Apr 91	Supports hard-disk volumes larger than 528 MB on the 670 MB internal ESDI hard-disk Fixes problems with HP-HIL board and coprocessor hanging.	D2237-83001	
K.03.03	Nov 91	Supports D1681A shipped from Nov 15, 91 and new versions of HPMM.SYS and RELOCATE.SYS which does not load if DOS 5.0 is found.	D2237-83002	
K.03.05	June 92	Same as G.03.09 (486 and 486/25T)	D2237-83003	

1 EC: EASY CONFIG on Vectra 486T PCs

Main Memory

The HP Vectra 486 & 486T Series PCs have eight sockets for main memory modules located on the memory board.

2-MB and 8-MB Double-Density Main Memory Configurations

For a TOTAL mem of:	Install Main Memory Modules in These Banks:							
	1	2	3	4	5	6	7	8
4 MB	2 MB	2 MB						
8 MB	2 MB	2 MB	2 MB	2 MB				
12 MB	2 MB	2 MB	2 MB	2 MB	2 MB	2 MB		
16 MB or 16MB	2 MB	2 MB	2 MB	2 MB	2 MB	2 MB	2 MB	2 MB
20 MB	8 MB	8 MB	2 MB	2 MB				
24 MB	8 MB	8 MB	2 MB	2 MB	2 MB	2 MB		
28 MB	8 MB	8 MB	2 MB	2 MB	2 MB	2 MB	2 MB	2 MB
32 MB	8 MB	8 MB	8 MB	8 MB				
36 MB	8 MB	8 MB	8 MB	8 MB	2 MB	2 MB		
40 MB	8 MB	8 MB	8 MB	8 MB	2 MB	2 MB	2 MB	2 MB
48 MB	8 MB	8 MB	8 MB	8 MB	8 MB	8 MB		
52 MB	8 MB	8 MB	8 MB	8 MB	8 MB	8 MB	2 MB	2 MB
64 MB	8 MB	8 MB	8 MB	8 MB	8 MB	8 MB	8 MB	8 MB

Deskside Vectras



HP Vectra 486 & 486T PC Series 19-7

HP Vectra 486 & 486T PC Series

1-MB and 4-MB Single-Density Main Memory Configurations

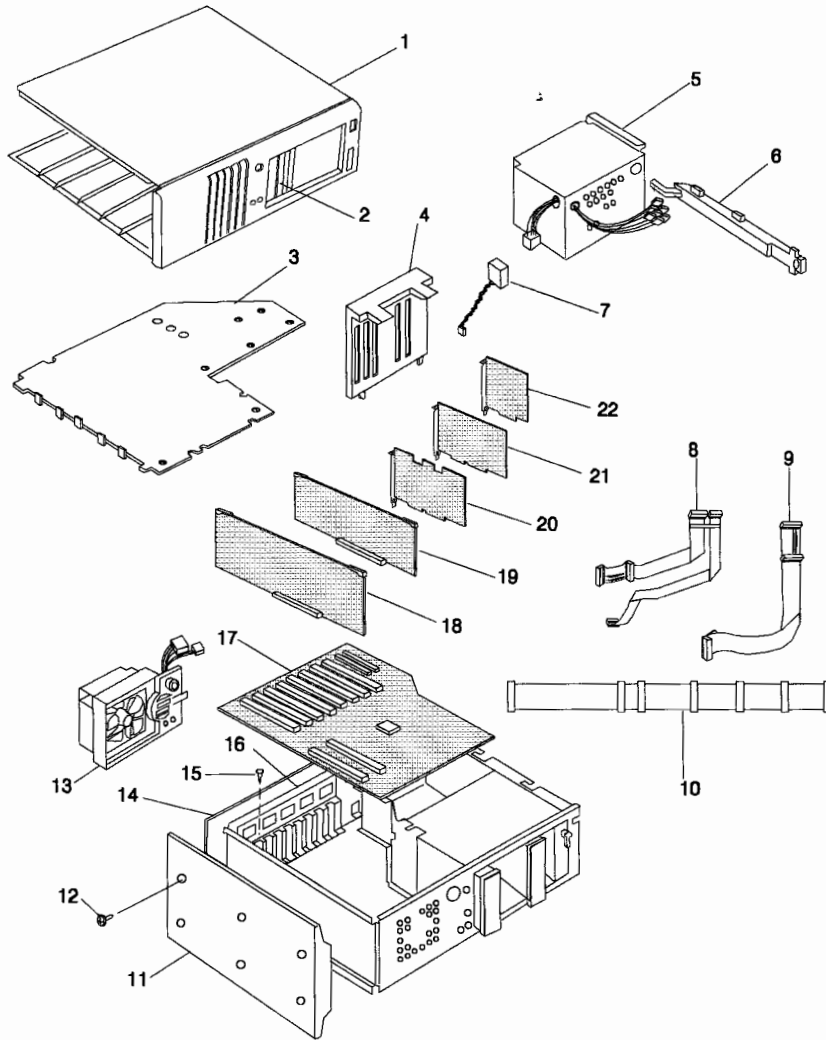
For a TOTAL mem of:	Install Main Memory Modules in These Banks:							
	1	2	3	4	5	6	7	8
2 MB	1 MB	1 MB						
4 MB	1 MB	1 MB	1 MB	1 MB				
6 MB	1 MB	1 MB	1 MB	1 MB	1 MB	1 MB		
8 MB or 8 MB	1 MB 4 MB	1 MB 4 MB	1 MB	1 MB	1 MB	1 MB	1 MB	1 MB
10 MB	4 MB	4 MB	1 MB	1 MB				
12 MB	4 MB	4 MB	1 MB	1 MB	1 MB	1 MB		
14 MB	4 MB	4 MB	1 MB	1 MB	1 MB	1 MB	1 MB	1 MB
16 MB	4 MB	4 MB	4 MB	4 MB				
18 MB	4 MB	4 MB	4 MB	4 MB	1 MB	1 MB		
20 MB	4 MB	4 MB	4 MB	4 MB	1 MB	1 MB	1 MB	1 MB
24 MB	4 MB	4 MB	4 MB	4 MB	4 MB	4 MB		
26 MB	4 MB	4 MB	4 MB	4 MB	4 MB	4 MB	1 MB	1 MB
32 MB	4 MB	4 MB	4 MB	4 MB	4 MB	4 MB	4 MB	4 MB

Note



If you change the main memory configuration, run EASY CONFIG and verify that the new configuration has been detected, then save configuration.

Part Numbers



Deskside Vectras 

HP Vectra 486 & 486T PC Series

Parts List for HP Vectra 486, 486/25T and 486/33T PCs

Item	Description	Repl. Part Number	Exchange Part Number
1	Top Cover	5062-6927	-
2	Front Bezel Insert: Small Insert	D1612-40005	-
	Large Insert	D1612-40011	-
3	RFI Shield Assembly	5062-6964	-
4	Board Guide	45945-40005	-
5	Power Supply	0950-2194	5062-6978
6	Power Switch Shaft	D1612-40008	-
7	Battery Pack	1420-0368	-
8	Hard Disk Cable: Vectra 486T Dual hard disk cable	5181-5646	-
	Hard Disk Cable (for 2nd ESDL/ST-506 drive)	5061-8981	-
	Hard Disk Cable (for IDE drive)	5181-5670	-
9	Flexible Disk Drive Cable, 3.5 & 5.25-inch	5181-5623	-
10	Hard Disk Cable (SCSI drive) ¹	5062-5579	-
	Vectra 486ST Hard Disk Cable ² (SCSI drive)	D2635-60026	-
11	Vectra 486T Base	D1612-40003	-
12	10 - 32 Base Screws	2680-0099	-
13	Fan/Speaker/Keylock Assembly	5061-8891	-
14	Rear Bezel Assembly	5062-6967	-
15	Accessory Slot Screw	2680-0311	-
16	Chassis Assembly	5061-8890	-
17	System Board	See PC's parts list	
18	Processor Board	See PC's parts list	
19	Memory Board	See PC's parts list	
20	Disk Controller Board	See PC's parts list	
	Datacomm Controller Boards:		
21	Parallel/Serial Board	See PC's parts list	
22	Mouse/Keyboard Board	See PC's parts list	

1 The SCSI disk activity light cable is built-into the computer

2 Terminated cable used for non-terminated devices

HP Vectra 486 & 486T PC Series

Parts List for HP Vectra 486, 486/25T and 486/33T PCs

Description	Repl. Part Number	Exchange Part Number
System Board (486/25T and 486/33T include integrated IDE disk controller):		
Vectra 486 and 486/25T System Board	5061-8889	5062-6955
Vectra 486/33T System Board	5062-6937	5062-6955
Processor Boards:		
Vectra 486 and 486/25T Processor Board	5062-6935	5062-6954
Vectra 486/33T Processor Board	D2237-63002	D2237-69002
Video Board (slot 1):		
HP Super VGA Board (D2382A)	D2382-63004	D2382-69004
HP Ultra VGA Board (D2325A/B)	D2325-63009	-
Memory Boards (above processor board):		
Vectra 486 and 486/25T Memory Board	5062-6934	5062-6924
Vectra 486/33T Memory Board	5062-6957	5062-6956
Disk Controller Boards (slot 8):		
ESDI High Performance Controller Board (D1664A)	1150-1884	1150-1885
HP EISA SCSI Host Adapter (D1681A)	1150-1920	1150-1921
HP ISA SCSI Host Adapter (D1682A)	1150-1837	1150-1887
D1682A SCSI Board Jumpers	1258-0209	-
Datacomm Controller Boards:		
Parallel/Serial Board (slot 9)	5062-6975	-
Mouse/Keyboard/Serial Board (slot 10)	5062-6976	-
Processors:		
486 25 MHz (486 and 486/25T)	1820-6749	-
486 33 MHz (486/33T)	1820-7615	-
Main Memory Modules:		
1-MB Main Memory Module	1818-4709	D2150-69001
2-MB Main Memory Module	D2381-63001	-
4-MB Main Memory Module	1818-4703	D2156-69001
8-MB Main Memory Module (36-bit)	1818-4702	D2152-69001
BIOS ROM:		
Vectra 486 and 486/25T ROM 0	1818-5287	-
Vectra 486 and 486/25T ROM 1	1818-5288	-
Vectra 486/33T	1818-5286	-
Nameplates:		
HP Vectra 486/25T Logo	5181-5619	-
HP Vectra 486/33T Logo	D2237-80006	-
8042 Keyboard Controller	1821-0061	-



Notes: _____

HP Vectra RS PC Series

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
Vectra RS PCs					
HP Vectra RS/16 PC (CPL: 03/88; discontinued: 03/89)					
D1500A	1.2 MB 45812A	40 MB D1297A	ST-506 F-F Board 45945-60013	None	1 MB
D1501A		103 MB D1674A	ESDI F-F Board D1677A	VGA Board D1180A	2 MB
D1502A				None	
HP Vectra RS/20 PC (CPL: 03/88; discontinued: 03/89)					
D1600A	1.2 MB 45812A	40 MB D1297A	ST-506 F-F Board 45945-60013	None	1 MB
D1601A		103 MB D1674A	ESDI F-F Board D1677A	VGA Board D1180A	2 MB
D1602A				None	
D1603A		155 MB D1675A			
D1604A		310 MB D1676A			
D1606B	1.2 MB 45812A <i>and</i> 1.44 MB D1687A	103 MB D1674A		VGA Board D1180A (512 KB)	4 MB

Deskside Vectras



HP Vectra RS PC Series 20-1

HP Vectra RS PC Series

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Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
HP Vectra RS/20C PC (CPL: 01/89; discontinued: 10/90)					
D2001A	1.2 MB	None	ESDI F-F Board D1677A	None	1 MB
D2002A	45812A	103 MB D1674A			
D2003A		155 MB D1675A			
D2004A					4 MB
HP Vectra RS/25C PC (CPL: 01/89; discontinued: 08/92)					
D2021A	1.2 MB	None	ESDI F-F Board D1677A	None	1 MB
D2022A	45812A	103 MB D1674A			
D2023A		155 MB D1675A			
D2024A					4 MB
D2025A	310 MB D1676A				
<i>From April 91, all RS/25C products have new model numbers:</i>					
D2020A	1.2 MB 45812A	None	IDE M-F Board D2384-63031	None	4 MB
D2080A	1.44 MB D1667A				
D2082A		168 MB D1680A			
D2083A		330 MB D1660A	IDE M-F Board D2384-63031 <i>and</i> ESDI Brd. D1664A		

Supported Accessories

1-MB Main Memory Upgrade (4×256-KB modules) kit	D1640A
8-MB Main Memory Upgrade (8×1-MB modules) kit	D1641A
4-MB Main Memory Upgrade (4×1-MB modules) kit	D1642A
Intel 80387DX Math Coprocessor	D2070A
Flexible Disk Expander Board	D1678A
Setup Kit (setting up manual and diskettes)	D2053B

Input Devices

HP-HIL Mouse	46060A
Keyboard	C1405A

Video Boards

HP VGA Board	D1180A
HP Super VGA Board	D2382A

Video Displays

Monochrome Display	D1181A/W/G
VGA Color Display	D1182A/B
Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Multifunction Controller Boards

HP IDE Multifunction Controller Board	D2384-60021
HP ST-506 Four-Function Controller Board	45945-60013
HP ESDI High Performance Controller Board	D1664A
HP ESDI Four-Function Controller Board	D1677A

Mass Storage

Flexible Disk 360 KB 5-1/4 inch	45811A
Flexible Disk 1.2 MB 5-1/4 inch	45812A
Flexible Disk 1.44 MB 3-1/2 inch	D1667A
ST-225 20 MB Hard Disk	D1296A
ST-251 40 MB Hard Disk	D1297A
ESDI 108 MB Hard Disk	D1445A
ESDI 152 MB Hard Disk	D1446A
ESDI 330 MB Hard Disk	D1660A
ESDI 670 MB Hard Disk	D1661A
ESDI 103 MB Hard Disk	D1674A
ESDI 155 MB Hard Disk	D1675A
ESDI 310 MB Hard Disk	D1676A
IDE 42 MB Hard Disk	D1665A
IDE 84 MB Hard Disk	D1666A
IDE 120 MB Hard Disk	D1679A
IDE 168 MB Hard Disk	D1680A
IDE Dual 168 MB Hard Drives	D1688A



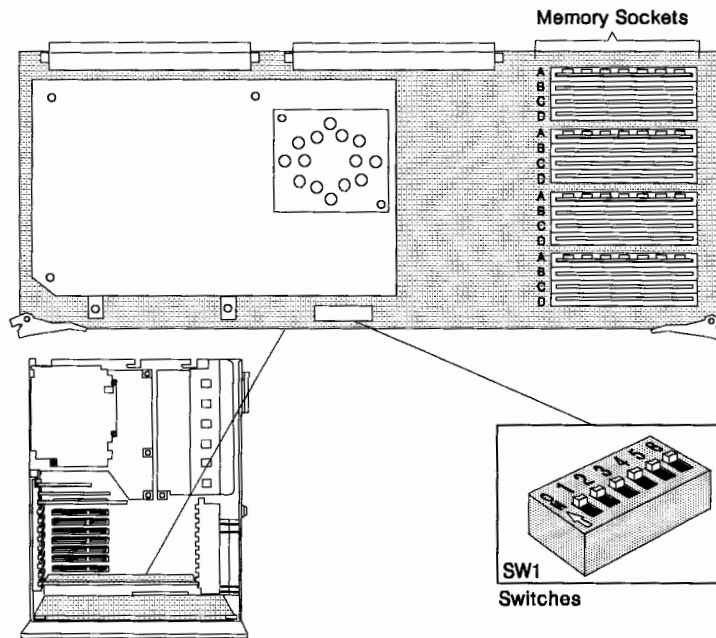
HP Vectra RS PC Series

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Datacomm and LAN Boards

Serial Parallel Board	24540B
Dual Serial Board	24541B
Modem 1200 baud	24550A
Modem 2400 baud	24551A
Ethertwist PC Link Adapter	27245A
Ethertwist Adapter/16	27247A
Ethertwist Adapter/16	27247B
HP ThinLAN Board	27250A
Terminal Multiplexor	D2040A
Token-Ring Adapter	D2378A

System Board, BIOS, and Memory



HP Vectra RS PC Series

Processor/Memory Board Switches

20

Switch #	Function		Default
1	ON	Coprocessor—disabled	ON
	OFF	Coprocessor—enabled	
2	ON	I/O channel speed—asynchronous 8 MHz	ON
	OFF	I/O channel speed ¹ —synchronous 8 MHz RS/16, 10 MHz RS/20 and RS/20C, 12.5 MHz RS/25C	
3	ON	Base memory—640 KB	ON
	OFF	Base memory—512 KB	
4	ON	Option ROMs—enabled ²	ON
	OFF	Option ROMs—disabled	
5	ON	<i>Reserved</i> (leave at factory default setting)	ON
6	ON	<i>Reserved</i> (leave at factory default setting)	ON

1 I/O speed: only use 10 MHz or 12.5 MHz if all the accessory boards can use these speeds

2 Option ROMs: leave switch 4 ON even if no option ROMs are installed.

(On boards with a serial # < 2947, if switch 4 is set to OFF and there are no option ROMs, the PC will not boot.)

Setup and BIOS History

Setup version "B.xx.xx" is used on Vectra RS PCs.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra RS PCs				
HP Vectra RS/16 PC				
C.02.01	Mar 88	First release	ROM 0: 1818-4390 ROM 1: 1818-4391	Any "B" version
HP Vectra RS/20 PC				
C.02.01	Mar 88	First release	ROM 0: 1818-4388 ROM 1: 1818-4389	Any "B" version
HP Vectra RS/20C PC				
E.02.00	Dec 88	First release	-	Any "B" version
E.02.02	Oct 89	Same as D.02.02 and D.02.03 of the QS/20	D2010-83002	

Deskside Vectras 

HP Vectra RS PC Series 20-5

HP Vectra RS PC Series

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BIOS Ver.	Date	Description	Kit Part No.	Min Setup
HP Vectra RS/25C PC				
E.02.00	Dec 88	First release	-	Any "B" version
E.02.01	Aug 89	Same as D.02.02 (QS/20)	-	
E.02.02	Aug 89	Same as D.02.03 (QS/20)	-	
E.02.03	Jun 90	Same as D.02.04 (QS/20)	-	
E.03.04	-	Not released	-	
E.03.05	-	Not released	-	
E.02.06	Feb 91	Same as D.02.05 (QS/20) Supports hard-disk volumes larger than 528 MB	D2060-83006	
E.02.07	Mar 92	Fixes Coprocessor test hang problems with Cyrix Coprocessor	D2060-83007	

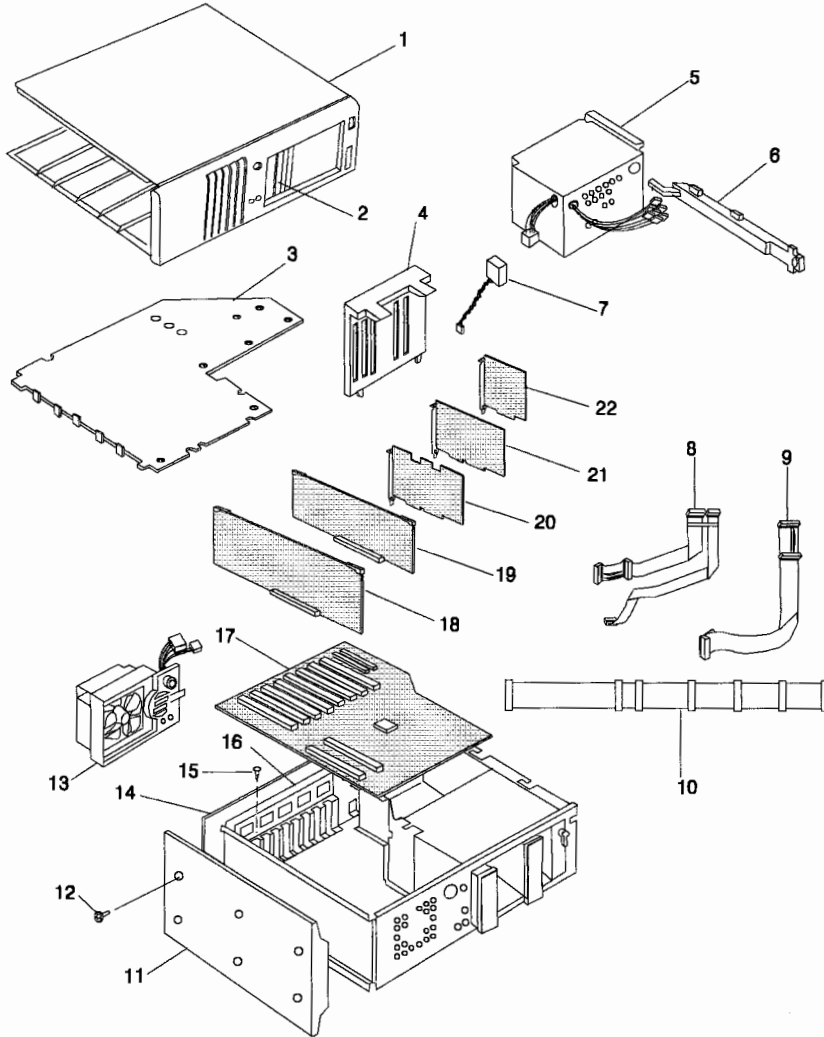
Main Memory

The Vectra RS system board has sixteen sockets for main memory modules, in four banks labeled A, B, C, and D.

Main Memory Configuration

For a TOTAL memory of:	Install:	In these banks:
1 MB	Four 256-KB modules	All A banks
2 MB	Eight 256-KB modules	All A and B banks
4 MB	Sixteen 256-KB modules	All A, B, C, and D banks
4 MB	Four 1-MB modules	All A banks
8 MB	Eight 1-MB modules	All A and B banks
10 MB	Eight 256-KB modules and eight 1-MB modules	All A and B banks All C and D banks
16 MB	Sixteen 1-MB modules	All A, B, C, and D banks

Part Numbers



Deskside Vectras 

HP Vectra RS PC Series

Parts List for HP Vectra RS/16, RS/20, RS/20C and RS/25C PCs

20

Item	Description	Repl. Part Number	Exchange Part Number
1	Top Cover	D1612-60015	-
2	Front Bezel Insert: Small Insert	D1612-40005	-
	Large Insert	D1612-40011	-
3	RFI Shield Assembly	D1612-60011	-
4	Board Guide	45945-40005	-
5	Power Supply	0950-2019	D1612-69010 ¹
6	Power Switch Shaft	D1612-40008	-
7	Battery Pack	1420-0368	-
8	Hard Disk Cable: Dual Hard Disk Cable	D1612-80013	-
	Dual Hard Disk Cable (Vectra RS/25C with serial number above #0191)	5181-5646	-
	Hard Disk Cable (for 2nd ESDI/ST-506 drive)	5061-8981	-
	Hard Disk Cable (for IDE drive)	5181-5670	-
9	Flexible Disk Drive Cable, 3.5 & 5.25-inch	5181-5623	-
10	Hard Disk Cable (SCSI drive) ²	5062-5579	-

1 Vectra RS Power Supply: D1612-69010 for Europe only

2 The SCSI disk activity light cable is built-into the computer

HP Vectra RS PC Series

Parts List for HP Vectra RS/16, RS/20, RS/20C and RS/25C PCs (continued)

20

Item	Description	Repl. Part Number	Exchange Part Number
11	Base (486T)	D1612-40003	-
	Base (Vectra 486ST)	D2635-60021	-
12	10 - 32 Base Screws	2680-0099	-
13	Fan/Speaker/Keylock Assembly	5063-0308	-
14	Rear Bezel Assembly	5062-2659	-
15	Accessory Slot Screw	2680-0311	-
16	Vectra RS Chassis Assembly	D1612-60006	-
17	System Board	See PC's parts list	
18	Processor Board	See PC's parts list	
	Board Guide (left)	D1612-40001	-
	Board Guide (right)	D1612-40002	-
19	Memory Board	See PC's parts list	
20	Disk Controller Board	See PC's parts list	
	Datacomm Controller Boards:		
21	Parallel/Serial Board	See PC's parts list	
22	Mouse/Keyboard Board	See PC's parts list	



HP Vectra RS PC Series

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Parts List for HP Vectra RS/16, RS/20, RS/20C and RS/25C PCs

Description	Repl. Part Number	Exchange Part Number
System Board:		
Vectra RS System Interface Board	D1612-63002	D1612-69002
Processor/Memory Boards:		
Vectra RS/16, RS/20, and RS/20C Processor/Memory Board	D2010-63005	D2010-69005
Vectra RS/25C Processor/Memory Board	D2060-63025	D2060-69005
Vectra RS/20C Cache Memory Board	D2010-63023	D2010-69023
Vectra RS/25C Cache Memory Board	D2060-63026	D2060-69026
Vectra RS/16 and RS/20 Processor/Memory Board RFI Shield	D1612-00007	-
Vectra RS/20C and RS/25C Cache Memory Board Bottom Shield Assembly	D2010-60020	-
Vectra RS/20C and RS/25C Cache Memory Board Top Shield Assembly	D2010-60010	-
Video Board (any slot):		
HP VGA Board (D1180A) See Vectra Accessories—Part Numbers for Video Boards	-	-
HP Super VGA Board (D2382A)	D2382-63004	D2382-69004
Disk Controller Boards (slot 8):		
ST-506 Four-Function Controller Board	45945-60013	45945-69013
ESDI Four-Function Controller Board (D1677A)	1150-1802	1150-1803
ESDI High-Performance Controller Board (D1664A)	1150-1884	1150-1885
IDE Controller	D2384-63031	-
Flexible Disk Expander Board	D1678-60001	-
Flexible Disk Expander Cable	D1678-80002	-
Datacomm Controller Board (slot 9):		
Input Device Connector Board	D1612-60001	-
Processors:		
386 16 MHz (Vectra RS/16)	1820-6055	-
386 20 MHz (Vectra RS/20)	1820-8487	-
386 20 MHz (Vectra RS/20C)	1820-6054	-
386 25 MHz (Vectra RS/25C)	1820-6294	-
Math Coprocessor:		
387 16-33 MHz (all Vectra RS PCs)	1820-6295	-
Oscillators:		
32 MHz (Vectra RS/16)	1813-0622	-
40 MHz (Vectra RS/20C and RS/20)	1813-0119	-
50 MHz (Vectra RS/25C)	1813-0725	-

HP Vectra RS PC Series

Parts List for HP Vectra RS/16, RS/20, RS/20C and RS/25C PCs (continued)

20

Description	Repl. Part Number	Exchange Part Number
Main Memory Modules:		
256-KB Main Memory Module	1818-4268	-
1-MB Main Memory Module	5062-2674	-
BIOS ROM:		
Vectra RS/16 ROM 0	1818-4390	-
Vectra RS/16 ROM 1	1818-4391	-
Vectra RS/20 ROM 0	1818-4388	-
Vectra RS/20 ROM 1	1818-4389	-
Vectra RS/20C ROM 0	1818-4762	-
Vectra RS/20C ROM 1	1818-4763	-
Vectra RS/20C ROM Kit	D2010-83002	-
Vectra RS/25C ROM 0	1818-5244	-
Vectra RS/25C ROM 1	1818-5245	-
Vectra RS/25C ROM Kit	D2060-83007	-
Nameplates:		
HP Vectra RS/16 Logo	D1510-00001	-
HP Vectra RS/20 Logo	D1612-00010	-
HP Vectra RS/20C Logo	D2010-00010	-
HP Vectra RS/25C Logo	D2060-00010	-
8042 Keyboard Controller	1820-5550	-
Support Manuals:		Part Number
Service Manual		5958-7599
Technical Reference Manual: Hardware and BIOS		5958-7598

Part Numbers for HP Utility Diskettes

Description	Rev	Date Code	Part #	Info.
Vectra RS Setup & Utilities Disks:				
3.5-inch disk	C.01.03	3139	Available on HP PC Internal BBS	Setup version B.06.01
5.25-inch disk				

Desktop Vectras



HP Vectra RS PC Series 20-11

HP Vectra 386/25 PC

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Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
Vectra 386/25 PC					
HP Vectra 386/25 PC (CPL: 06/90; discontinued: 03/93)					
D2360A	1.2 MB 45812A	None	IDE M-F Board D2384-63031	None	2 MB
D2361A	1.44 MB D1667A	84 MB D1666A		Super VGA Board D2382A	
D2362A		168 MB D1680A			
D2363A	1.2 MB 45812A	84 MB D1666A		None	
D2364A		168 MB D1680A			
D2371A	1.44 MB D1667A	None			

Supported Accessories

2-MB Main Memory Upgrade (1×2-MB modules) kit	D2381A
8-MB Main Memory Upgrade (1×8-MB modules) kit	D2152A
Intel 80387-25 Math Coprocessor	D2070A
Security Lock	45986A
Setup Kit (setting up manual and diskettes)	D2380B

Input Devices

Mouse (PS/2, Microsoft)	C1413A
Keyboard	C1405A

HP Vectra 386/25 PC

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Video Displays

Monochrome Display	D1192A/B
VGA Color Display 14-inch	D1182A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Video Boards

HP Intelligent Controller 20	A1083A
HP Intelligent Controller 10	A1086A
HP Intelligent Controller 10 Memory Board	A1087A
HP Super VGA Board	D2382A

Multifunction Controller Boards

HP IDE Multifunction Controller Board	D2384-60021
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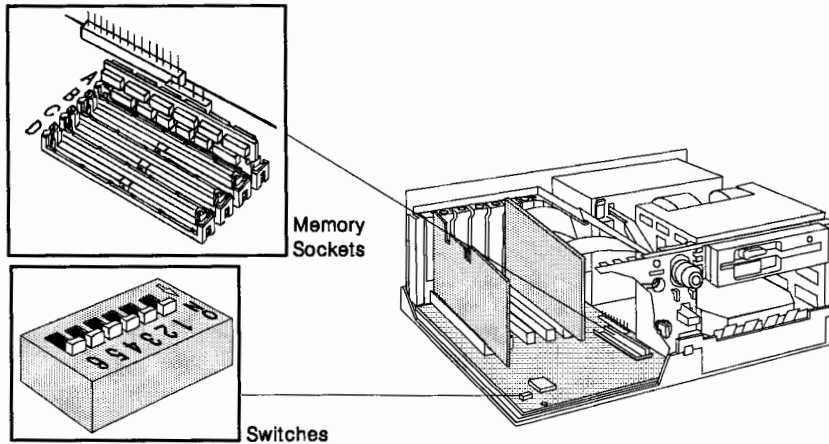
Mass Storage

Flexible Disk 360 KB 5-1/4 inch	45811A
Flexible Disk 1.2 MB 5-1/4 inch	45812A
Flexible Disk 1.44 MB 3-1/2 inch	D1667A
IDE 42 MB Hard Disk	D1665A
IDE 84 MB Hard Disk	D1666A
IDE 120 MB Hard Disk	D1679A
IDE 168 MB Hard Disk	D1680A

Datacomm and LAN Boards

Serial Parallel Board	24540B
Dual Serial Board	24541B
Modem 1200 baud	24550A
Modem 2400 baud	24551A
Ethertwist PC Link Adapter	27245A
Ethertwist Adapter/16	27247A
Ethertwist Adapter/16	27247B
HP ThinLAN Board	27250A
Terminal Multiplexor	D2040A

System Board, BIOS, and Memory



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HP Vectra 386/25 PC System Board Switches

Switch #	Function		Default
1	ON	Power-on password—enabled	ON
	OFF	Power-on password—disabled	
2	ON	Option ROMs—enabled	ON
	OFF	Option ROMs—disabled	
3	ON	Cache memory—enabled	ON
	OFF	Cache memory—disabled	
4	ON	I/O channel speed—synchronous 8.3 MHz	ON
	OFF	I/O channel speed—asynchronous 8 MHz	
5	ON	Mouse interrupt IRQ 12—enabled	ON
	OFF	Mouse interrupt IRQ 12—disabled (disable mouse if an accessory board uses IRQ 12)	
6	ON	Reserved (leave at factory default setting)	ON

HP Vectra 386/25 PC

Setup and BIOS History

Setup version "C.xx.xx" is used on Vectra 386/25 PCs.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra 386/25 PC HP Vectra 386/25 PC				
J.03.00	May 90	First release	-	Any "C" version
J.03.01	Sep 90	Provides fixes for problems with: Banyan Vines Chip-set temperature	-	
J.03.02	Mar 91	Support for diskless config. Fix > 16 MB Config error	-	C.02.00
J.03.03	Feb 92	Support for dual VGA board boot, 1024 cylinder drives, and improved POST error codes	D2360-83005	

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Main Memory

The Vectra 386/25 PC system board has four main memory sockets labeled A, B, C, and D.

Main Memory Configuration

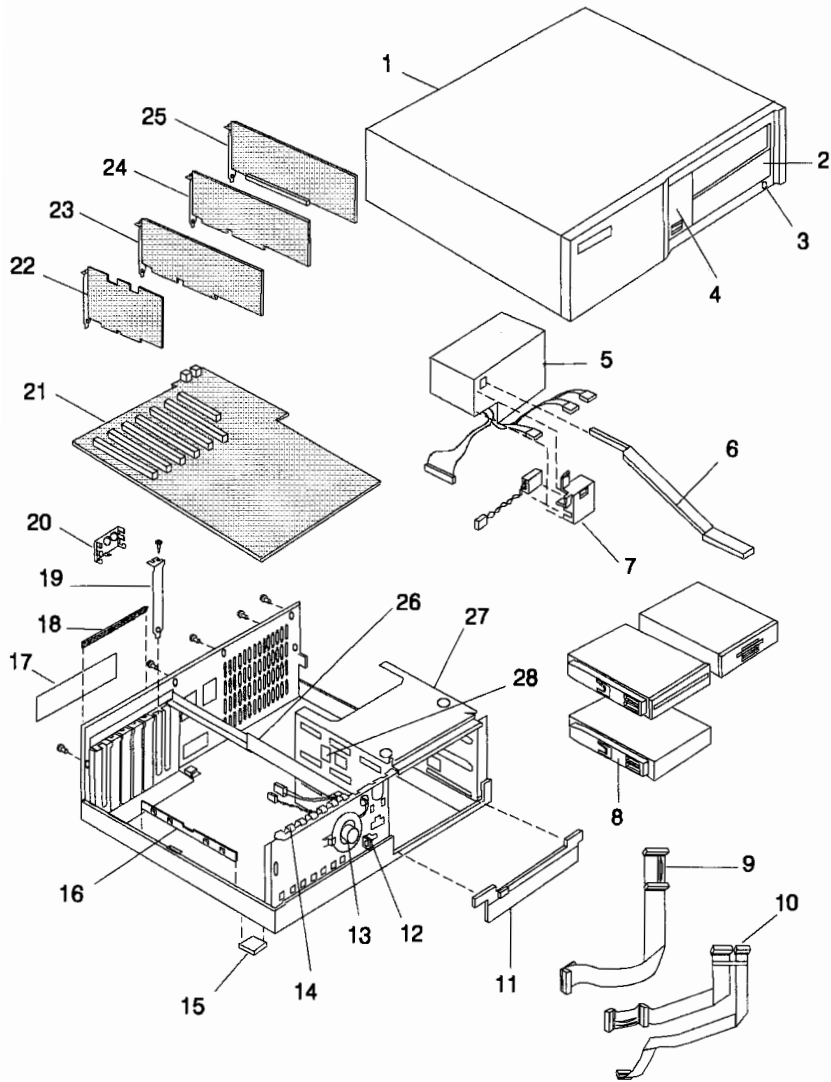
For a TOTAL mem of:	Install Main Memory Modules in These Sockets:				Using this Upgrade Kit(s):
	A	B	C	D	
2 MB	2 MB				Standard
4 MB	2 MB	2 MB			One 2-MB kit
6 MB	2 MB	2 MB	2 MB		Two 2-MB kits
8 MB <i>or</i> 8 MB	2 MB 8 MB	2 MB	2 MB	2 MB	Three 2-MB kits One 8-MB kit ¹
10 MB	8 MB	2 MB			One 8-MB kit ²
12 MB	8 MB	2 MB	2 MB		One 8-MB kit and one 2-MB kit ²
14 MB	8 MB	2 MB	2 MB	2 MB	One 8-MB kit and two 2-MB kits ²
16 MB	8 MB	8 MB			Two 8-MB kits ¹
18 MB	8 MB	8 MB	2 MB		Two 8-MB kits ²
20 MB	8 MB	8 MB	2 MB	2 MB	Two 8-MB kits and one 2-MB kit ²
24 MB	8 MB	8 MB	8 MB		Three 8 MB kits ¹
26 MB	8 MB	8 MB	8 MB	2 MB	Three 8-MB kits ²
32 MB	8 MB	8 MB	8 MB	8 MB	Four 8-MB kits ¹

1 Remove the original 2-MB memory module in socket A.

2 Move the original 2-MB memory module in socket A to another socket.



Part Numbers



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HP Vectra 386/25 PC

Parts List for HP Vectra 386/25 PC

Item	Description	Repl. Part Number
1	Top Cover-Bezel Assembly ¹	5062-2654
2	Disk Drive Cover Plate	5041-2532
3	Light Pipe	45945-40003
4	Front Bezel Insert Keylock Front Bezel Insert	5041-2531 5041-2533
5	Power Supply	0950-2190
6	Power Switch Shaft	5041-1057
7	Battery Assembly: Battery Battery Bracket	- 45935-60201 45945-40006
8	5.25-inch Disk Mounting Tray 3.5-inch Disk Mounting Tray	D1445-60001 D1665-60003
9	Flexible Disk Drive Cable, 3.5 & 5.25-inch disk	5181-5623
10	Hard Disk Cable: Dual Hard Disk Cable (for ESDI/ST-506 drive) Hard Disk Cable (for 2nd ESDI/ST-506 drive) Hard Disk Cable (for IDE drive)	5181-5646 5061-8981 5181-5670
11	Drive Door	45945-40004
12	LED Assembly LED Holder	D1173-60002 1400-1461
13	Speaker Assembly	02620-60016
14	Board Guide	45945-40005
15	Bumper Foot	45935-40011
16	Side Panel Clip	45945-00011
17	Serial Label	5181-4805
18	Rear panel RFI clip	5181-0596
19	I/O Panel, Blank	45935-00004
20	Rear Panel Adapter (Vectra ES and QS) Rear Panel Adapter (Vectra 286/12— included with system board)	5001-4221 5001-4220

¹ Includes the front bezel and computer cover.

HP Vectra 386/25 PC

Parts List for HP Vectra 386/25 PC (continued)

Item	Description	Repl. Part Number
21	System Board	See PC's Part list
22	Video Board	
23	Disk Controller Board	
24	Processor/Memory Board	
25	Memory Board	
26	Chassis Stiffener: Stiffener (Vectra ES) Stiffener (Vectra QS)	45945-00007 D1410-00003
27	Chassis Assembly and Base (includes Bumper Foot, Speaker, I/O Panel and Light Pipe)	5062-2650
28	Cable Clamp	1400-1365
	Screws: Screw, Tapping Screw Screw, Machine 6-32 Screw, Machine 6-32 Pilot Point Screw, Plastite 8-16 Screw, TORX/Flat 6-32, or	0624-0704 0624-0719 2360-0312 2360-0514 2680-0310 2680-0311
	RFI Clips: Power Supply Clip Flexible Disk Drive Clip Front Bezel Clip I/O Clip Hard Disk Drive Clip Keyboard Ground Clip	5001-4213 5001-4214 5001-4215 5001-4216 5001-4217 5001-4218
	Power Connector Adapter Cable	5062-5550

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HP Vectra 386/25 PC

Parts List for HP Vectra 386/25 PC

Description	Repl. Part Number	Exchange Part Number
System Board:		
Vectra 386/25 System Board	D2360-63018	D2360-69020
Video Board (slot 1):		
HP Super VGA Board (D2382A)	D2382-63004	D2382-69004
Disk Controller Board (slot 6):		
IDE Multifunction Controller Board	D2384-63031	D2384-69021
Processor: 386 25 MHz	1820-6294	-
Math Coprocessor: 387 25 MHz	1820-6295	-
Main Memory Modules:		
2-MB Main Memory Module	D2381-63001	-
8-MB Main Memory Module (36-bit)	1818-4702	D2152-69001
BIOS ROM Kit	D2360-83005	-
Nameplate: HP Vectra 386/25 Logo	5041-6366	-
8042 Keyboard Controller	1821-0066	-
Support Manuals:		Part Number
Familiarization Guide		D2360A + 49A-90001
Service Manual		D2360-90001
Technical Reference Manual: Hardware and BIOS		D2360-90002

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Part Numbers for HP Utility Diskettes

Description	Rev	Date Code	Part #	Info.
Vectra 386/25 Setup & Utilities Disks:				
3.5-inch disk	A.02.01	3138	Available on HP PC	Setup version
5.25-inch disk			Internal BBS	C.02.00

HP Vectra 286/12 PC

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
Vectra 286/12 PC					
HP Vectra 286/12 PC (CPL: 05/90; discontinued: 03/93)					
D2460A	1.2 MB 45812A	None	IDE M-F Board D2384-63031	Integrated Super VGA (256 KB)	1 MB
D2461A		20 MB D1296A	ST-506 F-F Board 45945-60013		
D2462A	1.44 MB D1667A				
D2463A	1.2 MB 45812A	42 MB D1665A	IDE M-F Board D2384-63031		
D2464A	1.44 MB				
D2467A	D1667A	None			

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Supported Accessories

2-MB Main Memory Upgrade (2×1-MB modules) kit	D1354A
1-MB Main Memory Upgrade (4×256-KB modules) kit	D1640A
Main Memory Extension Board	D2401A
Intel 80C287 Math Coprocessor (12 MHz)	D2400A
Security Lock	45986A
Setup Kit (setting up manual and diskettes)	D2402B

Input Devices

Mouse (PS/2, Microsoft)	C1413A
Keyboard	C1405A



HP Vectra 286/12 PC

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Video Displays

Monochrome Display	D1192A/B
VGA Color Display 14-inch	D1182A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Video Boards

HP Intelligent Controller 20	A1083A
HP Intelligent Controller 10	A1086A
HP Intelligent Controller 10 Memory Board	A1087A

Multifunction Controller Boards

HP IDE Multifunction Controller Board	D2384-60021
HP ST-506 Four-Function Controller Board	45945-60013

Mass Storage

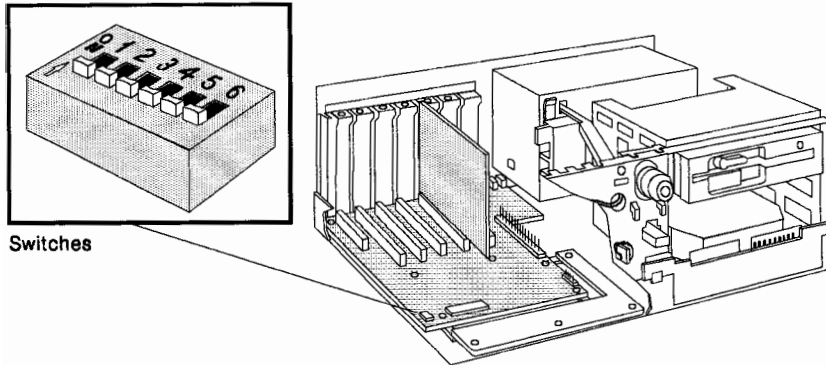
Flexible Disk 360 KB 5-1/4 inch	45811A
Flexible Disk 1.2 MB 5-1/4 inch	45812A
Flexible Disk 1.44 MB 3-1/2 inch	D1667A
ST-225 20 MB Hard Disk	D1296A
ST-251 40 MB Hard Disk	D1297A
ESDI 108 MB Hard Disk	D1445A
ESDI 152 MB Hard Disk	D1446A
IDE 42 MB Hard Disk	D1665A
IDE 84 MB Hard Disk	D1666A
IDE 120 MB Hard Disk	D1679A
IDE 168 MB Hard Disk	D1680A

Datacomm and LAN Boards

Serial Parallel Board	24540B
Dual Serial Board	24541B
Modem 1200 baud	24550A
Modem 2400 baud	24551A
Ethertwist PC Link Adapter	27245A
Ethertwist Adapter/16	27247A
Ethertwist Adapter/16	27247B
HP ThinLAN Board	27250A
Terminal Multiplexor	D2040A



System Board, BIOS, and Memory



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HP Vectra 286/12 PC System Board Switches

Switch #	Function		Default
1	OFF	Video interrupt IRQ 9—disabled	OFF
	ON	Video interrupt IRQ 9—enabled	
2	OFF	Built-in VGA controller—enabled	OFF
	ON	Built-in VGA Controller—disabled (disable built-in video if another video board is used)	
3	OFF	Mouse interrupt IRQ 12—enabled	OFF
	ON	Mouse interrupt IRQ 12—disabled (disable mouse if an accessory board uses IRQ 12)	
4	OFF	Power-on password—enabled	OFF
	ON	Power-on password—disabled	
5	OFF	Option ROMs on I/O backplane—enabled	OFF
	ON	Option ROMs on memory extension board—enabled	
6	OFF	Reserved (leave at factory default setting)	OFF

Setup and BIOS History

Setup version "C.xx.xx" is used on Vectra 286/12 PCs.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
H.03.01	Mar 90	First release	-	C.02.00
H.03.02	Nov 90	Second release	-	

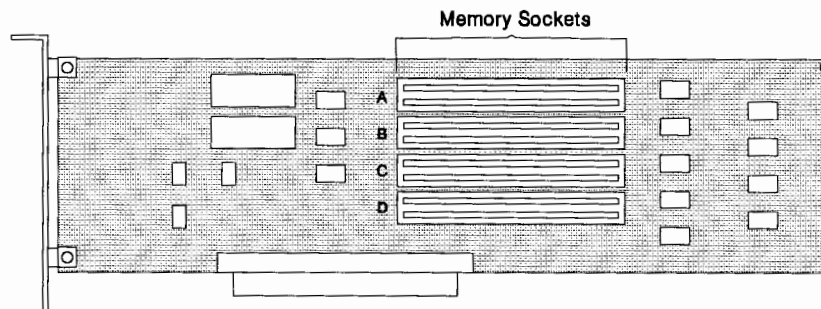
HP Vectra 286/12 PC

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
H.03.03	Dec 90	Support for floppy-less config & VMI video board Fix spelling error in an invalid Real Time Clock message	-	C.02.00
H.03.04	Dec 91	Change to revision of video BIOS ¹	5062-1319	

¹ Vectra 286/12 video BIOS: refer to notes in appendix D

Main Memory Extension Board (D2401A)

22 The HP Vectra 286/12 PC system board has 1 MB of main memory. The HP D2401A Main Memory Extension Board can be installed in slot 6 to add up to 8 MB of main memory to the HP Vectra 286/12 PC.



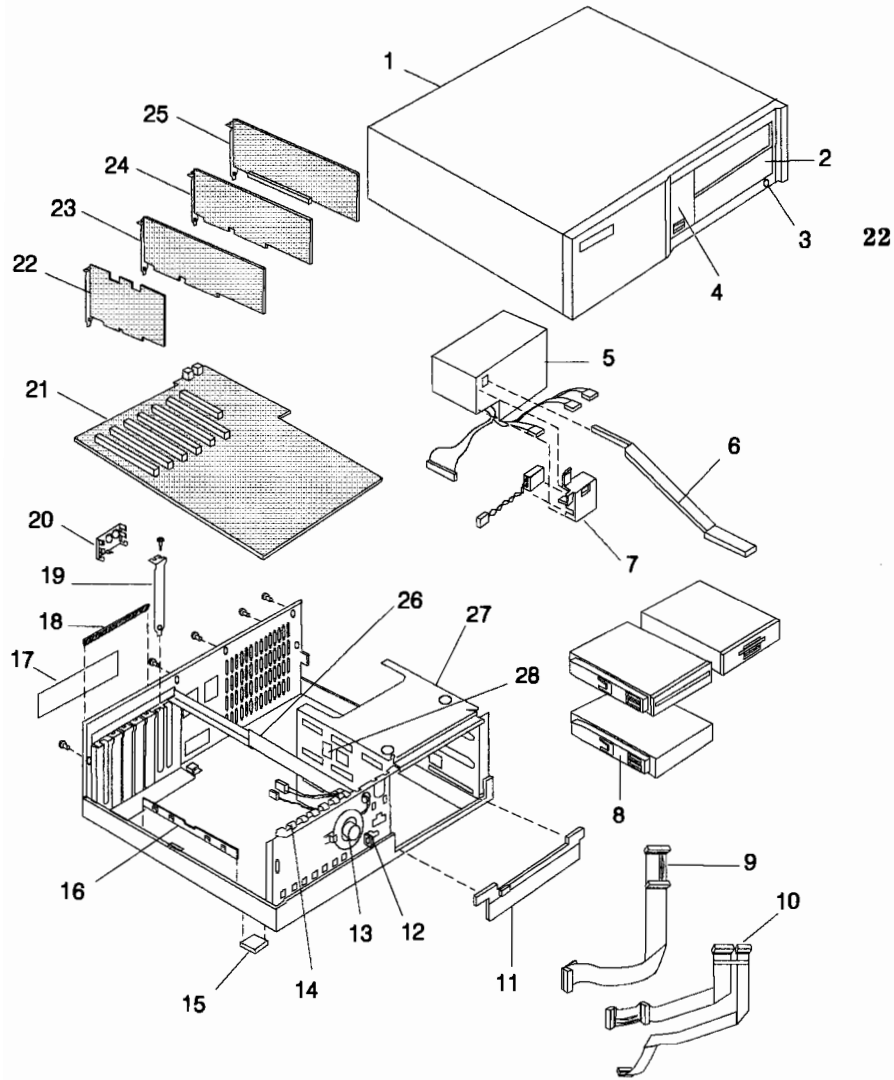
D2401A Vectra 286/12 Main Memory Extension Board

Main Memory Configuration

For a TOTAL mem. of:	Install Main Memory Modules in These Banks (each bank has two sockets):								Using This Upgrade Kit
	A	A	B	B	C	C	D	D	
2 MB					256 KB	256 KB	256 KB	256 KB	One 1-MB kit
3 MB					1 MB	1 MB			One 2-MB kit
5 MB					1 MB	1 MB	1 MB	1 MB	Two 2-MB kits
6 MB ¹	1 MB	1 MB	1 MB	1 MB	1 MB	1 MB			Three 2-MB kits
8 MB ¹	1 MB	1 MB	1 MB	1 MB	1 MB	1 MB	1 MB	1 MB	Four 2-MB kits

¹ For 6 MB or 8 MB, the original 1 MB on the system board is automatically ignored.

Part Numbers



HP Vectra 286/12 PC

Parts List for HP Vectra 286/12 PC

Item	Description	Repl. Part Number
1	Top Cover-Bezel Assembly	5062-2654
2	Disk Drive Cover Plate	45935-40008
3	Light Pipe	45945-40003
4	Front Bezel Insert Keylock Front Bezel Insert	45935-40004 5041-2533
5	Power Supply	0950-2190
6	Power Switch Shaft	5041-1057
7	Battery Assembly: Battery Battery Bracket	- 45935-60201 45945-40006
8	5.25-inch Disk Mounting Tray 3.5-inch Disk Mounting Tray	D1445-60001 D1665-60003
9	Flexible Disk Drive Cable, 3.5 & 5.25-inch disk	5181-5623
10	Hard Disk Cable: Dual Hard Disk Cable (for ESDI/ST-506 drive) Hard Disk Cable (for 2nd ESDI/ST-506 drive) Hard Disk Cable (for IDE drive)	5181-5646 5061-8981 5181-5670
11	Drive Door	45945-40004
12	LED Assembly LED Holder	D1173-60002 1400-1461
13	Speaker Assembly	02620-60016
14	Board Guide	45945-40005
15	Bumper Foot	45935-40011
16	Side Panel Clip	45945-00011
17	Serial Label	5181-4805
18	Rear panel RFI clip	5181-0596
19	I/O Panel, Blank	45935-00004
20	Rear Panel Adapter (included with system board)	5001-4220

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HP Vectra 286/12 PC

Parts List for HP Vectra 286/12 PC (continued)

Item	Description	Repl. Part Number
21	System Board	See PC's Part list
22	Video Board	
23	Disk Controller Board	
24	Processor/Memory Board	
25	Memory Board	
26	Chassis Stiffener: Stiffener (Vectra ES) Stiffener (Vectra QS)	45945-00007 D1410-00003
27	Chassis Assembly and Base (Includes Bumper Foot, Speaker, I/O Panel and Light Pipe)	5062-2650
28	Cable Clamp	1400-1365
	Screws: Screw, Tapping Screw Screw, Machine 6-32 Screw, Machine 6-32 Pilot Point Screw, Plastite 8-16 Screw, TORX/Flat 6-32, or	0624-0704 0624-0719 2360-0312 2360-0514 2680-0310 2680-0311
	RFI Clips: Power Supply Clip Flexible Disk Drive Clip Front Bezel Clip I/O Clip Hard Disk Drive Clip Keyboard Ground Clip	5001-4213 5001-4214 5001-4215 5001-4216 5001-4217 5001-4218
	Power Connector Adapter Cable	5062-5550

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HP Vectra 286/12 PC

Parts List for HP Vectra 286/12 PC

Description	Repl. Part Number	Exchange Part Number
System Board (includes integrated Super VGA controller):		
Vectra 286/12 System Board	D2460-63001	D2460-69001
System Board Holder (bracket)	D1410-00001	-
Disk Controller Boards (slot 5):		
ST-506 Four-Function Controller Board	45945-60013	45945-69023
IDE Multifunction Controller Board	D2384-63031	D2384-69021
Memory Board (slot 6):		
Memory Extension Board (D2401A)	D2401-63001	D2401-69001
Processor: 286 12 MHz	Processor not removable	
Math Coprocessor: 287 12 MHz	D2400-60001	-
Main Memory Modules: ¹		
1-MB Main Memory Module	5062-2674	-
256-KB Main Memory Module	1818-4268	-
BIOS ROM Kit	5062-1319	-
Nameplate: HP Vectra 286/12 Logo	D2460-40001	-
Support Manuals:		Part Number
Familiarization Guide		D2460A + 49A-90001
Service Manual		D2460-90001
Technical Reference Manual: Hardware and BIOS		D2460-90002

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¹ Caution: do not use 1-MB main memory modules 1818-4271 in the Vectra 286/12 PC

Part Numbers for HP Utility Diskettes

Description	Rev	Date Code	Part #	Info.
Vectra 286/12 Setup & Utilities Disks:				
3.5-inch disk	A.02.01	3138	Available on HP PC Internal BBS	Setup version C.02.00
5.25-inch disk				



HP Vectra QS PC Series

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
Vectra QS PCs					
HP Vectra QS/16 PC (CPL: 09/88; discontinued: 09/89)					
D1410A	None	None	ST-506 F-F Board 45945-60013	None	1 MB
D1411A	1.2 MB	40 MB D1297A		VGA Board D1180A	
D1412A	45812A				
D1414A	1.44 MB D1667A				
D1415A	1.2 MB 45812A	108 MB D1445A	ESDI ¹ F-F Board D1677A	None	1 MB
D1417A	1.44 MB D1667A	None	ESDI F-F Board D1677A	None	
D1419A	1.2 MB 45812A				
HP Vectra QS/16S PC (CPL: 05/89; discontinued: 05/92)					
D1470A	1.2 MB 45812A	None	ST-506 F-F Board 45945-60013	None	1 MB
D1472A		40 MB D1297A		VGA Board D1180A	
D1472B	42 MB D1665A	IDE ² F-F Board D2384-63031			
D1474A	1.44 MB D1667A	40 MB D1297A	ST-506 F-F Board 45945-60013		
D1474B		42 MB D1665A	IDE M-F Board ³ D2384-63031		

1 ESDI: Enhanced Small Device Interface

2 IDE: Integrated Drive Electronics, also known as embedded AT

3 M-F Board: Multifunction Controller Board

HP Vectra QS PC Series

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
HP Vectra QS/16S PC (continued)					
D1475A	1.2 MB 45812A	108 MB D1445A	ESDI F-F Board D1677A	None	1 MB
D1477A	1.44 MB D1667A	None	ESDI F-F Board D1677A	None	
D1482B	1.2 MB		IDE M-F Board	VGA Board D1180A	
D1486B	45812A	84 MB D1666A	D2384-63031		
D1487B	1.44 MB D1667A				
<i>From May 90, all QS/16S products have new model numbers:</i>					
D1460A	1.2 MB 45812A	None	ST-506 F-F Board 45945-60013	None	1 MB
D1461B	1.44 MB D1667A		IDE M-F Board		VGA Board D1180A
D1461C			D2384-63031		
D1462A	1.2 MB 45812A	40 MB D1297A	ST-506 F-F Board 45945-60013	VGA Board D1180A	1 MB
D1462B		42 MB D1665A	IDE M-F Board D2384-63031	VGA D1180A or Super VGA D2382A	
D1462C				Super VGA Board D2382A	
D1464A	1.44 MB D1667A	40 MB D1297A	ST-506 F-F Board 45945-60013	VGA Board D1180A	1 MB
D1464B		42 MB D1665A	IDE M-F Board D2384-63031	VGA D1180A or Super VGA D2382A	
D1464C				Super VGA Board D2382A	
D1465A	1.2 MB 45812A	108 MB D1445A	ESDI F-F Board D1677A	None	1 MB
D1481B		None	IDE M-F Board D2384-63031		VGA D1180A or Super VGA D2382A
D1481C					
D1488B		84 MB D1666A		VGA D1180A or Super VGA D2382A	1 MB
D1488C				Super VGA Board D2382A	2 MB
D1489B	1.44 MB D1667A			VGA D1180A or Super VGA D2382A	1 MB
D1489C				Super VGA Board D2382A	2 MB

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HP Vectra QS PC Series

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
HP Vectra QS/20 PC (CPL: 03/89; discontinued: 05/92)					
D1430A	None	None	ESDI F-F Board D1677A	None	1 MB
D1432A	1.2 MB 45812A	40 MB D1297A	ST-506 F-F Board 45945-60013	VGA Board D1180A	
D1432B		42 MB D1665A	IDE M-F Board D2384-63031		
D1434A	1.44 MB D1667A	40 MB D1297A	ST-506 F-F Board 45945-60013	VGA Board D1180A	
D1434B		42 MB D1665A	IDE M-F Board D2384-63031		
D1435A	1.2 MB 45812A	108 MB D1445A	ESDI F-F Board D1677A	None	
D1437A	1.44 MB D1667A	None			
D1439A	1.2 MB				
D1492B	45812A		IDE M-F Board D2384-63031		
D1496B		84 MB		VGA Board D1180A	
D1497B	1.44 MB D1667A	D1666A			
<i>From May 90, all QS/20 products have new model numbers:</i>					
D1420A	1.2 MB 45812A	None	ESDI F-F Board D1677A	None	1 MB
D1421B	1.44 MB D1667A		IDE M-F Board D2384-63031		
D1422A	1.2 MB 45812A	40 MB D1297A	ST-506 F-F Board 45945-60013	VGA Board D1180A	
D1422B		42 MB D1665A	IDE M-F Board D2384-63031	VGA D1180A or Super VGA D2382A	
D1424A	1.44 MB D1667A	40 MB D1297A	ST-506 F-F Board 45945-60013	VGA Board D1180A	
D1424B		42 MB D1665A	IDE M-F Board D2384-63031	VGA D1180A or Super VGA D2382A	

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HP Vectra QS PC Series

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
HP Vectra QS/20 PC (continued)					
D1425A	1.2 MB 45812A	108 MB D1445A	ESDI F-F Board D1677A	None	1 MB
D1427A	1.44 MB D1667A	None			
D1491B	1.2 MB	84 MB D1666A	IDE M-F Board	VGA D1180A <i>or</i> Super VGA D2382A	
D1498B	45812A		D2384-63031		
D1499B	1.44 MB D1667A				

Supported Accessories

2-MB Memory Upgrade (2×1-MB modules) kit-QS/16S	D1354A
1-MB Memory Upgrade (4×256-KB modules) kit-QS/16 & QS/20	D1640A
4-MB Memory Upgrade (4×1-MB modules) kit-QS/20	D1642A
23 Main Memory Extension Board-QS/16 & QS/20	D1440A
Intel 80387SX-16 Math Coprocessor-QS/16S	D1453A
Intel 80387SL Math Coprocessor-QS/16S	D2408A
Intel 80387DX Math Coprocessor-QS/16 & QS/20	D2070A
Security Lock	45986A
Setup Kit (setting up manual and diskettes)	D1451C

Video Displays

Monochrome Display	D1181A/W/G
VGA Color Display	D1182A/B
High Resolution Color Display	D1187A
High Resolution Color Display	D1188A
Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A



HP Vectra QS PC Series

Video Boards

HP Intelligent Controller 20	A1083A
HP Intelligent Controller 10	A1086A
HP Intelligent Controller 10 Memory Board	A1087A
HP VGA Board	D1180A
HP Super VGA Board	D2382A

Multifunction Controller Boards

HP IDE Multifunction Controller Board	D2384-60021
HP ST-506 Four-Function Controller Board	45945-60013
HP ESDI Four-Function Controller Board	D1677A

Mass Storage

Flexible Disk 360 KB 5-1/4 inch	45811A
Flexible Disk 1.2 MB 5-1/4 inch	45812A
Flexible Disk 1.44 MB 3-1/2 inch	D1687A
ST-225 20 MB Hard Disk	D1296A
ST-251 40 MB Hard Disk	D1297A
ESDI 108 MB Hard Disk	D1445A
ESDI 152 MB Hard Disk	D1446A
IDE 42 MB Hard Disk	D1665A
IDE 84 MB Hard Disk	D1666A
IDE 120 MB Hard Disk	D1679A
IDE 168 MB Hard Disk	D1680A

Datacomm and LAN Boards

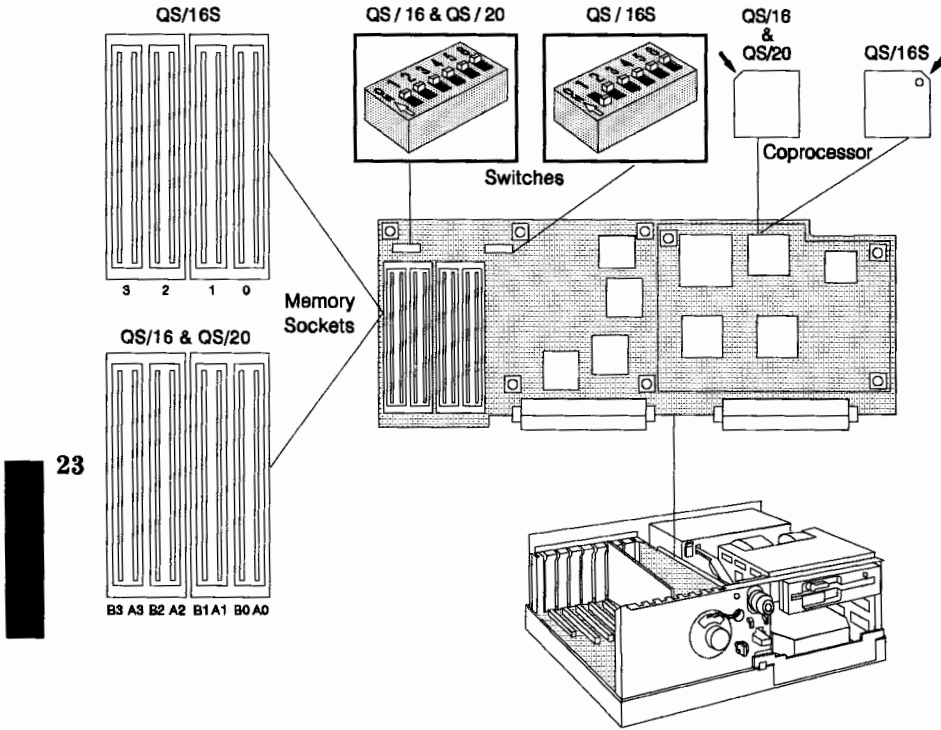
Serial Parallel Board	24540B
Dual Serial Board	24541B
Modem 1200 baud	24550A
Modem 2400 baud	24551A
Ethertwist PC Link Adapter	27245A
Ethertwist Adapter/16	27247A
Ethertwist Adapter/16	27247B
HP ThinLAN Board	27250A
Terminal Multiplexor	D2040A

Input Devices

HP-HIL Mouse	46060A
Keyboard	C1405A

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System Board, BIOS, and Memory



HP Vectra QS Processor/Memory Board Switches

Switch #	Function		Default		
			QS/16	QS/20	QS/16S
1	ON	Coprocessor—disabled	ON	ON	OFF
	OFF	Coprocessor—enabled			
2	ON	I/O channel speed—asynchronous 8 MHz	ON	ON	ON
	OFF	I/O channel speed—synchronous 8 MHz QS/16 & QS/16S, 10 MHz QS/20			
3	ON	Base memory—640KB	ON	ON	ON
	OFF	Base memory—512KB			
4	ON	Option ROMs—enabled	ON	ON	ON
	OFF	Option ROMs—disabled			
5	ON	Reserved (leave at factory default setting)	ON	ON	ON
6	ON	Coprocessor speed—synchronous 16 MHz QS/16 & QS/16S, 20 MHz QS/20	ON	ON	ON
	OFF	Coprocessor speed—asynchronous 16 MHz QS/16 & QS/16S, 20 MHz QS/20			

Setup and BIOS History

Setup version "B.xx.xx" is used on Vectra QS PCs.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra QS PCs HP Vectra QS/16 PC				
D.02.00	Jun 88	First release	BIOS ROM Kit: D1410-83001	B.06.00
D.02.07	Aug 93	Adds support for: - HP IDE disk drives - Western Digital hardcard 40 - VMI video interface - Sigma L-View video boards - Novell NE2100 board - Intel Rapid CAD	D1410-83002	Any "B" version
HP Vectra QS/16S PC				
F.02.00	Mar 89	First release	-	Any "B" version
F.02.01	-	Not available	-	
F.02.02	Nov 89	Provides product design fix for C & T chip set	-	
F.02.03	Nov 89	Same as D.02.03 (QS/20)	-	
F.02.04	Jun 90	Same as D.02.04 (QS/20)	-	

HP Vectra QS PC Series

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
F.02.05	Oct 90	Same as D.02.05 (QS/20)	D1470-83005	
F.02.07	Feb 92	Same as D.02.06 (QS/20)	D1470-83006	
F.02.08	Aug 93	Same as D.02.07 (QS/20)	D1470-83007	
HP Vectra QS/20 PC				
D.02.01	Feb 89	First release	-	Any "B" version
D.02.02	Mar 89	Provides fixes for product line defects. One major fix is for Toshiba floppy drive	-	
D.02.03	Oct 89	Support for 3rd party disk drive and HP D1665A, D1666A, D1660A and D1661A Provides fix for system power up/reset to be compatible with IBM and Compaq	-	
D.02.04	Jun 90	Support for HP D1679A and D1680A hard disks to replace HP D1445A, D1446A, D1674A, D1675A, D1676A Add fix to support VMI video board	-	
D.02.05	Oct 90	Provides fixes for Western Digital hardcard 40 & the Ungermann-Bass Network interface board 2237A	D1430-83004	
D.02.06	Feb 92	Provides fixes for problems with: - Sigma L-View video boards - 387 intermittent hang Supports Hard disks greater than 528 MB	D1430-83005	
D.02.07	Aug 93	Adds support for: - Novell NE2100 board - Intel Rapid CAD	D1430-83006	

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Main Memory

The QS/16S processor/memory board has eight sockets for main memory modules, for a maximum of up to 8 MB. Each pair of sockets (labeled 0, 1, 2, and 3) forms a bank.

HP Vectra QS/16S PC Main Memory Configuration

For a TOTAL mem. of:	Install Main Memory Modules in These Banks (each bank has two sockets):							
	0	0	1	1	2	2	3	3
1 MB	256 KB	256 KB	256 KB	256 KB				
2 MB	256 KB	256 KB	256 KB	256 KB	256 KB	256 KB	256 KB	256 KB
2 MB	1 MB	1 MB						
3 MB ¹	256 KB	256 KB	256 KB	256 KB	1 MB	1 MB		
4 MB	1 MB	1 MB	1 MB	1 MB				
5 MB ¹	256 KB	256 KB	256 KB	256 KB	1 MB	1 MB	1 MB	1 MB
6 MB	1 MB	1 MB	1 MB	1 MB	1 MB	1 MB		
8 MB	1 MB	1 MB	1 MB	1 MB	1 MB	1 MB	1 MB	1 MB

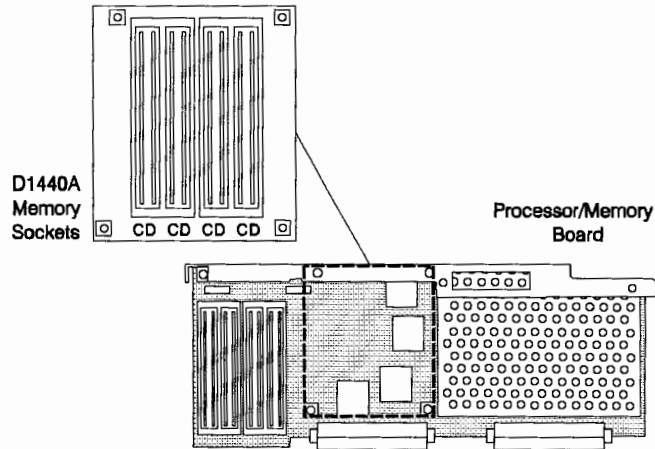
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1 For 3-MB & 5-MB configurations, the 256-KB modules must be in banks 0 and 1

The QS/16 and QS/20 processor/memory boards have eight sockets for main memory modules, for a maximum of up to 8MB. Each pair of sockets (labeled A0 to A3 and B0 to B3) forms a bank.

HP Vectra QS PC Series

The main memory of the QS/16 and QS/20 can be expanded further by installing the HP D1440A Main Memory Extension Board (onto the processor/memory board). This board has eight main memory sockets, for a maximum of 8MB, in two banks labeled C and D.

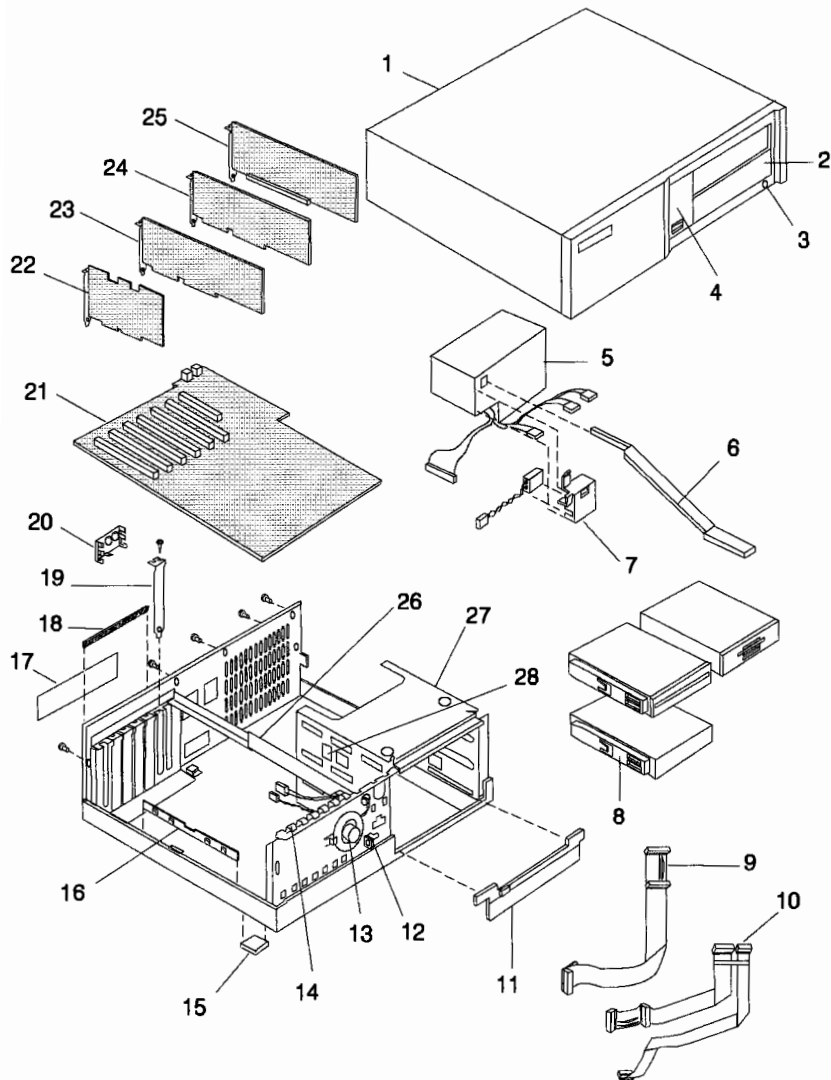


D1440A Vectra QS Main Memory Extension Board

HP Vectra QS/16 and QS/20 PCs Main Memory Configuration

For a TOTAL main memory of:	Install:	In these sockets:
1 MB	Four 256-KB modules	All A sockets
2 MB	Eight 256-KB modules	All A and B sockets
4 MB	Sixteen 256-KB modules	All A, B, C, and D sockets
4 MB	Four 1-MB modules	All A sockets
8 MB	Eight 1-MB modules	All A and B sockets
10 MB	Eight 256-KB modules and eight 1-MB modules	All A and B sockets All C and D sockets
16 MB	Sixteen 1-MB modules	All A, B, C, and D sockets

Part Numbers



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HP Vectra QS PC Series

Parts List for HP Vectra QS/16, QS/20, and QS/16S PCs

Item	Description	Repl. Part Number
1	Top Cover-Bezel Assembly ¹	45945-60214
2	Disk Drive Cover Plate	45935-40008
3	Light Pipe	45945-40003
4	Front Bezel Insert Keylock Front Bezel Insert	45935-40004 5041-2533
5	Power Supply	0950-2190
6	Power Switch Shaft	5041-1057
7	Battery Assembly: Battery Battery Bracket	- 45935-60201 45945-40006
8	5.25-inch Disk Mounting Tray 3.5-inch Disk Mounting Tray	D1445-60001 D1665-60003
9	Flexible Disk Drive Cable, 3.5 & 5.25-inch disk	5181-5623
10	Hard Disk Cable: Dual Hard Disk Cable (for ESDI/ST-506 drive) Hard Disk Cable (for 2nd ESDI/ST-506 drive) Hard Disk Cable (for IDE drive)	5181-5646 5061-8981 5181-5670
11	Drive Door	45945-40004
12	LED Assembly LED Holder	D1173-60002 1400-1461
13	Speaker Assembly	02620-60016
14	Board Guide	45945-40005
15	Bumper Foot	45935-40011
16	Side Panel Clip	45945-00011
17	Serial Label	5181-4805
18	Rear panel RFI clip	5181-0596
19	I/O Panel, Blank	45935-00004
20	Rear Panel Adapter	5001-4221

1 Includes the front bezel and computer cover.



HP Vectra QS PC Series

Parts List for HP Vectra QS/16, QS/20, and QS/16S PCs

Item	Description	Repl. Part Number	Exchange Part Number
21	System Interface Boards:		
	Vectra QS/16, QS/20 System Interface Board	D1410-63002	D1410-69002
	Vectra QS/16S System Interface Board	D1470-63002	D1470-69002
	Vectra QS System Interface Board Extender	D1410-00001	-
24	Processor/Memory Boards (slot 8):		
	Vectra QS/16 Processor/Memory Board	D1410-63001	D1410-69001
	Vectra QS/16S Processor/Memory Board	D1470-63031	D1470-69031
	Vectra QS/20 Processor/Memory Board	D1430-63011	D1430-69001
	Memory Board (processor/memory board): QS/16, QS/20 Memory Extension Board (D1440A)	D1440-63001	-
22	Video Boards (slot 1):		
	HP VGA Board (D1180A) See Vectra Accessories—Part numbers for Video Boards HP Super VGA Board (D2382A)	- D2382-63004	- D2382-69004
23	Disk Controller Boards (slot 7):		
	ST-506 Four-Function Controller Board	45945-60013	45945-69023
	ESDI Four-Function Controller Board (D1677A)	1150-1802	1150-1803
	IDE Multifunction Controller Board	D2384-63031	D2384-69021
	Processors:		
	386 16 MHz (Vectra QS/16)	1820-6055	-
	386SX 16 MHz (Vectra QS/16S)	Processor not removable	-
	386 20 MHz (Vectra QS/20)	1820-6054	-
	Math Coprocessors:		
	387 16-33 MHz (Vectra QS/16 & QS/20)	1820-6295	-
	387SL (Vectra QS/16S)	D2408-83001	-
	Main Memory Modules: (available for QS/20 only)		
	256-KB Main Memory Module (QS/20)	1818-4268	-
	1-MB Main Memory Module (QS/20)	5062-2674	-
	BIOS ROM Kits:		
	Vectra QS/16 ROM Kit (BIOS D.02.07)	D1410-83002	-
	Vectra QS/16S ROM Kit (BIOS F.02.08)	D1470-83007	-
	Vectra QS/20 ROM Kit (BIOS D.02.07)	D1430-83006	-
	Nameplates:		
	HP Vectra QS/16 Logo	D1410-80010	-
	HP Vectra QS/16S Logo	D1470-80010	-
	HP Vectra QS/20 Logo	D1430-80010	-
	8042 Keyboard Controller	1820-5550	-

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HP Vectra QS PC Series

Parts List for HP Vectra QS/16, QS/20, and QS/16S PCs

Item	Description	Repl. Part Number
26	Chassis Stiffener:	D1410-00003
27	Chassis Assembly and Base (includes Bumper Foot, Speaker, I/O Panel and Light Pipe)	5062-2650
28	Cable Clamp	1400-1365
	Screws:	
	Screw, Tapping	0624-0704
	Screw	0624-0719
	Screw, Machine 6-32	2360-0312
	Screw, Machine 6-32 Pilot Point	2360-0514
	Screw, Plastite 8-16	2680-0310
	Screw, TORX/Flat 6-32, or	2680-0311
	RFI Clips:	
	Power Supply Clip	5001-4213
	Flexible Disk Drive Clip	5001-4214
	Front Bezel Clip	5001-4215
	I/O Clip	5001-4216
	Hard Disk Drive Clip	5001-4217
	Keyboard Ground Clip	5001-4218
	Power Connector Adapter Cable	5062-5550

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Parts List for HP Vectra QS/16, QS/20, and QS/16S PCs

Description	Repl. Part Number	Exchange Part Number
Support Manuals:		Part Number
Service Manual		D1410-90001
Technical Reference Manual: Hardware and BIOS		D1410-90002

Part Numbers for HP Utility Diskettes

Description	Rev	Date Code	Part #	Info.
Vectra QS Setup & Utilities Disks:				
3.5-inch disk	C.01.03	3139	Available on HP PC	Setup version
5.25-inch disk			Internal BBS	B.06.01



HP Vectra ES and ES/12 PCs

Models and Accessories

Product Number	Flexible Drive A:	Hard Drive C:	Disk Controller	Video Controller	Std. RAM
Vectra ES PCs					
HP Vectra ES PC (CPL:10/87; discontinued: 03/90)					
D1210A	1.2 MB 45812A	None ¹	ST ² -506 F-F Board ³ 45945-60013	None	640 KB
D1215A	1.44 MB D1667A				
D1220A	1.2 MB 45812A	20 MB D1296A		VGA Board D1180A	
D1226A	1.44 MB D1667A				
D1227A	1.44 MB D1667A				
HP Vectra ES/12 PC⁴ (CPL: 10/87; discontinued: 09/90)					
D1310A	1.2 MB 45812A	None	ST-506 F-F Board 45945-60013	None	640 KB
D1315A	1.44 MB D1667A				
D1320A	1.2 MB 45812A	20 MB D1296A		VGA Board D1180A	
D1326A	1.44 MB D1667A				
D1327A	1.44 MB D1667A				
D1340A	1.2 MB 45812A	40 MB D1297A		None	
D1346A	1.44 MB D1667A				
D1347A	1.44 MB D1667A				

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1 None: not supplied with standard computer model

2 ST: Seagate Technology

3 F-F Board: Four-Function Controller Board

4 Vectra ES/12 PC: BIOS version B.02.03 provides support for IDE drives

Classic Desktop Vectras 

HP Vectra ES and ES/12 PCs 24-1

HP Vectra ES and ES/12 PCs

Supported Accessories

2-MB Main Memory Upgrade (for 45944A board)	D1354A
Security Lock	45986A

Input Devices

HP-HIL Mouse	46060A
Keyboard	C1405A

Video Displays

Monochrome Display	D1181A/W/G
VGA Color Display	D1182A/B
High Resolution Color Display	D1187A
High Resolution Color Display	D1188A
Monochrome Display	D1192A/B
Ultra VGA Color Display 17-inch	D1193A
Super VGA Color Display 14-inch	D1194A
Ergo Super VGA Color Display 15-inch	D1195A
Ergo Ultra VGA Color Display 15-inch	D1196A
Color VGA Display	D1197A
Ultra VGA 1600 Display	D1199A
Monochrome VGA 14-inch Display	D2801A/B
Entry-Level SVGA 14-inch Display	D2802A
Super VGA 1024i 14-inch Display	D2804A
Ergo 1024 14-inch Display	D2805A
Ergo Ultra VGA 15-inch Display	D2806A
Ultra VGA 1280 17-inch Display	D2807A
Super VGA 14-inch Display (Low Emissions)	D2814A

Video Boards

HP Intelligent Controller 20	A1083A
HP Intelligent Controller 10	A1086A
HP Intelligent Controller 10 Memory Board	A1087A
HP EGA Board	45983A
HP VGA Board	D1180A

Multifunction Controller Boards

HP IDE Multifunction Controller Board	D2384-60021
HP ST-506 Four-Function Controller Board	45945-60013

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HP Vectra ES and ES/12 PCs

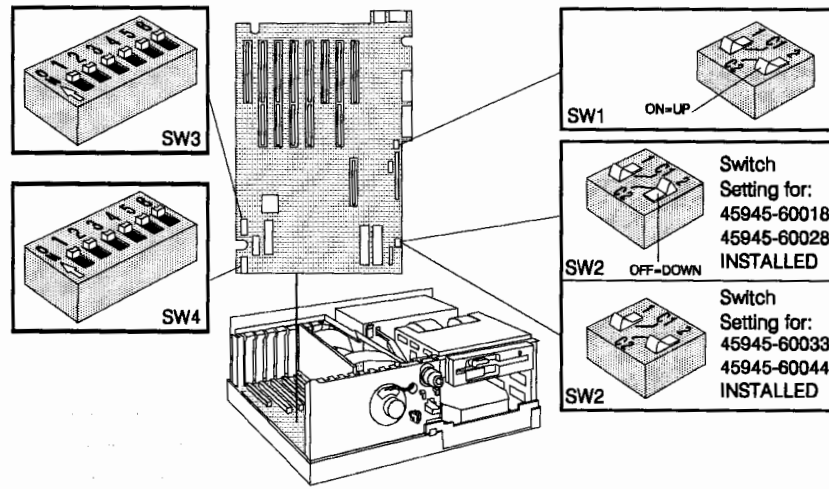
Mass Storage

Flexible Disk 360 KB 5-1/4 inch	45811A
Flexible Disk 1.2 MB 5-1/4 inch	45812A
Flexible Disk 1.44 MB 3-1/2 inch	D1667A
ST-225 20 MB Hard Disk	D1296A
ST-251 40 MB Hard Disk	D1297A
ESDI 330 MB Hard Disk	D1660A
ESDI 670 MB Hard Disk	D1661A
IDE 42 MB Hard Disk	D1665A
IDE 84 MB Hard Disk	D1666A
IDE 120 MB Hard Disk	D1679A
IDE 168 MB Hard Disk	D1680A

Datacomm and LAN Boards

Serial Parallel Board	24540B
Dual Serial Board	24541B
Modem 1200 baud	24550A
Modem 2400 baud	24551A
Ethertwist PC Link Adapter	27245A
Ethertwist Adapter/16	27247A
Ethertwist Adapter/16	27247B
HP ThinLAN Board	27250A
Terminal Multiplexor	D2040A

System Board, BIOS, and Memory



Switch Bank SW1—Option ROMs and Coprocessor Clock

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Switch # ¹	Function—default ON	
C1	ON	Option ROMs OFF
	OFF	Option ROMs ON—mapped into E000 h to EFFF h
C2	ON	80287 uses system clock frequency
	OFF	80287 uses system clock divided by three

¹ ON = switch up; OFF = switch down

HP Vectra ES and ES/12 PCs

Switch Bank SW2—Clock Source and Wait States

Switch # ¹		Function—leave at the factory default setting
C1	ON	On the 45945-60018 Board or 45945-60028 Board
C2	OFF	
Alternatively . . .		
C1	ON	On the 45945-60033 Board or 45945-60044 Board
C2	ON	

1 ON = switch up; OFF = switch down

Switch Bank SW3—Base Memory, Backplane Speed, Fast Boundary and HP-HIL

Switch #		Function—default ON		
1 & 2		1	2	Base Memory
		ON	ON	640KB
		OFF	OFF	512KB
		ON	OFF	256KB
3	ON	I/O channel speed 8 MHz		
	OFF	I/O channel speed 12 MHz		
4	ON	Fast boundary at 640KB		
	OFF	Fast boundary at 512KB		
5	ON	HP-HIL (XBIOS) enabled		
	OFF	HP-HIL disabled		
6	ON	Reserved (leave at factory default setting)		



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Switch Bank SW4—Memory Address Limit and Adapter Board Speed

Switch #		Function—default ON
1	ON	Extended memory address range upper limit of: 000000h. Alternative configurations for these switches are listed in the next table.
2		
3		
4		
5		
6	ON	16-bit adapter boards using MEMCS16 signal operate at 8 MHz
	OFF	16-bit adapter boards using MEMCS16 signal operate at 12 MHz

HP Vectra ES and ES/12 PCs

Switch Bank SW4—Extended Memory Address Range

1	2	3	4	5	Upper Limit
ON	ON	ON	ON	ON	000000 h (default)
OFF	ON	ON	ON	ON	07FFFF h
ON	OFF	ON	ON	ON	0FFFFFF h
OFF	OFF	ON	ON	ON	17FFFF h
ON	ON	OFF	ON	ON	1FFFFFF h
OFF	ON	OFF	ON	ON	27FFFF h
ON	OFF	OFF	ON	ON	2FFFFFF h
OFF	OFF	OFF	ON	ON	37FFFF h
ON	ON	ON	OFF	ON	3FFFFFF h
OFF	ON	ON	OFF	ON	47FFFF h
ON	OFF	ON	OFF	ON	4FFFFFF h
OFF	OFF	ON	OFF	ON	57FFFF h
ON	ON	OFF	OFF	ON	5FFFFFF h
OFF	ON	OFF	OFF	ON	67FFFF h
ON	OFF	OFF	OFF	ON	6FFFFFF h
OFF	OFF	OFF	OFF	ON	77FFFF h
ON	ON	ON	ON	OFF	7FFFFFF h
OFF	ON	ON	ON	OFF	87FFFF h
ON	OFF	ON	ON	OFF	8FFFFFF h
OFF	OFF	ON	ON	OFF	97FFFF h
ON	ON	OFF	ON	OFF	9FFFFFF h
OFF	ON	OFF	ON	OFF	A7FFFF h
ON	OFF	OFF	ON	OFF	AFFFFFF h
OFF	OFF	OFF	ON	OFF	B7FFFF h
ON	ON	ON	OFF	OFF	BFFFFFF h
OFF	ON	ON	OFF	OFF	C7FFFF h
ON	OFF	ON	OFF	OFF	CFFFFFF h
OFF	OFF	ON	OFF	OFF	D7FFFF h
ON	ON	OFF	OFF	OFF	DFFFFFF h
OFF	ON	OFF	OFF	OFF	E7FFFF h
ON	OFF	OFF	OFF	OFF	EFFFFFF h
OFF	OFF	OFF	OFF	OFF	F7FFFF h

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Setup and BIOS History

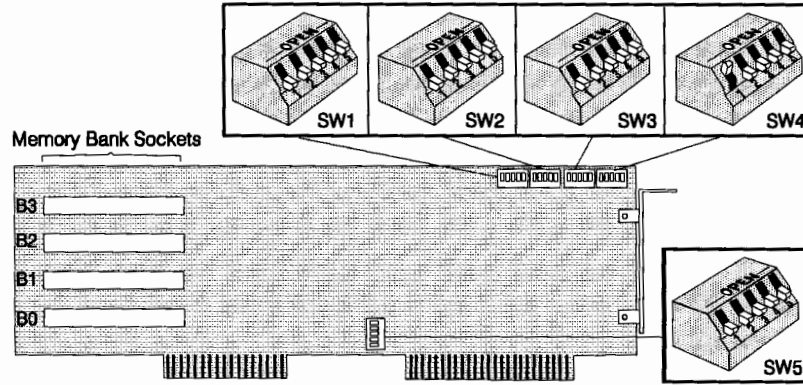
Setup version "B.xx.xx" is used on Vectra ES and ES/12 PCs.

BIOS Ver.	Date	Description	Kit Part No.	Min Setup
Vectra ES PCs				
HP Vectra ES PC				
B.02.01	Oct 87	First release	-	Any "B" version
B.02.02	Mar 88	Provides support for Industry Standard 1/2 height ESDI drives	ROM 0: 1818-4425 ROM 1: 1818-4426	
HP Vectra ES/12 PC				
B.02.01	Oct 87	First release	-	Any "B" version
B.02.02	Mar 88	Provides support for Industry Standard 1/2 height ESDI drives	-	
B.02.03	Oct 89	Provides support for IDE drives and compatibility fixes for 3rd party hard disks and video boards (Orchid VGA & Number 9's PRO1280 VGA board)	ROM 0: 1818-4783 ROM 1: 1818-4784	

**Expanded Memory Board (45944A)
for the HP Vectra ES & ES/12 PCs**

Expanded Main Memory Board (45944A)

The HP Vectra ES system board has 640 KB of main memory. The HP 45944A Main Memory Extension Board can be installed in slot 8 to add up to 8 MB of main memory to the ES PCs.



Memory Board Switches

The board is configured by five switch banks. The default switch settings are all CLOSED (OFF), except SW4 position 1 which is OPEN (ON)—shown in bold text in the following tables. This configuration uses all of the main memory modules as expanded memory.

Assigning the I/O Port Address. The I/O port address is set using switch bank 1.

Switch Bank SW1—I/O Port Address (ON = OPEN)

1	2	3	4	5	I/O port address
OFF ¹	OFF	OFF	OFF	OFF	208 h (default)
Not used	OFF	OFF	OFF	ON	218 h
	OFF	ON	OFF	OFF	248 h
	OFF	ON	OFF	ON	258 h
	OFF	ON	ON	OFF	268 h
	ON	OFF	ON	OFF	2A8 h
	ON	OFF	ON	ON	2B8 h
	ON	ON	ON	OFF	2E8 h
	ON	ON	ON	ON	2F8 h

¹ Switch OFF = CLOSED



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**Expanded Memory Board (45944A)
for the HP Vectra ES & ES/12 PCs**

Assigning Extended Memory. Switch bank SW2 and switch bank SW4 set the size of extended memory.

Switch Bank SW2—Stop Address (ON = OPEN)

1	2	3	4	End Address of Extended Memory	5
OFF	OFF	OFF	OFF	1 MB (default)	OFF—disable last 128 KB of Extended memory or ON—enable last 128 KB of Extended memory
ON	OFF	OFF	OFF	2 MB	
OFF	ON	OFF	OFF	3 MB	
ON	ON	OFF	OFF	4 MB	
OFF	OFF	ON	OFF	5 MB	
ON	OFF	ON	OFF	6 MB	
OFF	ON	ON	OFF	7 MB	
ON	ON	ON	OFF	8 MB	
OFF	OFF	OFF	ON	9 MB	
ON	OFF	OFF	ON	10 MB	
OFF	ON	OFF	ON	11 MB	
ON	ON	OFF	ON	12 MB	
OFF	OFF	ON	ON	13 MB	
ON	OFF	ON	ON	14 MB	
OFF	ON	ON	ON	15 MB	
ON	ON	ON	ON	16 MB	

Switch Bank SW4—Start Address (ON = OPEN)

1	2	3	4	5	Start Address of Extended Memory
ON	OFF	OFF	OFF	OFF	1 MB (default)
OFF	ON	OFF	OFF	Not used	2 MB
ON	ON	OFF	OFF		3 MB
OFF	OFF	ON	OFF		4 MB
ON	OFF	ON	OFF		5 MB
OFF	ON	ON	OFF		6 MB
ON	ON	ON	OFF		7 MB
OFF	OFF	OFF	ON		8 MB
ON	OFF	OFF	ON		9 MB
OFF	ON	OFF	ON		10 MB
ON	ON	OFF	ON		11 MB
OFF	OFF	ON	ON		12 MB
ON	OFF	ON	ON		13 MB
OFF	ON	ON	ON		14 MB
ON	ON	ON	ON		15 MB

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**Expanded Memory Board (45944A)
for the HP Vectra ES & ES/12 PCs**

Extended memory must be configured in increments of 2 MB:

- Switch bank 2 sets the Stop (end) address of extended memory.
- Switch bank 4 sets the Start address.

For example, if the Start address is 1 MB, and you want to assign 4 MB of extended memory, set the End address to 5 MB. If the Start address is 4 MB, and you want to assign 2 MB to extended memory, set the End address to 6 MB.

Assigning Memory Banks. Switch bank 3 assigns the memory to either expanded or extended memory, depending on how you set switch banks 2 and 4. (The main memory banks are labeled B0, B1, B2, and B3.)

If the switch bank SW2 End address is less than or equal to the switch bank SW4 Start address, ALL main memory banks are assigned to Expanded memory.

If the End address is greater than the Start address, main memory banks are assigned to Expanded memory according to the setting of switch bank SW3.

**Switch Bank SW3—Assign Main Memory Banks
(ON = OPEN)**

1	2	3	4	5	Assign Main Memory Banks
OFF	OFF	OFF	OFF	OFF	All expanded memory (default)
ON	OFF	Not used			B0 expanded memory B1, B2, and B3 extended memory
OFF	ON	Not used			B0, B1 expanded memory B2, B3 extended memory
ON	ON	Not used			B0, B1, and B2 expanded memory B3 extended memory

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Assigning Substitute Memory, Parity, and Processor Speed. Switch bank SW5 can be used to set the amount of Base memory replaced with Expanded memory. The amount of Expanded memory configured with switch bank SW5 must correspond to the Base memory setting of switch bank SW3 on the Vectra ES system board.

For example, if you used the default switch bank SW5 setting (all switches off) to replace Base memory between 256 KB and 640 KB with expanded memory, switch bank SW3 on the Vectra ES system board must be set to a Base memory of 256 KB. Refer to the following table.



**Expanded Memory Board (45944A)
for the HP Vectra ES & ES/12 PCs**

**Switch Bank SW5—Substitute Memory, Parity, and
Processor Speed (ON = OPEN)**

Switch #	Function—default OFF		
1 & 2	1	2	Base Memory Replaced with Expanded Memory
	OFF	OFF	256 KB to 640 KB
	ON	OFF	256 KB to 512 KB
	OFF	ON	512 KB to 640 KB
	ON	ON	No backfill memory
3	OFF	Parity checking enabled	
	ON	Parity checking disabled	
4	OFF	PC uses 12 MHz processor (Vectra ES/12)	
	ON	PC uses 8 MHz processor	
5	OFF	Reserved (leave at factory default setting)	

Main Memory Board

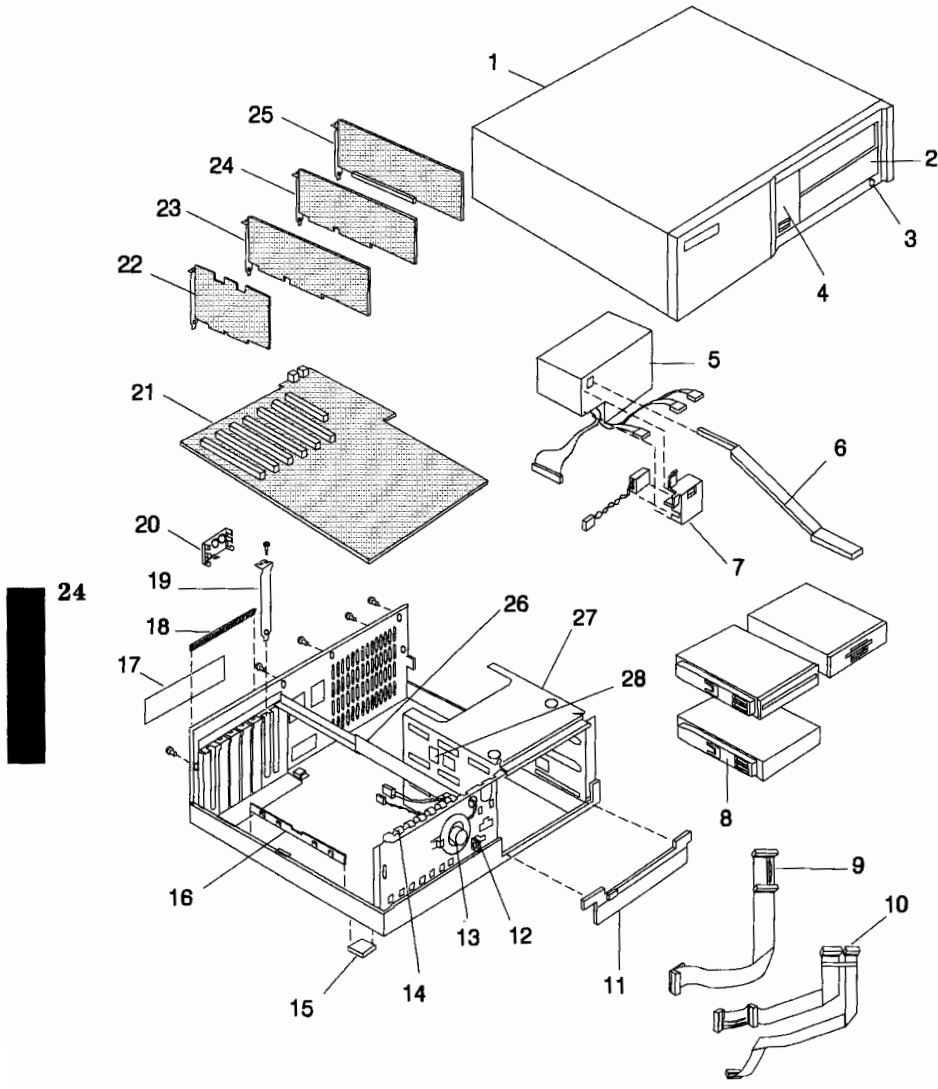
This board can provide 2 MB, 4 MB, or 8 MB of expanded memory using combinations of 1-MB main memory modules.

Main Memory Configuration

For a TOTAL mem of:	Install Main Memory Modules in These Banks (each bank has two sockets):								Using This Upgrade Kit
	B0	B0	B1	B1	B2	B2	B3	B3	
2 MB	1 MB	1 MB							45944A option # 001
4 MB	1 MB	1 MB	1 MB	1 MB					45944A option # 002
8 MB	1 MB	1 MB	1 MB	1 MB	1 MB	1 MB	1 MB	1 MB	45944A option # 003

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Part Numbers



HP Vectra ES & ES/12 PCs

Parts List for HP Vectra ES and HP Vectra ES/12 PCs

Item	Description	Repl. Part Number
1	Top Cover-Bezel Assembly ¹	45945-60214
2	Disk Drive Cover Plate	45935-40008
3	Light Pipe	45945-40003
4	Front Bezel Insert	45935-40004
5	Keylock Front Bezel Insert	5041-2533
5	Power Supply	0950-2190
6	Power Switch Shaft	5041-1057
7	Battery Assembly:	-
	Battery	45935-60201
	Battery Bracket	45945-40006
8	5.25-inch Disk Mounting Tray	D1445-60001
	3.5-inch Disk Mounting Tray	D1665-60003
9	Flexible Disk Drive Cable, 3.5 & 5.25-inch disk	5181-5623
10	Hard Disk Cable:	
	Dual Hard Disk Cable (for ESDI/ST-506 drive)	5181-5646
	Hard Disk Cable (for 2nd ESDI/ST-506 drive)	5061-8981
	Hard Disk Cable (for IDE drive)	5181-5670
11	Drive Door	45945-40004
12	LED Assembly	D1173-60002
	LED Holder	1400-1461
13	Speaker Assembly	02620-60016
14	Board Guide	45945-40005
15	Bumper Foot	45935-40011
16	Side Panel Clip	45945-00011
17	Serial Label	5181-4805
18	Rear panel RFI clip	5181-0596
19	I/O Panel, Blank	45935-00004
20	Rear Panel Adapter	5001-4221

1 Includes the front bezel and computer cover.

HP Vectra ES & ES/12 PCs

Parts List for HP Vectra ES and HP Vectra ES/12 PCs (continued)

Item	Description	Repl. Part Number
21	System Board	See PC's Part list
22	Video Board	
23	Disk Controller Board	
25	Memory Board	
26	Chassis Stiffener	45945-00007
27	Chassis Assembly and Base (includes Bumper Foot, Speaker, I/O Panel and Light Pipe)	5062-2650
28	Cable Clamp	1400-1365
	Screws:	
	Screw, Tapping	0624-0704
	Screw	0624-0719
	Screw, Machine 6-32	2360-0312
	Screw, Machine 6-32 Pilot Point	2360-0514
	Screw, Plastite 8-16	2680-0310
	Screw, TORX/Flat 6-32, or	2680-0311
	RFI Clips:	
	Power Supply Clip	5001-4213
	Flexible Disk Drive Clip	5001-4214
	Front Bezel Clip	5001-4215
	I/O Clip	5001-4216
	Hard Disk Drive Clip	5001-4217
	Keyboard Ground Clip	5001-4218
	Power Connector Adapter Cable	5062-5550

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Vectra ES PC Parts

Parts List for HP Vectra ES and HP Vectra ES/12 PCs

Description	Repl. Part Number	Exchange Part Number
System Boards:		
Vectra ES and ES/12 below serial #2841	45945-63038	45945-69038
Vectra ES and ES/12 above serial #2841	45945-63054	45945-69054
Video Boards (any slot):		
HP EGA Board (45983A)	45983-60001	1150-1784
HP VGA Board (D1180A) See Vectra Accessories—Part Numbers for Video Boards	-	-
Multimode Video Adapter	45981-60010	45981-69010
Multimode Color Adapter	45984-60002	-
Dan./Nor. Multimode Video Adapter	45981-60011	-
Mono. Plus Video Adapter	35732-60001	-
Disk Controller Boards (slot 7):		
ST-506 Four-Function Controller Board	45945-60013	45945-69023
IDE Multifunction Controller Board	D2384-63031	D2384-69021
Datacomm Controller Boards (any slot):		
Serial/Parallel Board (24540B)	24540-60031	-
Dual Serial Board (24541B)	24541-60031	-
Memory Board (slot 8):		
Expanded Memory Board (45944A)	45944-60010 ¹ 45944-60001 ²	-
Memory module:		
1-MB memory module (For 45944A)	1818-4271	-
Processors:		
286 12 MHz Processor (ES/12)	1820-5601	-
286 8 MHz Processor (ES)	1820-5246	-
Math Coprocessor:		
287 (ES and ES/12)	1820-4848	-
BIOS ROM:		
Vectra ES ROM 0	1818-4425	-
Vectra ES ROM 1	1818-4426	-
Vectra ES/12 ROM 0	1818-4783	-
Vectra ES/12 ROM 1	1818-4784	-
Nameplates:		
HP Vectra ES Logo	45945-00005	-
HP Vectra ES/12 Logo	45945-00004	-



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- 1 Without main memory modules
- 2 With 2x 1-MB main memory modules

Vectra ES PC Parts

**Parts List for HP Vectra ES and HP Vectra ES/12 PCs
(continued)**

Description	Repl. Part Number	Exchange Part Number
Support Manuals:		Part Number
Service Manual		D1211-60003
Technical Reference Manual: Hardware and BIOS		5061-8982

Part Numbers for HP Utility Diskettes

Description	Rev	Date Code	Part #	Info.
Vectra ES Setup & Utilities Disks:				
3.5-inch disk	C.01.03	3139	Available on HP PC Internal BBS	Setup version B.06.01
5.25-inch disk				

Notes: _____

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HP Vectra POST Routine and Error Codes

POST (Power-On Self-Test) Routine

This appendix details POST and error messages common to most Vectra PCs. Certain models of the HP Vectra may have a slightly different POST. If the POST of a Vectra is very different, the error messages are provided in the chapter describing that Vectra. See the chapter contents list for error code entries.

POST No.	Power-On Self-Test Name
1	LED Test
2	Processor Test
3	System (BIOS) ROM Test
4	RAM Refresh Timer Test
5	Interrupt RAM Test
6	Shadow the System ROM BIOS
7	CMOS RAM Test
8	Internal Cache Memory Test
9	Initialize the Video Card
10	Test External Cache
11	Shadow Option ROMs
12	Memory Subsystem Test
13	Initialize EISA/ISA Hardware
14	8042 Self-Test
15	Timer 0/Timer 2 Test

A 

POST No.	Power-On Self-Test Name
16	DMA Subsystem Test
17	Interrupt Controller Test
18	RAM Address Line Independence Test
19	Size Extended Memory
20	Real-Mode Memory Test (First 640 K)
21	Shadow RAM Test
22	Protected Mode RAM Test (Extended RAM)
23	Real-Time Clock Test
24	Keyboard Test
25	Mouse Test
26	Hard Disk Test
27	LAN Test
28	Flexible Disk Controller Subsystem Test
29	Internal Numeric Coprocessor Test
30	Weitek Coprocessor Test
31	Clock Speed Switching Test
32	Serial Port Test
33	Parallel Port Test

A For more information on the POST routines, refer to the PCs' reference manual.

Error Codes

Error Code (hex):	Description:
000F	Microprocessor error
001X	BIOS ROM Error
008X	Video ROM Error
009X 00AX 00BX	Option ROM Error while testing address range C800-DFFFh
00CX 00DX	Option ROM Error while testing address range E000-EFFFh
011X	RTC Error while testing the CMOS register
0120 0130	RTC Error RTC/System Configuration Error
0240	CMOS Memory/System Configuration Error
0250	Invalid Configuration
0241 0280	CMOS Memory Error
02C0 02C1	EEPROM Error
02D0	Serial # not present
030X 0311 0312 032X 033X 03E0 03E1 03E2 03E3 03E4 03EC	Keyboard/Mouse Controller Error
034X 035X	Keyboard Test Failure
03E5 03E6 03E7 03E8 03E9 03EA 03EB	Mouse Test Failure

A



Error Code (hex):	Description:
0401	Protected Mode Failure
050X 0510 0520	Serial Port Error
0543 0545	Parallel Port Error
0506 0546	Datacomm Conflict
06XX	Keyboard Key Stuck
07XX	Processor speed error
0800	Boot ROM Conflict
0801	Boot ROM Not Found
081X	Integrated Ethernet Interface Errors
0900	Fan Error
110X 1200 1201	Timer Error
20XA	Memory Mismatch
21XX 22XX	DMA Error
30XX	HP-HIL Error ¹
4XXX 5XXX	RAM Error
61XX	Memory Address Line Error
62XX	RAM Parity Error/memory Controller Error
630X 6400	RAM Test Error
6500	BIOS ROM Shadowing Error
6510	Video BIOS Shadowing Error/system ROM Error
6520	Option ROM Shadowing Error
65A0 65B0 65C0 65D0 65E0 65F0	Shadow Error probably caused by system board memory
66XX	Shadow Error probably caused by memory on accessory board
7XXX	Interrupt Error

1 Only for HP-HIL PCs (ES, QS and RS)

A-4 HP Vectra POST Routine and Error Codes

Error Code (hex):	Description:
8003 8005/6	Bad Drive Configuration
8004 8007	CMOS Drive/System Configuration Error
8X0D 8X10 8X12 8X20 8X21 8X38 8X3C 8X40 8X45	Controller Busy/Controller Error
8X0E	Hard Disk Error
8X0F	Hard Disk Drive Mismatch
8X11 8X13 8X30 8X39 8X3A 8X3B 8X41 8X42 8X43 8X44 8X49 8X4B	Hard Disk Drive Control Error
8X28	Hard Disk Drive Splitting Error
8048 804A	Hard Disk Drive Identity Error
8050	Hard Disk Drive Controller Conflict
84XX	Bad Boot Sector
9XXX	Flexible Disk Drive Error
9X0A 9X10	Flexible Disk Drive Conflict
A00X	Numeric Coprocessor Error
B300	Cache Controller Error
B320	Memory Cache Module Error
CXXX	Extended RAM Error ¹
EXXX	Bus Memory Error

1 Only for HP-HIL PCs (ES, QS and RS)

A



HP Vectra Hardware IRQs and Memory Map

HP Vectra Interrupts (IRQs) and I/O Addresses

These Interrupts and I/O addresses are common to most HP Vectras. The exceptions for each Vectra are described in the Vectras individual chapter. For example, the HP Vectra 486VL is described in Chapter 6.

Interrupt Vector # Hex	Interrupt Vector Address Hex	IRQ	Typical Function	I/O Port Hex
08	20-23	IRQ 0	Timer	040-043
09	24-27	IRQ 1	Keyboard controller chip	060, 064
0A	28-2B	IRQ 2	Cascade from INTC2 ¹	-
0B	2C-2F	IRQ 3 ²	Serial Port 1 ³ (COM2)	2F8-2FF
0C	30-33	IRQ 4	Serial Port 0 ³ (COM1)	3F8-3FF
0D	34-37	IRQ 5 ²	Parallel Port 1 ⁴ (LPT2)	278-27F
0E	38-3B	IRQ 6	Flexible Disk Controller	3F0-3F7
0F	3C-3D	IRQ 7	Parallel Port 0 ⁴ (LPT1)	378-37F

1 INTC2: interrupt controller 2, also known as PIC #2 (programmable interrupt controller 2).

2 By default the network software may configure your LAN board to use IRQ3. If Serial port 1 is being used by a printer/plotter then the LAN board must be re-configured to use IRQ5 (if this is available).

3 The BIOS references serial ports as Serial Port 0 to Serial Port 3. MS-DOS references the serial ports as COM1 to COM4. In addition, MS-DOS only counts the serial ports that are present. For example, if Serial Ports 0, 1 and 2 are present, MS-DOS calls them COM1, COM2, and COM3 respectively. If only Serial Port 3 is present, MS-DOS calls it COM1.

4 The BIOS references parallel ports as Parallel Port 0 and Parallel Port 1. MS-DOS references the parallel ports as LPT1 and LPT2. In addition, MS-DOS only counts the parallel ports that are present. For example, if Parallel Ports 0 and 1 are present, MS-DOS calls them LPT1 and LPT2 respectively. If only Parallel Port 1 is present, MS-DOS calls it LPT1.

Interrupt Vector # Hex	Interrupt Vector Address Hex	IRQ	Typical Function	I/O Port Hex
70	1C0-1C3	IRQ 8	Real-time Clock	070-071
71	1C4-1C7	IRQ 9	VGA controller	
72	1C8-1CB	IRQ 10	Serial Port 2 (COM3)	3E8-3EF
73	1CC-1CF	IRQ 11	Serial Port 3 (COM4)	2E8-2EF
74	1D0-1D3	IRQ 12	mini-DIN Mouse or HIL	Mouse: 060, 064 HP-HIL: 068, 06C to 06F
75	1D4-1D7	IRQ 13	Math coprocessor	0F0-0FF
76	1D8-1DB	IRQ 14	Hard Disk Controller	1F0-1F7
77	1DC-1DF	IRQ 15	Reserved	-

For more information on a PC's address space, memory map, a list of the interrupts, IRQ numbers and I/O addresses currently used by a PC. You can use the Microsoft Diagnostic utility supplied with Windows version 3.1, MS-LAN Manager version 2.10 or more recently MS-DOS version 6.0.

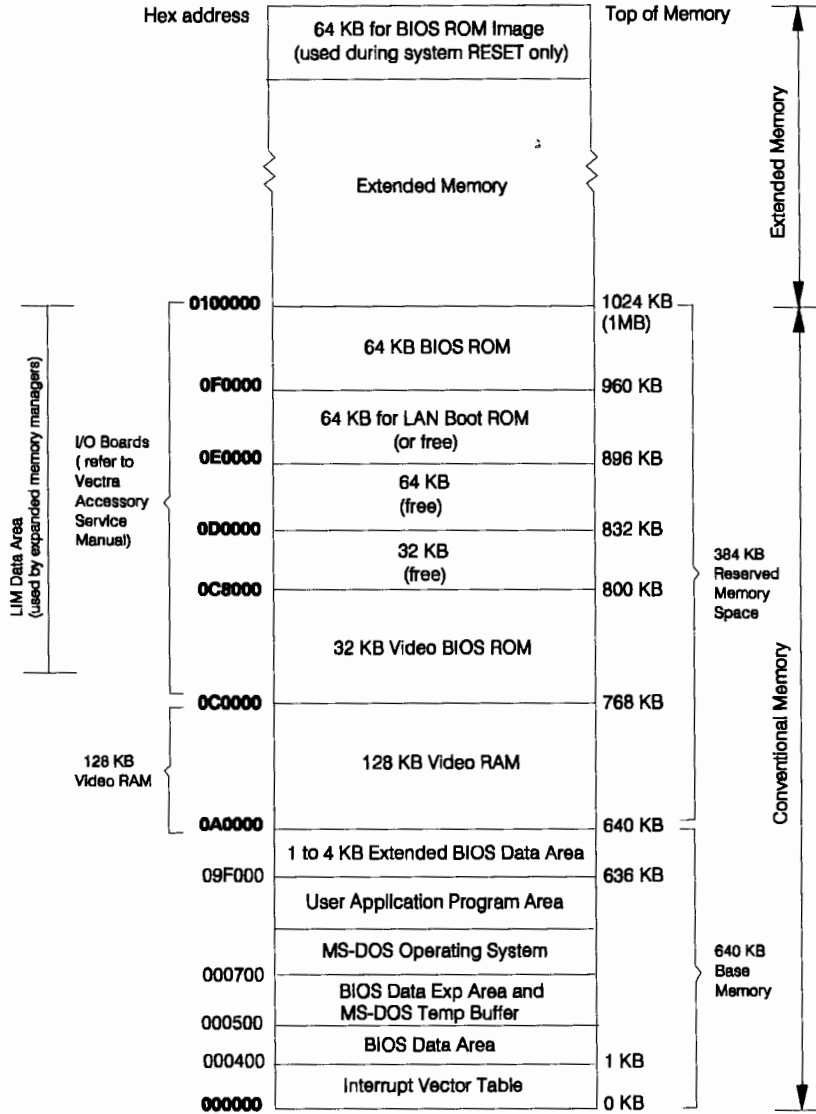
To start the utility, type MSD **(Enter)**.

For more information about the Microsoft diagnostic utility (MSD.EXE), refer to Appendix C of this handbook.

B

B-2 Hardware IRQs and Memory Map

HP Vectra Memory Map



B

HP Utilities and DOS Quick Reference

This chapter provides information on some useful MS-DOS commands and HP utilities. For the latest information about commands for your version of MS-DOS refer to the *MS-DOS User Reference* manual.

Microsoft Diagnostic Utility (MS-DOS 6.0, MS-Windows 3.1, MS-LAN Manager 2.10 and above)

The Microsoft diagnostic utility provides detailed technical information about the PC under the following categories.

Computer	Displays computer manufacturer, processor type, and bus type; ROM BIOS manufacturer, version and date; keyboard type; DMA controller configuration; and math coprocessor status.
Memory	Displays a map of the upper memory area (UMA)—the memory region from 640K to 1024K.
Video	Shows your video card manufacturer, model, and type; video BIOS version and date; and current video mode.
Network	Displays network-specific configuration information.
Operating System	Displays the operating system version, location of MS-DOS in memory, the drive the computer was started from, the current environment settings, and the path from which MSD was run.
Mouse	Shows the MS-DOS mouse driver version, mouse type, mouse interrupt request line (IRQ) number, and other information specific to the configuration of the mouse.
Other Adapters	Displays the game card status for up to two game devices or joysticks.
Disk Drives	Displays the size and number of bytes free on local and remote drives.
LPT Ports	Displays the port addresses of all installed parallel ports, and displays the status of each port.
COM Ports	Displays the port addresses and current communications parameters of all installed serial ports, and displays the status of each port.
IRQ Status	Displays the configuration of the hardware IRQs.
TSR Programs	Displays the name, location in memory, and size of each program loaded in memory at the time MSD was run.
Device Drivers	Displays the names of all device drivers installed at the time MSD was run.

Starting the diagnostic utility

If you want to examine some technical information about the PC, start the diagnostic utility by typing the following at the command prompt:

```
MSD 
```

The utility has an interface that makes it easy for you to access detailed technical information about the PC.

Creating a report

If you want to create a file called REPORT.TXT that contains a detailed technical report about the PC. To do this, you could type the following at the command prompt:

```
MSD /P REPORT.TXT 
```

If you want to create a detailed report about the PC and you wanted the report to include such information as your name, company, address, and phone number, you would type the following at the command prompt:

```
MSD /F REPORT.TXT 
```

MSD.EXE Switches	Description
/I	Specifies that MSD does not initially detect hardware. Use the /I switch if you are having problems starting MSD or if MSD is not running properly.
/F[drive:][path]filename	Prompts you for name, company, address, country, phone number, and comments, then writes a complete MSD report to the file you specify.
/P[drive:][path]filename	Writes a complete MSD report to the file you specify, without prompting you for information.
/S[drive:][path]filename	Writes a summary MSD report to the file you specify, without prompting you for information. If you do not specify any of the parameters, MSD writes the report to the screen.
/B	Runs MSD in black and white instead of color. Use the /B switch when you have a monitor that does not correctly display MSD in color.

C

Diagnostic Utility (HP)

The HP Vectra PC diagnostic utility is a low-level DOS-based hardware diagnostic utility. The following table summarizes which tests can be used on which PCs. Note that the diagnostic utility will not test third party accessories.

 C

Utilities—Diagnostics

PC ¹	Flex. Disk	Hard Disk	SCSI	Tape	Data-comm	Video	Mem-ory	SPU	Key-board ²	LAN
Classic Desktop Vectras³										
ES	Y	Y		Y						
QS	Y	Y		Y	Y	Y	Y	Y		
286/12	Y	Y		Y	Y	Y	Y	Y	Y	
386/25	Y	Y		Y	Y	Y	Y	Y	Y	
Low-Profile Desktop Vectras⁴										
386N	Y	Y	Y		Y	Y	Y	Y	Y	Y
386/33N & NI	Y	Y	Y		Y	Y	Y	Y	Y	Y
486N & NI	Y	Y	Y		Y	Y	Y	Y	Y	Y
N2	Y	Y	Y		Y	Y	Y	Y	Y	Y
Medium-Profile Desktop Vectras⁴										
486M & MI	Y	Y	Y		Y	Y	Y	Y	Y	Y
486XM	Y	Y	Y		Y	Y	Y	Y	Y	Y
486VL	Y	Y	Y		Y	Y	Y	Y	Y	Y
XP	Y	Y	Y		Y	Y	Y	Y	Y	Y
XM2	Y	Y	Y		Y	Y	Y	Y	Y	Y
VL2	Y	Y	Y		Y	Y	Y	Y	Y	Y
M2	Y	Y	Y		Y	Y	Y	Y	Y	Y
Full-Height Desktop Vectras										
386s	Y	Y	Y		Y	Y	Y	Y	Y	Y
486S/20	Y	Y	Y	Y	Y	Y	Y	Y	Y	
XU ⁴	Y	Y	Y		Y	Y	Y	Y	Y	Y
Deskside Vectras										
RS	Y	Y	Y ⁵	Y	Y	Y	Y	Y		
486	Y	Y	Y	Y	Y	Y	Y	Y	Y	

1 Vectra 486U and 486ST tests are not available. Use a third party test.

2 Keyboard interface test only (keyboard itself is not tested).

3 Tests for these Vectras are included with the Diagnostic Utility 5.25-inch diskette Rev: A.03.06 P/N 5063-0843.

4 Tests for these PCs are included with the Vectra Diagnostic Utility Rev: B.00.03 (available June '94 on HP Support BBS).

5 SCSI tests are only available on the RS/25C.

C

DOS Help (MS-DOS 5.0 and above)

For information on MS-DOS 5.0 command syntax, type *HELP command*.

For example, for help on the format command, type HELP FORMAT.

(For more information relevant to your version of MS-DOS, refer to the *MS-DOS User Reference* manual.)

EASY CONFIG—for desktide EISA PCs (HP)

EASY CONFIG is used on HP Vectra 486, 486/25T and 486/33T EISA-bus computers. When you install boards and options in an EISA computer, or change the amount of memory installed, you must reconfigure the computer with the EASY CONFIG utility.

EASY CONFIG examines the details of all the boards and options installed, to determine the best conflict-free configuration. This configuration is saved in a file called SYSTEM.SCI.

To run EASY CONFIG, enter either

SD

or

CF

Running *CF* bypasses the main EASY CONFIG menu and jumps directly to: *Configure computer - advanced method*

Advanced method allows you to add, remove, or move all types of boards, to change the functions and resources on these boards, and to look at more detailed information about them.

EASY CONFIG options

- /B* this option should be used with any *non-standard* display.
- /E* sets Easy Configuration mode—*only works with CF*.
- /F* sets Fast Configuration mode—*only works with CF*.
- /H* displays hi-resolution text on EGA and VGA displays.
- /K* disables the mouse during EASY CONFIG sessions.
- /M* enables monochrome display of EASY CONFIG screens.
- /N* runs EASY CONFIG in "Modeling Mode". This mode can be used to create an alternative SYSTEM.SCI system configuration file. *This only works with CF*.
- /T* displays a detailed view of the present configuration. *This only works with CF*.

C

EDIT Editor (MS-DOS 5.0 and above)

EDIT is the MS-DOS 5.0 editor.

To create a new file:

1. Type *EDIT* **(Enter)**
2. Press **(Esc)** to view the first text screen.

To edit an existing file:

1. Type *EDIT filename* **(Enter)**
2. Press **(Alt)** and the appropriate key to activate menus.
3. To obtain help about using the editor, press **(Alt) (H)**.
4. To exit EDIT, press **(Alt) (F)**.
 - a. To quit EDIT, type *x*.
 - b. To *save changes* you made to the text, type *y*.

EDLIN Editor (MS-DOS 4.0 and earlier)

EDLIN is the MS-DOS line editor.

To create a new file:

1. Type *EDLIN newfilename* **(Enter)**
2. Type *i* **(Enter)** to begin inserting text.
3. Press **(Enter)** to move to a new line.

To edit an existing file:

1. Type *EDLIN filename* **(Enter)**
2. Type *p* **(Enter)** to view the first page of text.
3. Type *line-number* **(Enter)** to edit that line,
or type *#i* **(Enter)** to insert a line after the last line in the text.
4. Press **(Ctrl) (C)** when you have finished editing text.
5. Type *q* **(Enter)** to quit EDLIN *without saving changes* to the text.
6. Type *e* **(Enter)** to quit EDLIN and *save changes* you made to the text.

(For more information relevant to your version of MS-DOS, refer to the *MS-DOS User Reference* manual.)

EXMODE Utility (HP)

EXMODE can be used to temporarily change the processor speed, keyboard click volume, or the cache memory. On the HP Vectra 486N, it can also set the HP identifier in the BIOS shadow RAM.

EXMODE lists the EXMODE commands available on the PC.

EXMODE SPE speed

speed is the computers speed—possible speeds are:

- *LOW* 8 MHz
- *HIGH* highest speed of the computer
- *AUTO* “HIGH” with automatic switch to “LOW” for diskette access

If no speed is specified, the current setting is displayed.

On 486U and 486ST PCs possible values can be any number between 1 and the processor speed in MHz. If <6 MHz is used, the computer can only read data from diskettes. It cannot format or write data to diskettes.

If you have one application only that needs to run at low speed to access the flexible disk drive, use Setup to set the computer to the highest speed. Then add *EXMODE SPEED LOW* to the batch file that starts the application. For example:

```
EXMODE SPEED LOW
APPLIC.EXE
EXMODE SPEED HIGH
```

EXMODE CLI volume

volume is a number between 0 and 15 for the click volume. 0 is inaudible and 15 is maximum volume.

EXMODE MEM setting

setting is the state of the cache memory, when applicable. Can be *ON* or *OFF*.

EXMODE HP setting

setting is the state of the HP identifier in the BIOS shadow RAM. (HP Vectra 486N Series only.) A soft reset will not change the state of the identifier. Can be *ON* or *OFF*.

C

FORMAT Command (MS-DOS)

FORMAT is an external DOS command used to prepare a disk for use.

FORMAT drive /1 /4 /8 /N:sectors /T:tracks /V:label /S

FORMAT drive /1 /B /N:sectors /T:tracks

FORMAT drive /V:label /F:size /S

DOS 5.0: *FORMAT drive /V:label [/Q] [/U] /F:size [B/S]*

- /1* formats 5.25-inch diskettes as single-sided (160/180 KB single-sided and 320/360 KB double-sided diskettes only)
- /4* formats 5.25-inch single- and double-sided diskettes in a high density (1.2 MB) drive (160/180 KB single-sided and 320/360 KB double-sided diskettes only)
- /8* formats a diskette with only eight sectors per track (160/180 KB single-sided and 320/360 KB double-sided diskettes only)
- /N:sectors* specifies number of sectors per track. Specify 9 for a 3.5-inch 720 KB diskette. Always use */T: tracks* with */N: sectors*. (When possible, use */F* instead of */N*.)
- /T:tracks* specifies number of tracks per side. Specify 80 for a 3.5-inch 720 KB diskette. Always use */T: tracks* with */N: sectors*. (When possible, use */F* instead of */T*.)
- /V:label* assigns "label" as the volume label for the diskette (or disk).
- /F:size* specifies the size of the diskette to format. *Size* can be one of the following: 160 KB, 180 KB, 320 KB, 720 KB, 1.2 MB or 1.44 MB; and for DOS 5.0, 2.88 MB 3.5-inch. */T: tracks* and */N: sectors* cannot be used with this parameter.
- /B* formats a disk with eight sectors per track and reserves space for DOS bootstrap information to be written to it using the *SYS* command. This parameter provides backward compatibility for earlier versions of MS-DOS. Do not use */B* and */S* together.
- /S* writes system bootstrap information to the disk when the format has completed.
- /Q* (DOS 5.0) quick format—deletes the file allocation table but does not check the disk for bad sectors
- /U* (DOS 5.0) unconditional formatting—destroys existing data on the disk.

(For more information relevant to your version of MS-DOS, refer to the *MS-DOS User Reference* manual.)

Memory Managers



MemMaker (DOS 6.0 and above)

For PCs with DOS 6.0 and above use MemMaker to optimize extended memory. This automatically detects the available memory and modifies the CONFIG.SYS, AUTOEXEC.BAT and WIN.INI files make the best use of it.

The MemMaker syntax is:

```
MEMMAKER [/B] [/BATCH] [/T] [/UNDO] [W:n,m]
```

For example, to run MemMaker in batch mode and direct it not to reserve any upper memory for Windows translation buffers, use the following command.

```
MEMMAKER /BATCH /W:0,0
```

If you wish to return to the previous configuration before running MemMaker, use the following command.

```
MEMMAKER /UNDO
```

(For more information relevant to your version of MS-DOS, refer to the *MS-DOS User Reference* manual.)

EMM386.EXE (DOS 5.0 and above)

EMM386.EXE is the MS-DOS 5.0 expanded memory manager for 386 and 486 PCs. It converts extended memory to expanded memory for programs that need expanded memory. If it is on the hard disk, it can be activated by including these default commands in the CONFIG.SYS file:

```
DEVICE=HIMEM.SYS
DEVICE=EMM386.EXE
```

Once activated it can be turned on/off by typing: *EMM386.EXE* [ON/OFF]

You will need to customize the EMM386.EXE syntax if you have an accessory board that uses reserved memory address space (such the ScanJet board). The EMM386.EXE syntax is:

```
DEVICE= [drive:] [path] EMM386.EXE [ON/OFF/AUTO] [MEMORY]
[W=ON/W=OFF] [Mx]FRAME=address/Pmmmm] [Pn=address]
[X= mmmm- nnnn] [I= mmmm- nnnn] [B= address] [L= minXMS]
[A= altrgs] [H= handles] [D= nnn] [RAM] [NOEMS]
```

C

Utilities—Memory Managers

The RAM and NOEMS options allow you to use lost upper memory bytes.

For more information relevant to your version of MS-DOS, refer to the *MS-DOS User Reference* manual.

HIMEM.SYS (DOS 5.0 and above)

HIMEM.SYS is the MS-DOS 5.0 extended memory manager. If it is on the hard disk, it can be activated by including this default command in the CONFIG.SYS file: *DEVICE=HIMEM.SYS*

HIMEM.SYS must be the first driver that uses extended or expanded memory in your CONFIG.SYS file.

The HIMEM.SYS syntax is:

```
DEVICE=[drive:] [path] HIMEM.SYS [/HMAMIN=m]  
[/NUMHANDLES=n] [/INT15=xxxx] [/MACHINE:xxxx]  
[/A20CONTROL:ON|OFF] [/SHADOWRAM:ON|OFF]  
[/CPUCLOCK:ON|OFF]
```

For more information relevant to your version of MS-DOS, refer to the *MS-DOS User Reference* manual.

HPMM.SYS (DOS 4.0 and earlier)

Note

It is recommended that you install EMM386.EXE in preference to HPMM.SYS.



HPMM.SYS is HP's expanded memory manager supplied with 386- and 486-based PCs.

If HPMM.SYS is on the hard disk, it can be activated by including this default command in the CONFIG.SYS file: *DEVICE=HPMM.SYS*

The HPMM.SYS syntax is:

```
DEVICE=[drive:] [path] HPMM.SYS [size] [state] [FRAME=nnnn]  
[W=on|off] [INCLUDE=xxxx-yyyy] [EXCLUDE=zzzz-aaaa] [EXT=nnnn]  
[DMA=nnn] [NOXRAM] [AMRS=xx] [NOHMA] [HMAMIN=nn]  
[RELOCATE=xxxx-yyyy]
```

You will not be able to run Windows 3.0 in 386 Enhanced Mode if the Weitek FPA support is enabled with *W=ON*.

For more information, refer to the documentation that came with the PC.

HPEMM.SYS (Vectra 286/12 PC)

HPEMM.SYS is HP's Expanded Memory Manager supplied with the HP Vectra 286/12 PC. If it is on the hard disk, it can be activated by including this default command in the CONFIG.SYS file:

DEVICE=HPEMM.SYS

The HPEMM.SYS syntax is:

*DEVICE=[drive:] [path] HPEMM.SYS [FRAME=nnnn]
[INCLUDE=xxxx-yyy] [EXCLUDE=zzz-aaaa] [EXT=nnnn] [NOXRAM]
[TEST] [HANDLES=nn] [CONTEXTS=nnn] [DEPTH=nn] [AUTOSIZE]*

For more information, refer to the documentation that came with the PC.

HPEMM386.SYS (Vectra RS and QS PCs)

Note

It is recommended that you install EMM386.EXE in preference to HPEMM386.SYS.



HPEMM386.SYS is HP's original Expanded Memory Manager for the HP Vectra RS and QS PCs. If it is on the hard disk, it can be activated by including this default command in the CONFIG.SYS file:

DEVICE=HPEMM386.SYS

The HPEMM386.SYS syntax is:

*DEVICE=[drive:] [path] HPEMM386.SYS [size] [state] [FRAME=nnnn]
[W=on|off] [INCLUDE=xxxx-yyy] [EXCLUDE=zzz-aaaa] [EXT=nnnn]
[DMA=nnn] [NOXRAM] [AMRS=xx] [LOWFRAME] [REBOOT] [NOHMA]
[NOWARMBOOT] [NUMHANDLES=nn] [HMAMIN=nn]*

For more information, refer to the documentation that came with the PC.

HPMODE Utility (Vectra QS and RS PCs)

HPMODE is supplied with PCs equipped with an HP-HIL interface.

HPMODE can be used to temporarily change the processor speed, cache memory, or the HP-Human Interface Link (if the EX-BIOS is present).

HPMODE SPE speed

speed is the PC speed:

LOW 8 MHz

HIGH highest speed of the computer

AUTO "HIGH" with automatic switch to "LOW" for flexible disk access

If no speed is specified, the current setting is displayed.

HPMODE MEM setting

setting is the state of the cache memory, when applicable.

Can be *ON* or *OFF*.

HPMODE HIL setting

setting can be *ON* or *OFF*.

HPROMInit Utility (HP)

The HPROMInit utility is supplied with HP Vectra 386/33N & NI, HP Vectra 486N & NI PCs, HP Vectra 486M & MI PCs and HP 486XM PCs.

It is used to update the system ROM and set the language for SETUP, the error message utility, and system error messages.

To re-initialize the system ROM:

1. If the HPROMInit utility is on the hard disk drive, copy it onto a "bootable" diskette as follows:
 - a. Insert a diskette in drive A, then type:
FORMAT A: /S **ENTER**
 - b. When the formatting has finished, type:
COPY C:\HPUTILS\HPINIT*. * A: **ENTER**
2. When the copying has finished, leave the diskette in drive A and press **Reset**. Wait for the ROM initialization procedure to finish.
3. Remove the HPROMInit diskette.
4. Switch the PC OFF and then ON.



HPUpdate Utility (HP)

HPUpdate is supplied on the Vectra HPUpdate diskette shipped with the HP Vectra 486s/20, 486U PC Series, and 486ST PCs.

HPUpdate can be used to update (flash) the BIOS into the FLASH ROM of the Vectra 486s/20, 486U PC Series, and 486ST PCs.

HPUVGA Utility (HP)

HPUVGA is supplied on the Vectra 486s/20, 486U PC Series, and 486ST PCs.

It can be used to manage UVGA on the 486s/20 and UVGA+ on the 486U PC Series and 486ST. For example, it can be used to identify the type of video, the amount of video memory, and the video BIOS version of the PC. It can also select a display, compatibility model, and resolution.

HPVIEW Utility (HP)

HPVIEW is supplied on the Vectra diskette #1 shipped with the HP Vectra 486U PC Series and 486ST PCs. It can be used to display and print out the PC's configuration.

MEM Command (MS-DOS)

MEM is an external DOS command, available since DOS 4.0, that displays the amount of used and free memory, lists allocated memory and free memory, and lists programs loaded.

MEM /P[ROGRAM] displays status of programs loaded in memory
MEM /D[EBUG] displays status of programs and internal drivers, and other information
MEM /C[LASSIFY] lists the size of programs and amount of memory used, and lists largest memory block used

For more information relevant to your version of MS-DOS, refer to the *MS-DOS User Reference* manual.

MODE Command (MS-DOS)

MODE is an external DOS command that sets the parameters for displaying device status, video display, serial communication, parallel printers, parallel output redirection, keyboard auto-repeat rate, and code page switching modes.

Serial Communication Mode

MODE COMn : BAUD=*b* PARITY=*p* DATA=*d* STOP=*s* RETRY=*ra*

- n* Serial port number—COM1, COM2, COM3, or COM4
- b* Baud rate—110, 150, 300, 600, 1200, 2400, 4800, 9600, or 19200 (only the first two digits of any value are required). Default: 2400.
- p* Parity—N (no), O (odd) or E (even). Default: E
- d* Data bits—5, 6, 7, or 8. Default: 7
- s* Stop bits—1, 1.5, or 2. Default: 1
- ra* Retry action (do not use *ra* if MODE is used over a network):
 - E* return error from busy port
 - B* return busy from busy port, continuously retry
 - R* return ready from busy port
 - NONE* no retry action is taken
 - Default: *E*

Parallel Printer Mode

MODE LPTn: COLS=*c* LINES=*l* RETRY=*ra*

- n* Parallel printer device—LPT1, LPT2 or LPT3
- c* Horizontal spacing—80 or 132 characters per line.
- l* Vertical spacing—6 or 8 lines per inch
- ra* Retry action (do not use *ra* if MODE is used over a network):
 - E* return error from busy port
 - B* return busy from busy port, continuously retry
 - R* return ready from busy port
 - NONE* no retry action is taken
 - Default: *E*

For more information relevant to your version of MS-DOS, refer to the *MS-DOS User Reference* manual.

PrintCFG—for desktop EISA PCs (HP)

PrintCFG is an HP Utility that lets you view information about which board a configuration (CFG) file is associated with. PrintCFG is supplied on the Vectra diskette #2 shipped with the HP Vectra 486s/20, 486U PC Series, and 486ST PCs.

To run PrintCFG, enter:

```
PRINTCFG [drive:] [path] [filename.cfg] [>PRN]
```

filename.cfg is the name of the CFG file. You must use the CFG extension.

>PRN sends the information to the printer.

SAM—for desktop EISA PCs (HP)

EISA Configuration with System Administration Manager

The System Administration Manager is supplied on the Vectra diskette #1, shipped with the HP Vectra 486s/20, 486U PC Series, and 486ST PCs.

The HP Vectra 486s/20, 486U PC Series, and 486ST are EISA-bus PCs. When you install boards and options, or change the amount of memory installed, you must reconfigure the PC using the System Administration Manager utility.

System Administration Manager examines the details of all the boards and options installed to determine the best conflict-free configuration. This configuration is saved in a file called *SYSTEM.SCI*.

To run System Administration Manager, boot the Vectra #1 diskette.

SAM options

- /A* this option selects the advanced/dealer mode. It is used to display features that are not available when running the EISA Configuration Utility in normal mode.
- /B* this option should be used with any non-standard display.
- /H* displays hi-resolution text on EGA and VGA displays.
- /K* disables the mouse during EASY CONFIG sessions.
- /M* enables Monochrome display of EASY CONFIG screens.

C

Setup Utility (versions B and C)

Setup is an HP utility on the *Vectra Setup and Utilities Disk* supplied with the HP Vectra ES, QS, RS, 286/12, and 386/25. It can be used to change the configuration information stored in CMOS RAM and initialize ST-506 hard disks. Some of the Setup command line options described below are not available on all Vectras.

Setup options

- /BAK** makes a backup disk of the Setup master disk. This option creates a backup Setup work disk from the Setup and Utilities Disk.
- /C** specifies the drive characteristics for an “unknown” hard disk drive type.
- /D** manually marks hard disk defects. This option allows you to manually enter hard disk defects. A list of known defects is usually supplied with the hard disk.
- /E** re-initialize ESDI drive types 39, 40, 41, 42, 43, 45, 46 or 47. These drives are normally pre-initialized.
- /F** fast initialization. This option performs an initialization only, without a media scan or surface analysis. This option *does not* mark defects on a hard disk.
- /GBS** enables/disables global BIOS shadowing (Vectra 286/12 only).
- /H** displays all available options. This option displays all of the Setup command line options available for the Vectra on which Setup is running.
- /I** sets the hard disk interleave factor. (Do not change this value unless you understand the reasons for doing so.)
- /M** displays the Setup screens in monochrome.
- /MEM** enables/disables cache memory.
- /ORS** enables/disables option ROM shadowing (Vectra 286/12 and 386/25 only).
- /SA** saves a system configuration to a file. This option saves the present Setup configuration (stored in CMOS RAM) to a file.
- /R** loads a system configuration from a file.
- /S** loads the Setup shell. This option displays the main menu of the Setup program.
- /T** displays the disk drive type table (from version B.06.00)
- /VBS** enables/disables video BIOS shadowing (Vectra 286/12 and 386/25 only). Enabling video BIOS shadowing copies the video BIOS to RAM.
- /X** scans the hard disk to list marked defects. This option confirms that any defects found on the disk at the factory have been marked on the disk as defective.

C

Setup (version D)

Setup version D is a menu-driven utility with context-sensitive help built into the HP Vectra 386s, 386N& NI, 486N& NI, 486M & MI, and 486XM PC Series. It can be used to change the configuration information stored in CMOS RAM.

Setup is started by pressing the **F2** key after the PC completes its power-on self-test.

SSTOR.SYS Utility (DOS 5.0 and above)

You cannot use the Volume Expansion disk partitioning utility HARDRIVE.SYS (which was designed for MS-DOS 3.3) to partition your hard disk when you are running MS-DOS 5.0.

If, however, you have already partitioned the hard disk drive using the partitioning utility, you can still use the hard disk drive partitions with MS-DOS 5.0. To do this, you must add the following command to the CONFIG.SYS file:

```
DEVICE=[drive:]:\[DOS5.0 path]\SSTOR.SYS
```

For example, DEVICE=C:\DOS\SSTOR.SYS

UNDELETE Command (DOS 5.0 and above)

The UNDELETE command attempts to restore files previously deleted using the DEL command.

```
UNDELETE [drive:] [path] [filename] [/list|all] [/dos|dt]
```

- list lists the deleted files available for recovery but does not recover any files.
- all recovers deleted files without asking for confirmation.
- dos recovers files deleted by DOS, prompts for confirmation.
- dt recovers files listed in the deletion-tracking file produced by the mirror command.

C

WHATIS Utility (Vectra 386s and 386N PC Series)

The WHATIS utility (located in the \EU directory of the Vectra 386N PC Series and 386s PC setup disk) displays information on the POST error codes. Type:

WHATIS [xxxxx]

where *xxxxx* is the four-digit hex error code.

Notes: _____



HP Vectra PC Service Notes

This appendix contains the current *Service Notes* for the HP Vectra product line in product/chronological order.

The Service Notes are available on a System Support Division server that is updated fortnightly. To access this server from a connected DOS-based vectra using MS LAN Manager type the following:

```
C:\ ADDNAME WCSOLMX 15.24.176.18   
C:\ NET USE J: \\WCSOLMX\SNOTES 
```

The new J: drive contains an index and subdirectories for the service note issues. There are only a limited number of connections to the server. So copy the information you require and then disconnect by typing:

```
C:\ NET USE J: /D  this will free the connection for someone else.
```

Unix users can use the FTP protocol to log onto the server. When you make the connection type SNOTES and press the carriage return key as the password.

Note: FTP from DOS does not work because of password restrictions.


To print the Service Note

Use the DOS copy command to print the service note. For example,

```
C:\ COPY notename.C00 LPT1 /B where notename.C00 is the service note laserjet image.
```

All Vectras

Problem:	Service Note:	Page:
Hard Disk error 8311—troubleshooting tips	—	D-4

Vectras in the Medium-profile Desktop Box: 

Problem:	Service Note:	Page:
Vectra 486M & MI PC Series		
Flexible disk drive cable problem	D28xxA-02, D29xxA-01	D-7
Monitor intermittently flickers or goes blank.	D27xxA-01, D28xxA-01	D-9
New video drivers revision 3.17F available New system BIOS Version V.04.08 available	D27xxA-01, D28xxA-01	D-10
Vectra 486XM PC Series		
Flexible disk drive cable problem	D28xxA-02, D29xxA-01	D-7
Vectra 486VL PC Series		
Intermittent hang when accessing video drivers	D302xA-02	D-12
Wrong part number written on FDD cable	D302xA-01	D-14
Adding support of EGA monochrome add-on cards	D302xA-01	D-36

Vectras in the Low-profile Desktop Box: 

Problem:	Service Note:	Page:
Vectra 486N & NI (D27xxA) PC Series		
Monitor intermittently flickers or goes blank.	D27xxA-01, D28xxA-01	D-9
New video drivers revision 3.17F available New system BIOS Version V.04.08 available	D27xxA-01, D28xxA-01	D-10
Vectra 486N (D26xxA) PC Series		
New Windows 3.1 video drivers available	D26xxA-01	D-16
Vectra 386/25N PCs		
Error detected during Power-On test for a nonexistent memory module	D249xA-01	D-18
Vectra 386/25N PCs		
Parallel port error (typically for a printer)	D249xA-02	D-20
Vectra 386/33N & NI PCs		
System board and coprocessor socket marked incorrectly	D270xA-01	D-22

Vectras in the Full-Height Desktop Box

Problem:	Service Note:	Page:
Vectra 386s/20 PCs		
Vectra 386s/20—LMSI CD-ROM cannot be accessed through CM50 or CM153	D251xA-02	D-26
New power supply assembly	D251x-03	D-24
Vectra 386s/25 PCs		
Error detected during Power-On test for a nonexistent memory module	D257xA-01	D-28
New power supply assembly	D257xA-02	D-24
Vectra 486s and 486U PCs		
Power supply failure	D226xA-01A D2261A-01A D227xA-01A D228xA-01A	D-30

Vectras in the Deskside Box

Problem:	Service Note:	Page:
Vectra 486T PCs		
Vectra 486T Troubleshooting	-	D-38
Vectra 486/33T PCs		
Vectra 486/33T—Configuration failures with Novell NE3200 and Adaptec 1740 EISA bus master boards.	D2240A-04	D-32
Vectra 486ST PCs		
Vectra 486ST—EISA Card Positioning	D263xA-01 D264xA-01	D-34

Vectras in the Classic Desktop Box

Problem:	Service Note:	Page:
Vectra 286/12 PC		
Video BIOS note for 800x600 mode	—	D-39

Hard Disk 8311 Error**Service Note: Hard Disk 8311 Error**

HP Vectra PCs—All Models

SUPERSEDES: None

Hard Disk Error 8311

Situation:

This information has been prepared to assist you in troubleshooting HP Vectra hard disk drive failures. The first troubleshooting tree focuses on hard disk drive error 8311, which is the most common problem. The second tree is useful with most other hard disk drive failures.

In investigating hard disk errors, we have seen many customer service orders (CSOs) and have noticed that often the components replaced were not faulty.

We feel that these troubleshooting trees will help to cut down the time spent in fault finding.

Refer to the *HP Vectra Accessory Service Handbook* for details on the hard disk drive jumper settings when installing HP disk drives.

DATE: 10 May 1991

ADMINISTRATIVE INFORMATION

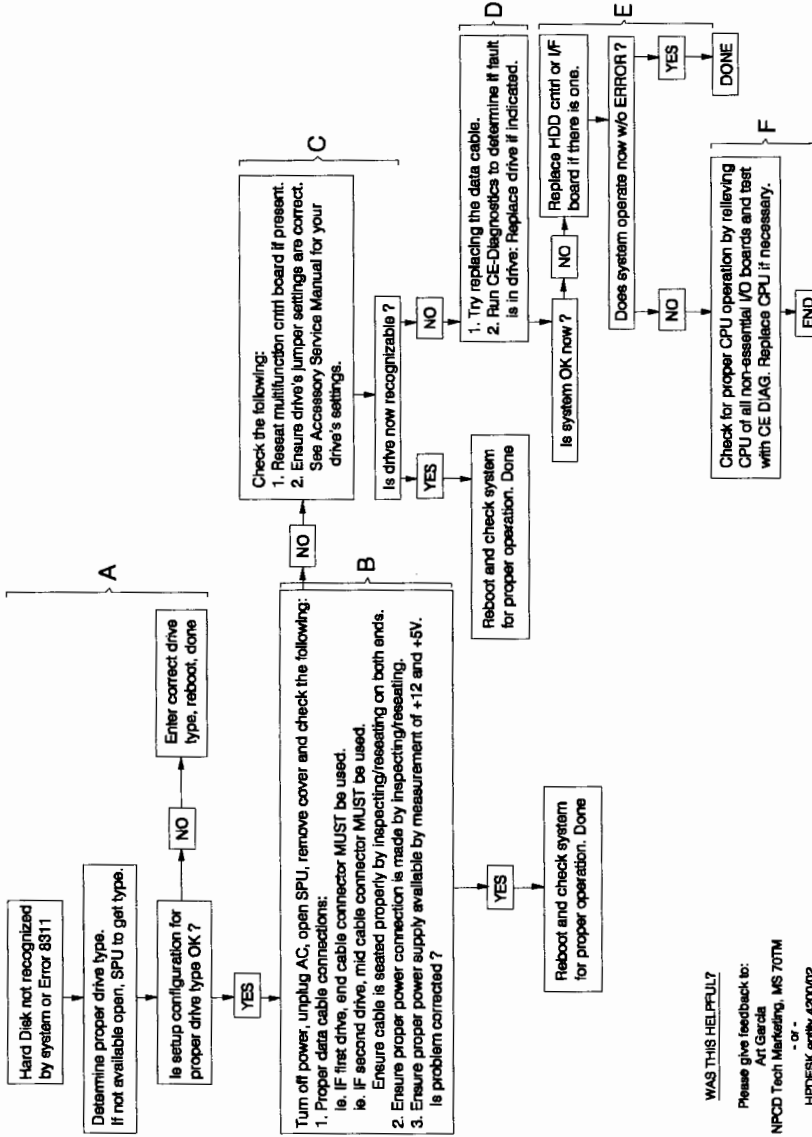
Service note classification:	
INFORMATION ONLY	
Author: AG Entity: 4200	Additional information:

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Hard Disk 8311 Error

8311 Troubleshooting Tree #1

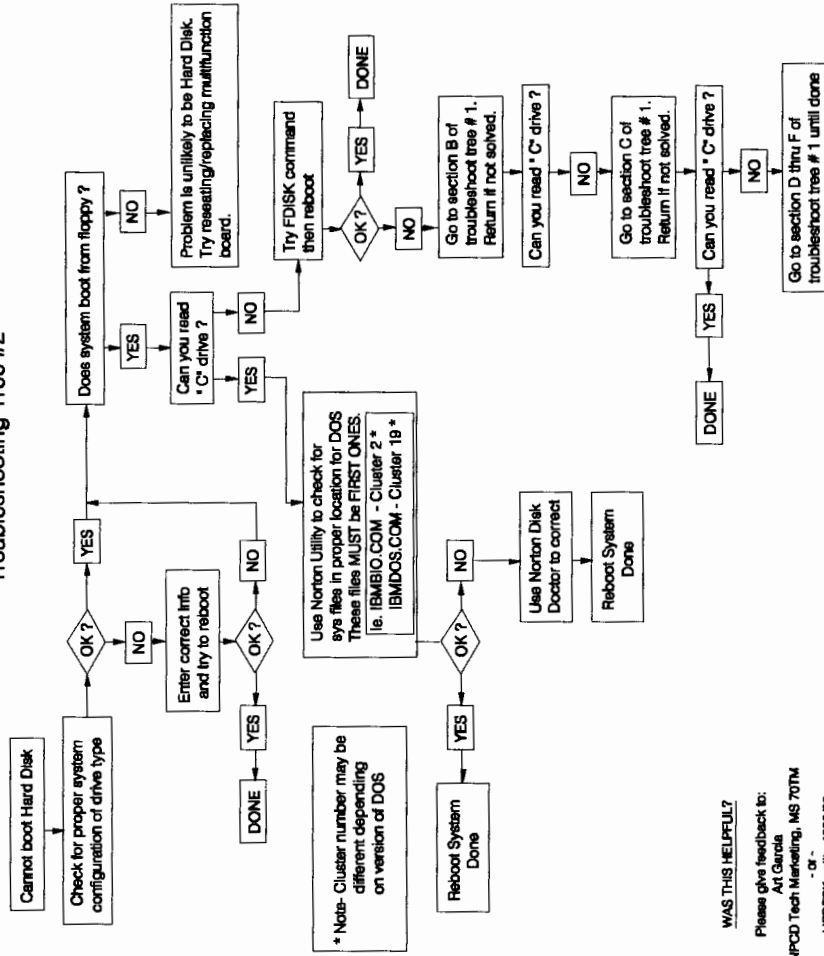


WAS THIS HELPFUL?

Please give feedback to:
Art Garcia
NPOD Tech Marketing, MS 707M
- or -
HPDESK entity 4200/02

Hard Disk 8311 Error

Troubleshooting Tree #2



WAS THIS HELPFUL?

Please give feedback to:
NP/CD Tech Marketing, MS 707M
- 8 -
HPDESK entry 4200/02

D28xxA-02 D29xxA-01

Service Note: D28xxA-02 D29xxA-01

HP Vectra 486M & MI Personal Computer Series HP Vectra 486XM Personal Computer Series	SUPERSEDES: None
Product Serial Numbers: 0000F00000 / 3344F99999 0000S00000 / 3344S99999	
Symptoms: The system failed the Power-On Self Test for the Flexible drive A: and/or for the System Configuration	
To be Performed by: HP-qualified personnel	
Parts Affected: Flexible disk drive cable	
Problem Description: When the flexible disk cable is not connected to a drive, the exposed connector could touch the chassis.	
DATE: 19 November 1993	

ADMINISTRATIVE INFORMATION

Service note classification: MODIFICATION RECOMMENDED			
Action category:	<input type="checkbox"/> immediately <input checked="" type="checkbox"/> on specified failure <input type="checkbox"/> agreeable time	Standards:	Labor: 0.5 hours
Location category:	<input type="checkbox"/> customer installable <input type="checkbox"/> on-site <input checked="" type="checkbox"/> HP location	Service inventory:	<input type="checkbox"/> return <input type="checkbox"/> scrap <input checked="" type="checkbox"/> see text
Availability:	Product's support life	Responsible entity:	6300 Until: 1 Nov 1995
Author: JV	Entity: 6300	Additional information: The CSO must refer to this service note	

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1 of 2

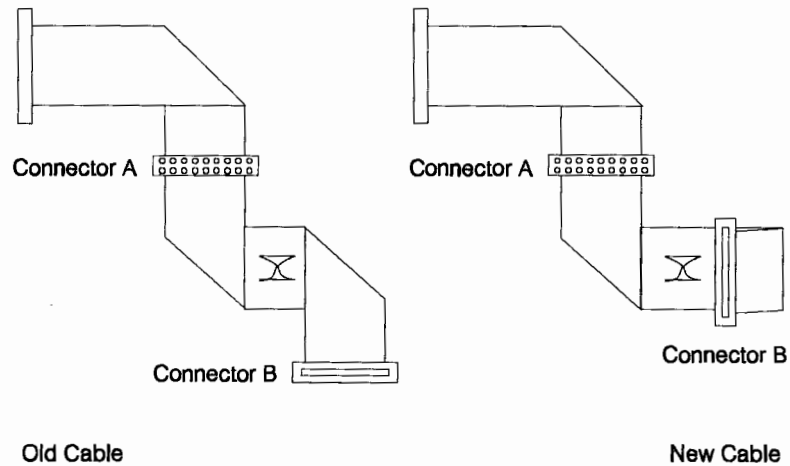
Medium-profile Desktop Vectras 

Service Notes D-7

D28xxA-02 D29xxA-01**Solution/Action:**

The problem is caused by the twists placed in the cable at manufacture. The solution is to unfold the 90° fold nearest connector B and make a 180° bend to avoid it touching the chassis.

See the illustration below:



This modification is recommended during any SPU repair.

Permanent Solution:

The flexible drive cable has been changed at manufacturing. The old cable part number 5182-0312 has been replaced with a new cable part number 5182-1089.

Service Note: D27xxA-01 D28xxA-01

HP Vectra 486N & NI (D27xxA) and HP Vectra 486M & MI Personal Computer Series (All models) SUPERSEDES: None

Product Serial Numbers:
3351F00000 / 3408F99999

Symptoms:

Monitor intermittently flickers or goes blank. Only a very small quantity of easily identifiable System Boards are affected.

Situation:

A very small quantity of N & NI and M & MI PCs have been shipped with a bad video chip. The bad S3 chip is marked 1xx2-0002. Boards marked 1xx1-0002 or 1xU2-0002 are OK.

Solution/Action:

Replace the system board. NB only system boards with video chip marked 1xx2-0002 are covered by this service note. This solution is to be used ON SPECIFIED FAILURE ONLY. Pro-active intervention, or intervention for defects other than that specified is not supported by this service note.

DATE: 17 March 1994

ADMINISTRATIVE INFORMATION

Service note classification:			
MODIFICATION RECOMMENDED			
Action category:	<input type="checkbox"/> immediately <input checked="" type="checkbox"/> on specified failure <input type="checkbox"/> agreeable time	Standards:	Labor: 0.5 hours
Location category:	<input type="checkbox"/> customer installable <input checked="" type="checkbox"/> on-site <input type="checkbox"/> HP location	Service inventory: No action	Used parts: <input checked="" type="checkbox"/> return <input type="checkbox"/> scrap <input type="checkbox"/> see text
Available until:	17 March 1995	Responsible entity:	6300
Author: BP	Entity: 6300	Additional information: Service Note Number on CSO.	

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D27xxA-01 D28xxA-01

Service Note: D27xxA-01 D28xxA-01

HP Vectra 486N & NI (D27xxA) and HP Vectra 486M & MI Personal Computer Series (All models) SUPERSEDES: D27xxA-01, D28xxA-01
Product Serial Numbers:
 0000F00000 / 3412F99999
 0000S00000 / 3412S99999
 0000Y00000 / 3412Y99999

New Video Drivers revision: 3.17F
 (Supersedes revision A.02.11. Requires BIOS V.04.08.)

New System BIOS version: V.04.08
 (Supersedes revision V.04.07)

Situation:
 The new drivers eliminate character loss when using TrueType fonts on DeskJet (and certain other printers).

Solution/Action:
 Drivers and BIOS are available on hppcgelo.grenoble.hp.com, or via local Response Centers.

DATE: 6 May 1994

ADMINISTRATIVE INFORMATION

Service note classification:		
MODIFICATION AVAILABLE		
Action category:	<input type="checkbox"/> immediately <input type="checkbox"/> on specified failure <input checked="" type="checkbox"/> agreeable time	<input checked="" type="checkbox"/> performance enhancement <input type="checkbox"/> service/reliability enhancement
Location category:	<input type="checkbox"/> customer installable <input checked="" type="checkbox"/> on-site (see text) <input checked="" type="checkbox"/> HP location	Available Until: Product Support Life
Author: BP	Entity: 6300	Additional information:

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D27xxA-01 D28xxA-01

FSI Information When installing exchange boards following a hardware failure, it is recommended to update the BIOS and video drivers during the same intervention.

Exchange boards (D27xx-69002), with date-code greater than or equal to 3413 contain the latest version of video drivers and US BIOS. When installing exchange boards with date-codes earlier than 3413, it is recommended to update the video drivers and BIOS, using the latest versions obtainable as mentioned.

2 of 2

Service Note: D302xA-02

HP Vectra 486VL Personal Computers (All models)		SUPERSEDES: None
Product Serial Numbers: 0000A00000 / 3327A99999 0000F00000 / 3329F99999		
Symptoms: The early 486VL hang intermittently when accessing video drivers.		
Parts Required: D3021-69001 CPU PCA 486SX D3025-69001 CPU PCA 486DX		
Situation: A limited percentage of Vectra 486VL PCs may exhibit the following failures:		
<ul style="list-style-type: none"> ■ Lock up or intermittent hangs, especially running Windows-intensive applications. ■ Error messages such as <ul style="list-style-type: none"> <input type="checkbox"/> Winfile has caused a general protection fault in 256.800.DRV <input type="checkbox"/> Progman has generated an illegal instruction in 256.800.DRV 		
DATE: 19 November 1993		

ADMINISTRATIVE INFORMATION

Service note classification:			
MODIFICATION RECOMMENDED			
Action category:	<input type="checkbox"/> immediately <input checked="" type="checkbox"/> on specified failure <input type="checkbox"/> agreeable time	Standards:	Labor: 0.75 hours
Location category:	<input type="checkbox"/> customer installable <input checked="" type="checkbox"/> on-site <input type="checkbox"/> HP location	Service inventory:	<input type="checkbox"/> return <input type="checkbox"/> scrap <input checked="" type="checkbox"/> see text
Availability:	Product's support life	Used parts:	<input checked="" type="checkbox"/> return <input type="checkbox"/> scrap <input type="checkbox"/> see text
Author:	DPL Entity: 6300	Responsible entity:	6300
		Until:	1 Nov 1994
		Additional information:	

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D302xA-02

These failures have been traced to the system CPU board which has been modified to fix the problem. The change was implemented very early in the production of the Vectra 486VL PCs.

Fix: Replacing the system board by an exchange part carrying a revision 'B/NR' fixes the problem.

System Board Identification Procedure:

The system board carries a revision label on the component side near to the 486SX processor, between the processor and the backplane connector. It can be read by simply removing the cover, without the need to remove the system board.

Labels carry the following, only:

A/NR or NR/NR	Old revision 'A' boards. Potentially exhibiting the symptom.
B/N	New revision 'B' boards, good.

Caution:

Reworked boards will have a ticked 'A' replaced by a 'B'. These boards are reputed to be good.

Service Inventory:

Only a very limited number of D3025-69001 boards were shipped, and only to the U.S. before the 'B/NR' revision was made.

All D3021-69001 boards are expected to be at 'B/NR' level.

Inspection of service inventory is recommended in the U.S. only.

Boards found at revision level 'A/NR' or 'NR/NR' can be returned for update at SMO.

2 of 2



D302xA-01

Service Note: D3021A-01 D3022A-01 D3025A-01 D3026A-01 D3028A-01

HP Vectra 486VL Personal Computers (All models)		SUPERSEDES: None
Product Serial Numbers:		
0000A00000 / 3340A99999		
0000F00000 / 3341F99999		
Wrong part number written on Flexible Disk Drive cable		
Parts Affected:		
P/N	Description	
5182-0312	FDD Cable (Vectra 486M & MI and Vectra 486XM)	
5182-1037	FDD Cable (Vectra 486VL, only)	
To be Performed by: HP-qualified personnel.		
		DATE: 5 November 1993

ADMINISTRATIVE INFORMATION

Service note classification:	
INFORMATION ONLY	
Author: DPL Entity: 6300	Additional information:

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1 of 2



D302xA-01**Situation:**

The wrong part number 5182-0312 has been printed on HP Vectra 486VL FDD cable in early units in the US.

The correct part number that should be printed is 5182-1037. The FDD cables fitted in the PCs have the correct specification, even if incorrectly identified.

However, anyone that needs to change the FDD cable and replaces the FDD cable using the incorrect part number will receive a cable that is known not to work on the HP Vectra 486VL but intended for use on the 486M & MI and 486XM PCs only.

Symptom:

DOS message: 'Cannot read from drive A:'

Solution/Action:

When replacing the FDD cable in the HP Vectra 486VL, use the cable with part number 5182-1037 as stated in the Vectra 486VL documentation. Refer to the part list section of chapter 2 of this service handbook.

2 of 2

D26xxA-01

Service Note: D26xxA-01

HP Vectra 386N (D26xxA) Personal Computer Series	SUPERSEDES: None
Product Serial Numbers: 0000A00000 / 9999Z99999	
New Windows 3.1 Drivers	
A new and improved version of the Windows 3.1 driver set for the 486N (D26xxA) PC Series Models has been released.	
DATE: 5 November 1993	

ADMINISTRATIVE INFORMATION

Service note classification:			
MODIFICATION AVAILABLE			
Action category:	<input type="checkbox"/> immediately <input type="checkbox"/> on specified failure <input checked="" type="checkbox"/> agreeable time	<input type="checkbox"/> performance enhancement <input checked="" type="checkbox"/> service/reliability enhancement	
Location category:	<input type="checkbox"/> customer installable <input checked="" type="checkbox"/> on-site <input type="checkbox"/> HP location	Responsible entity: 6300	Until: Product's support life
Author: JPB Entity: 6300		Additional information:	

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D26xxA-01**Situation**

This new driver set eliminates the “snowy screen” syndrome which has been reported by some customers. Because of its very low occurrence, it has mainly been observed on site with a large installed base.

The fully documented standard Windows video driver installation process must be followed and can be performed by the end-user at his/her convenience.

Local HP Response Centers should be contacted to obtain the revised driver set.

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D249X-01

**Service Note: D2490A-01 D2491A-01
D2492A-01 D2493A-01 D2494A-01
D2496A-01**

<p>HP Vectra 386/25N Personal Computers D2490A D2491A D2492A D2493A D2494A D2496A</p> <p>Product Serial Numbers:</p> <ul style="list-style-type: none"> ■ 0000F00000 / 3240F99999 ■ 0000S00000 / 3240S99999 ■ 0000Y00000 / 3240Y99999 <p>Parts affected:</p> <p>System BIOS, version L.03.07</p> <p>Symptoms:</p> <p>"Bad Memory Configuration" message:</p> <p>From time to time during its execution, the Power-On self test detects a bad memory configuration and displays the error message : 20XA (two memory modules of different size in same bank). But in fact, there are no memory modules in this bank.</p> <p style="text-align: right;">DATE: 24 December 1992</p>	<p>SUPERSEDES: None</p>
---	-------------------------

ADMINISTRATIVE INFORMATION

<p>Service note classification:</p> <p style="text-align: center;">MODIFICATION RECOMMENDED</p>			
<p>Action category:</p> <p><input type="checkbox"/> immediately</p> <p><input checked="" type="checkbox"/> on specified failure</p> <p><input type="checkbox"/> agreeable time</p>	<p>Standards:</p> <p style="text-align: right;">Labor: 0.5 hours</p>		
<p>Location category:</p> <p><input type="checkbox"/> customer installable</p> <p><input type="checkbox"/> on-site</p> <p><input checked="" type="checkbox"/> HP location</p>	<p>Service inventory:</p> <p><input type="checkbox"/> return</p> <p><input type="checkbox"/> scrap</p> <p><input checked="" type="checkbox"/> see text</p>	<p>Used parts:</p> <p><input type="checkbox"/> return</p> <p><input checked="" type="checkbox"/> scrap</p> <p><input type="checkbox"/> see text</p>	
<p>Availability: Product's support life</p>	<p>Responsible entity: 6300</p>	<p>Until: November 1994</p>	
<p>Author: DPL Entity: 6300</p>	<p>Additional information:</p>		

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D249X-01**Problem Description:**

The Power-On self test algorithm used to identify the system memory configuration may not be compatible with some signals on the system board (D2490-6x002). The timing for the test is near the limits for certain signals in the system board, resulting in intermittent failures on a small percentage of products.

Problem fix:

A new revision of the system BIOS, version L.03.08 or higher, fixes the problem by changing the memory identification process.

Note: The L.03.08 version was installed in a very limited number of units. Support parts directly jump to the L.03.09 version. The BIOS support Kit, version L.03.09 (P/N 5063-0842) replaces the previous kit based on the BIOS version L.03.07 (P/N 5062-2696).

Note for service inventory:

Old BIOS kit version L.03.07 (P/N 5062-2696) is still usable on Vectra 386/16N and 386/20N. This part is therefore "Use Till Gone" for those models. Switch to L.03.09 version on Vectra 386/16N and 386/20N at depletion of stock of L.03.07 versions.



D249XA-01/02

**Service Note: D2490A-02 D2492A-02
D2494A-02 D2495A-01 D2496A-02
D2497A-01 D2498A-01**

HP Vectra 386/25N Personal Computers D2490A D2492 D2494 D2495 D2496A D2497A D2498A	SUPERSEDES: None
Product Serial Numbers: <ul style="list-style-type: none"> ■ 3230F00000 / 3245F99999 ■ 3220S00000 / 3245S99999 	
Parts affected: System BIOS, version L.03.07 and L.03.08	
Symptoms: When installing a device on a parallel port, typically a printer, LPT1 doesn't work. The failure appears at the first print request. The failure is consistent on PC's having the problem. Error messages mention either "parallel port not ready" or "failure writing to device LPT1" or even "Paper Out!" depending upon the command used to address parallel ports.	
DATE: 24 December 1992	

ADMINISTRATIVE INFORMATION

Service note classification:			
MODIFICATION RECOMMENDED			
Action category:	<input type="checkbox"/> immediately <input checked="" type="checkbox"/> on specified failure <input type="checkbox"/> agreeable time	Standards:	Labor: 0.5 hours Parts: 5063-0842
Location category:	<input type="checkbox"/> customer installable <input type="checkbox"/> on-site <input checked="" type="checkbox"/> HP location	Service inventory:	Used parts:
Availability:	Product's support life	Responsible entity:	6300 Until: November 1994
Author: DPL Entity: 6300		Additional information:	

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D249XA-01/02**Problem Description:**

The Power-On self test algorithm used to recognize the configuration of parallel ports may not be compatible with some signals on the DTU of the system board (D2490-6x002).

As a result, the configuration is not properly set, but the problem remains transparent during initialization and shows up only when actually using the parallel port.

Problem fix:

A new revision of the system BIOS, version L.03.09 or higher, fixes the problem by changing the parallel port identification process.

The BIOS support Kit, version L.03.09 (P/N 5063-0842) replaces the previous kit based on the BIOS version L.03.07 (P/N 5062-2696).

Sites where this problem is experienced should have all 386/25N PCs upgraded with the new system BIOS.

Note for service inventory:

Old BIOS KIT VERSION L.03.07 (P/N 5062-2696) is still usable on Vectra 386/16N and 386/20N. This part is therefore "Use Till Gone" for those models. Switch to L.0309 versions on Vectra 386/16N and 386/20N at depletion of stock of L.03.07 versions.

D27xxA-01

**Service Note: D2701A-01 D2702A-01
D2703A-01 D2704A-01 D2707A-01
D2712A-01**

HP Vectra 386/33N & NI Personal Computers D2701A D2702A D2703A D2704A D2707 D2712A		SUPERSEDES: None
Product Serial Numbers:		
■ 0000F00000 / 3312F99999		
■ 0000S00000 / 3312S99999		
■ 0000Y00000 / 3312Y99999		
Parts affected:		
System board D2701-69001 and D2703-69001. Third party coprocessor accessory: Cyrix™ 387SL		
Symptoms		
The PC does not work after coprocessor installation.		
		DATE: 14 May 1993

ADMINISTRATIVE INFORMATION

Service note classification:		
MODIFICATION RECOMMENDED		
Action category:	<input type="checkbox"/> immediately <input checked="" type="checkbox"/> on specified failure <input type="checkbox"/> agreeable time	Standards: Parts Only: 5182-1026
Location category:	<input checked="" type="checkbox"/> customer installable <input type="checkbox"/> on-site <input type="checkbox"/> HP location	Service inventory: <input type="checkbox"/> return <input type="checkbox"/> scrap <input checked="" type="checkbox"/> see text Used parts: <input type="checkbox"/> return <input type="checkbox"/> scrap <input type="checkbox"/> see text
Availability:	Product's support life	Responsible entity: 6300 Until: May 1995
Author: PG	Entity: 6300	Additional information: Please reference service note number on the CSO.

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D27xxA-01**Description**

Units belonging to the above indicated date code range, may not have the coprocessor socket beveled corner, that indicates pin 1, aligned with the silk-screened index dot on the system board.

The Setting Up manual supplied with each PC correctly instructs the user to align the corner marker on the coprocessor with the corner marker on the system board itself (a large white dot). The coprocessor manufacturer's documentation also warns the user against wrongly inserting and refers him/her to the PC manual in case of doubt.

Because previous designs had a systematic coincidence of the socket and board markings, some users may install the coprocessor (Cyrix™ 387SL or 387SX/33), aligning its beveled corner with socket's one. In the above units, this will result in destruction of the coprocessor.

Problem fix:

Provide a replacement coprocessor to the user with instructions to refer to the Vectra N & NI PC Series Setting Up manual for correct installation. (White dot marking on the system board should match the beveled corner of the coprocessor.)

Coprocessor socket corner marker is aligned with the system board marker on production units after date code 3312.

Service inventory

In order to replace damaged customer components, the Cyrix™ 387SL (Also referred to as Cyrix™ 387SX/33) coprocessor has been made available on the HP parts price list, via part centers, under P/N 5182-1026.

Proof of purchase of the original component should be provided to HP personnel to claim for replacement (either the bill or the damaged component itself).

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D251xA-03 D257xA-02

Service Note: D251xA-03 D257xA-02

HP Vectra 386s/20 Personal Computers and HP Vectra 386s/25 Personal Computers (All models) Product Serial Numbers: 0000F00000/3312F00000 0000S00000/3310S00000 0000Y00000/3311Y00000 Parts affected: Power Supply Field replacement p/n: 5063-0319; 5063-0333 New Mfg. p/n: 0950-2175; 0950-2388 Situation: This service note documents a new power supply assembly for use in supporting the HP Vectra 386s/20, and 386s/25 series PCs. New Field Replacement P/N will be: 5063-0339 New Mfg P/N will be: 0950-2701	SUPERSEDES: None
DATE: 5 November 1993	

ADMINISTRATIVE INFORMATION

Service note classification:			
MODIFICATION RECOMMENDED			
Action category: <input type="checkbox"/> immediately <input checked="" type="checkbox"/> on specified failure <input type="checkbox"/> agreeable time	Standards: Labor: 0.5 hours		
Location category: <input type="checkbox"/> customer installable <input type="checkbox"/> on-site <input checked="" type="checkbox"/> HP location	Service inventory: <input checked="" type="checkbox"/> return <input type="checkbox"/> scrap <input type="checkbox"/> see text	Used parts: <input checked="" type="checkbox"/> return <input type="checkbox"/> scrap <input type="checkbox"/> see text	
Availability: Product's support life	Responsible entity: 6300	Until: 1 November 1995	
Author: JV Entity: 6300	Additional information: The CSO must refer to this service note number.		

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D251xA-03 D257xA-02**Reason:**

The existing power supply is experiencing a higher than normal failure rate due to an intermittently unreliable diode failure. As a result, some small quantities of power supplies have been reported to have failed leaving the PC inoperable.

This failure does NOT cause any other cards in the system to fail NOR is it a safety problem.

Symptoms are:

Fails on power up. The fan is not turning and the power supply is dead!

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D251XA-02

**Service Note: D2512A-02 D2513A-02
D2514A-02 D2515A-02 D2516A-02
D2517A-02**

HP Vectra 386s/20 Personal Computers		SUPERSEDES: None
D2512A	D2515A	
D2513A	D2516A	
D2514A	D2517A	
Product Serial Numbers: 0000F00000/323F99999		
Parts affected:		
System Board D2512-60005 and D2512-69005		
Symptoms:		
LMSI CD-ROM Drive Cannot Be Accessed Through a CM50 or CM153 Controller Board in DMA Mode		
Description		
The problem is due to the duration of a signal from the DMA controller of the system board (D2512A-6x005), which is not compatible with the DMA controller of the CM153.		
DATE: 9 October 1992		

ADMINISTRATIVE INFORMATION

Service note classification:			
MODIFICATION RECOMMENDED			
Action category:	<input type="checkbox"/> immediately <input checked="" type="checkbox"/> on specified failure <input type="checkbox"/> agreeable time	Standards:	Labor: 0.5 hours
Location category:	<input type="checkbox"/> customer installable <input type="checkbox"/> on-site <input checked="" type="checkbox"/> HP location	Service inventory: <input checked="" type="checkbox"/> return <input type="checkbox"/> scrap <input type="checkbox"/> see text	Used parts: <input checked="" type="checkbox"/> return <input type="checkbox"/> scrap <input type="checkbox"/> see text
Availability:	Product's support life	Responsible entity: 6300	Until: October 1994
Author: JVA	Entity: 6300	Additional information:	

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D251XA-02**Solution:**

A new system board, P/N D2513-69005, was introduced on 1 July 1992. The part has been updated and an FSI recall has been implemented to replace all support boards with the new revision.

The D2512-6x005 system boards have been replaced with P/N D2513-6x005, as follows:

Defective Part	Status	Replacement Part
D2512-60005	New	D2513-69005
D2512-69005	Board Exchange	
D2513-60005	New	
D2513-69005	New	

D257XA-01

**Service Note: D2570A-01 D2571A-01
D2572A-01 D2574A-01 D2575A-01
D2578A-01 D2579A-01**

HP Vectra 386s/25 Personal Computers D2570A D2571A D2572A D2574A D2575A D2578A D2579A	SUPERSEDES: None
Product Serial Numbers: <ul style="list-style-type: none"> ■ 0000F00000 / 3249F99999 ■ 0000S00000 / 3249S99999 ■ 0000Y00000 / 3249Y99999 	
Parts affected: System BIOS, version L.03.02	
Symptoms: " Bad Memory Configuration" message: From time to time, during its execution the Power-On self test detects a bad memory configuration and displays the error message : 20XA (two memory modules of different size in same bank). But in fact, there are no memory modules in this bank.	
DATE: 24 December 1992	

ADMINISTRATIVE INFORMATION

Service note classification:		
MODIFICATION RECOMMENDED		
Action category: <ul style="list-style-type: none"> <input type="checkbox"/> immediately <input checked="" type="checkbox"/> on specified failure <input type="checkbox"/> agreeable time 	Standards: <p style="text-align: right;"> Labor: 0.5 hours Parts: 5063-0842 </p>	
Location category: <ul style="list-style-type: none"> <input type="checkbox"/> customer installable <input type="checkbox"/> on-site <input checked="" type="checkbox"/> HP location 	Service inventory: <ul style="list-style-type: none"> <input type="checkbox"/> return <input type="checkbox"/> scrap <input checked="" type="checkbox"/> see text 	Used parts: <ul style="list-style-type: none"> <input type="checkbox"/> return <input checked="" type="checkbox"/> scrap <input type="checkbox"/> see text
Availability: Product's support life	Responsible entity: 6300	Until: November 1994
Author: PG Entity: 6300	Additional information:	

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D257XA-01**Problem Description:**

The Power-On self test algorithm used to identify the system memory configuration may not be compatible with some signals on the system board (D2490-6x005). The timing for the test is near the limits for certain signals in the system board, resulting in intermittent failures on a small percentage of products.

Problem fix:

A new revision of the system BIOS, version N.03.04 or higher, fixes the problem by changing the memory identification process.

The BIOS, version N.03.04 (P/N 5063-0860) replaces the first version N.03.02 (P/N 5063-0822).

Note for service inventory:

Old BIOS kit version L.03.04 (P/N 5063-0822) is still usable on Vectra 386s/20. This part is therefore "Use Till Gone" for those models.



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D22XXX-01A

**Service Note: D2260A-01A D2262A-01A
 D2263A-01A D2264A-01A D2265A-01A
 D2266A-01A D2268B-01A D2269B-01A
 D2272A-01A D2274B-01A D2275B-01A
 D2278A-01A D2280A-01A D2281B-01A
 D2284A-01A D2286B-01A D2287B-01A**

HP Vectra 486s and 486U Personal Computers		SUPERSEDES:
All models		D2260A-01 D2261A-01
		D2262A-01 D2263A-01
New Power Supply Assembly		D2264A-01 D2265A-01
		D2266A-01 D2268B-01
Product Serial Numbers:		D2269B-01 D2272A-01
■ 0000A00000 / 3307Z00000		D2274B-01 D2275B-01
■ 0000F00000 / 3307Z00000		D2278A-01 D2280A-01
■ 0000S00000 / 3307Z00000		D2281B-01 D2284A-01
■ 0000Y00000 / 3307Z00000		D2286B-01 D2287B-01
Assemblies affected:		
Power Supply		
Field Replacement P/N:	5063-0319; 5063-0333	
New Mfg P/N:	0950-2175; 0950-2388	
		DATE: 14 May 1993

ADMINISTRATIVE INFORMATION

Service note classification:		
MODIFICATION RECOMMENDED		
Action category:	<input type="checkbox"/> immediately <input checked="" type="checkbox"/> on specified failure <input type="checkbox"/> agreeable time	Standards: Labor: 0.5 hours
Location category:	<input type="checkbox"/> customer installable <input checked="" type="checkbox"/> on-site <input type="checkbox"/> HP location	Service inventory: <input checked="" type="checkbox"/> return <input type="checkbox"/> scrap <input type="checkbox"/> see text Used parts: <input checked="" type="checkbox"/> return <input type="checkbox"/> scrap <input type="checkbox"/> see text
Availability:	Product's support life	Responsible entity: 6300 Until: February 1995
Author: AG	Entity: 4200	Additional information: The CSO must reference this service note.

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D22XXX-01A**Situation:**

This service note documents a new power supply assembly for use in supporting the HP Vectra 486s and 486U series PCs.

New Field Replacement P/N: 5063-0339

New Mfg P/N: 0950-2701

Reason:

The existing power supply has an higher than normal failure rate due to an intermittent diode failure. As a result some power supplies have been reported to have failed leaving the PC inoperable.

This failure does NOT cause any other board in the system to fail nor is it a safety problem.

Symptoms are:

- Fails on power-up.
- Fan does not turn.
- Power supply is inoperable.

D2240A-04

Service Note: D2240A-04

HP Vectra 486/33T Personal Computers
D2240A

SUPERSEDES: None

Product Serial Numbers:

- 0000A00000 / 3248Z00000
- 0000F00000 / 3248Z00000
- 0000Y00000 / 3248Z00000

Situation:

486/33T PCs with Novell NE3200 and Adaptec 1740 EISA bus Master boards can cause system failure. This failure appears to occur only when an EISA bus mastering network board is present in the HP Vectra 486/33T PC.

DATE: 5 March 1993

ADMINISTRATIVE INFORMATION

Service note classification:	
INFORMATION ONLY	
Author: AG Entity: 4200	Additional information:

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D2240A-04

Under certain conditions this failure occurs intermittently and infrequently when the client disconnects. This could lead to corrupted received packets from the NE3200 board. A common error message on a Novell server might be: "Netware error on server (name): error sending on network abort, retry?"

This solution is only for Novell or OS/2 servers.

Solution:

HP has designed a software patch that provides the solution to the problem and is easily installed in an autoexec.bat file.

This patch referenced as "dclient.zip" is available through BBS.

For HP dealers, this patch will be available through HPNN. An article in the HP Network News/In Touch Support Newsletter will follow indicating the reference number, L0003036, for the patch.

HP expects only a small fraction of our customers to experience this failure because it only happens when customers are using the configuration described above.

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D26xxA-01

**Service Note: D2635A-01 D2641A-01
 D2636A-01 D2642A-01 D2637A-01
 D2646A-01 D2638A-01 D2647A-01
 D2639A-01 D2648A-01 D2640A-01**

**HP Vectra 486ST Personal Computers
 All Models**

SUPERSEDES: None

486ST EISA Card Positioning**Product Serial Numbers:**

- 0000A00000 / XXXXZ00000
- 0000F00000 / XXXXZ00000
- 0000Y00000 / XXXXZ00000

Situation:

With a greater number of EISA cards now available, we have heard that certain EISA cards do not function correctly if plugged into slots 6, 7, or 8. To confirm this, we have conducted appropriate testing here and have verified and found root cause of this problem which is not related to EISA bus loading.

The following are examples of this problem: A problem may occur at boot up if a card is in slot 7 as BIOS boots to memory address 7cxx. This may include random hangs during DMA processing. This same problem may occur at other times when not booting as well.

DATE: July 30, 1993

ADMINISTRATIVE INFORMATION

Service note classification:	
INFORMATION ONLY	
Author: AG Entity: 4200	Additional information:

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D26xxA-01

Another example, involves not being able to boot off the floppy when a Raycal interlan card is plugged into slot 7.

In addition to the two cards above, the Schneider & Koch FDDI card has also been found to have this slot related problem with slot 6.

Our conclusion is that EISA cards that connect to the IORD or IOWR to determine the card's EISA slot specific I/O register access will have the problem. This may occur in any of slots 6,7, or 8.

Solution:

1. Hewlett-Packard highly recommends installing only ISA cards in slots 6,7,or 8.
2. Move or install EISA cards only in slots 1-5.

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D
D302xA-04

**Service Note: D3021A-04 D3022A-04
D3025A-04 D3026A-04 D3028A-04**

HP D302xA Vectra 486/VL Personal Computer	SUPERSEDES: None
Product Serial Numbers: 0000A00000/3335A99999 0000F00000/3339F99999	
and	
3336A00000/3342A99999 if BIOS revision is AA.05.01 3340F00000/3349F99999 if BIOS revision is AA.05.01	
Adding Support of EGA Monochrome Add-On Cards	
Parts Required: D3021-69002 D3025-69002	CPU PCA 486SX-25 CPU PCA 486 33 and MHZ
Parts Affected: D3021-69001 D3025-69001	CPU PCA 486SX CPU PCA 486DX
DATE: 15 April 1994	

ADMINISTRATIVE INFORMATION

Service note classification:	
MODIFICATION RECOMMENDED	
Action category:	<input type="checkbox"/> immediately <input type="checkbox"/> on specified failure <input checked="" type="checkbox"/> agreeable time
Location category:	<input type="checkbox"/> customer installable <input checked="" type="checkbox"/> on-site (see text) <input checked="" type="checkbox"/> HP location
Author: DPL Entity: 6300	Available Until: January 1996
Additional information:	

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D302xA-04

Situation: The system board part numbers of the Vectra 486/VL are changing for both exchange and replacement parts.

The reason for the change is to give visibility to the BIOS change for specific configurations.

Starting with BIOS revision AA.05.01, and going on with BIOS revision AA.05.02, the following feature has been added to the HP Vectra 486/VL :

- Support of CGA/EGA/Hercules monochrome add-on video cards

HP Vectra 486VL PCs with serial numbers listed above don't work with CGA/EGA/Hercules monochrome add-on video cards.

New version of replacement and exchange parts are shipped with AA.05.02 BIOS.

BIOS And System Board Identification Procedure

The BIOS revision level appears in the system configuration screen each time the Vectra 486/VL is powered on.

Service Inventory

D3021-69001 and D3025-69001 can be use-till-gone as it is expected that a very low percentage of Vectra 486/VL is used with add-on monochrome cards.

Warning

Use of the newer D3021-69002 or D3025-69002 is mandatory when the customer configuration includes a monochrome CGA/EGA/Hercules add-on card.

Limitation of Warranty

Extended warranty is granted to customers that install a monochrome CGA/EGA/Hercules add-on card on an HP Vectra 486/VL having an AA.05.00 revision of BIOS in the serial number range defined in this service note.

The warranty location corresponds to the normal PC warranty conditions :

- first year after purchase is on-site
- beyond first year until January '96 is return to HP.

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Vectra 486T Trouble shooting

Note: Vectra 486T troubleshooting

The following table lists some common workarounds for the Vectra 486T PCs:

Symptom(s)	Problem	Workaround (fix)
<p>Memory Parity Error</p> <p>Configuration:</p> <ul style="list-style-type: none"> - ISA Master Board i.e. HP 1540 or CMS equivalent - Samsung memory modules 	<p>Samsung memory modules</p> <p>No evidence of Data corruption</p>	<p>Replace Samsung memory modules with HP qualified modules (i.e. Toshiba)</p> <p>Make sure that the memory modules are 80ns types</p>
<p>System does not boot from SCSI disk drive</p> <p>System does not recognize boards in lower numbered slots</p> <p>Failures occur in boards in lower numbered slots (slots 1, 2, & 3)</p> <p>Configuration:</p> <ul style="list-style-type: none"> - Out-of-spec EISA boards in upper slots (slots 6, 7, or 8) 	<p>EISA Bus Loading</p>	<p>Install all EISA boards starting from the lower numbered slots, working up, installing ISA boards last.</p> <p>Put the HP 1740 Board(s) in the lowest slot (slots 1 or 2)</p> <p>Avoid placing EISA boards in upper slots (i.e. slots 7 & 8)</p> <p>Slots 3 & 5 cannot be used for EISA bus Master Boards</p>
<p>Intermittent Hard Disk Errors (i.e. 83xx errors)</p> <p>Configuration:</p> <ul style="list-style-type: none"> - ESDI Controller or S/P board - Laserjet or externally powered mass storage device 	<p>Current Back-flow drains CMOS</p> <p>Any externally powered device (such as Laserjet) that is connected to the system through:</p> <ul style="list-style-type: none"> - Extra parallel port (HP 2454A board) - Other interface board connected to the backplane 	<p>Connect external device into the system's built-in parallel ports</p> <p>Power-up system first, before external device(s)</p> <p>Power-down peripheral if system is being powered off for an extended period</p>



Note: HP Vectra 286/12 PC 800×600 Extended Super VGA Mode Users

1. The new video BIOS version of the Vectra 286/12 PC (version 7.04) includes changes to the vertical refresh rate of the video display. This code is included in the BIOS ROM versions H.03.04 and higher.

In this version, the refresh rate for 800×600 modes is now 60 Hz instead of 56 Hz. This requires displays capable of running a 38 KHz horizontal scan rate.

As a result, some displays may no longer work. A known product having this problem is the NEC 2A monitor.

For users experiencing this incompatibility, when changing the Vectra 286/12 BIOS ROM, two possible solutions may be used:

- Keep the old BIOS ROM version (H.03.03) on the system board.
- or
- Use the previous revision (2.75) of the ALTPARM.COM driver.

The following table will help you understand the problem:

	BIOS rev H.03.03	BIOS rev H.03.04
ALTPARM.COM version 2.75	Always set to 56 Hz	Use 60 Hz if ALTPARM not loaded Use 56 Hz if ALTPARM loaded
ALTPARM.COM version 2.78	Use 56 Hz if ALTPARM not loaded Use 60 Hz if ALTPARM loaded	Always set to 60 Hz.

2. A known incompatibility exists between the new video BIOS, contained in ROM BIOS H.03.04 and above, and older revisions of the AUTOCAD super VGA driver. When using the new video BIOS and the old AUTOCAD driver (for AUTOCAD Rel 10 only), some colors may disappear.

The solution to this problem is to use the newer AUTOCAD driver, supporting AUTOCAD Rel 10 and 11. This driver is available on HP internal PCG bulletin boards.



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