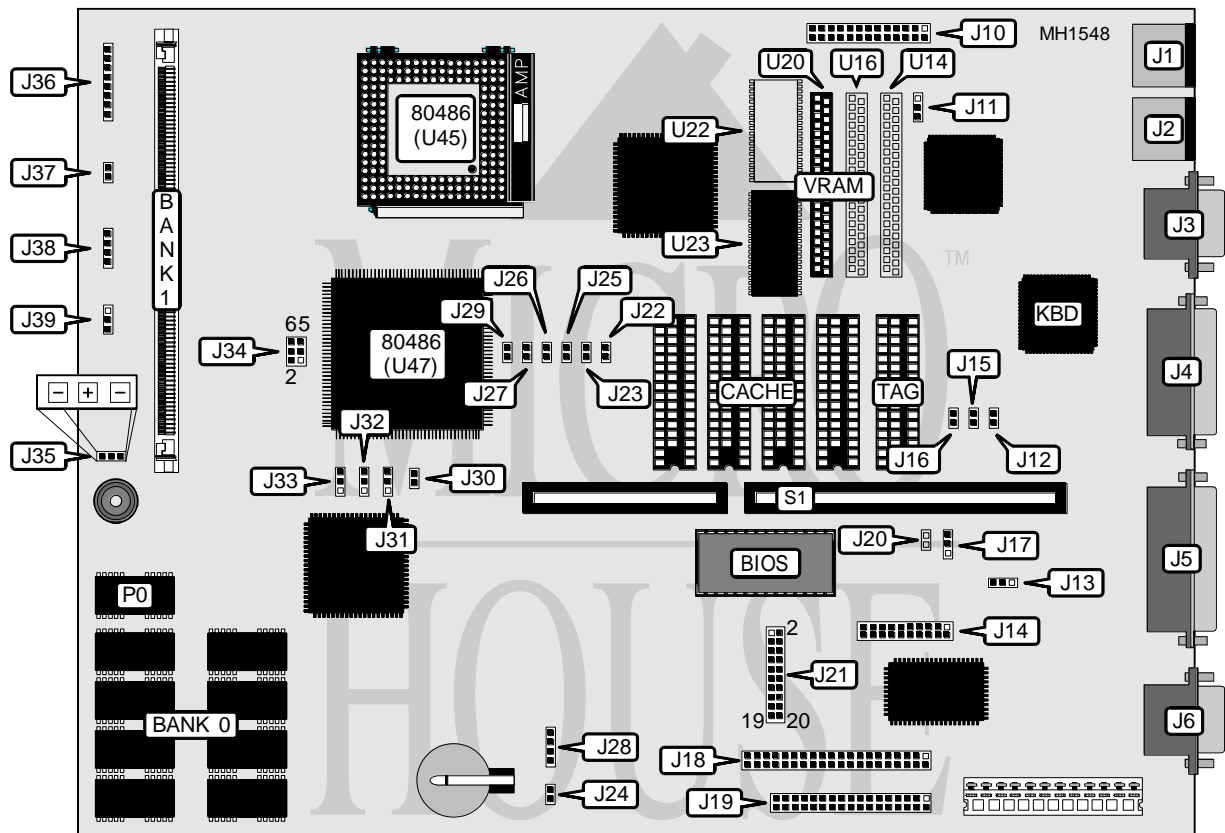


PACKARD BELL PB410 & PB420/420T (REVISION B)

Processor 80486SX/80487SX/80486DX/ODP486SX/80486DX2
Processor Speed 20/25/33/40/50(internal)/66(internal)MHz
Chip Set ACC
Max. onboard DRAM 36MB
SRAM Cache 32/128/512KB
BIOS Phoenix
Dimensions 330mm x 240mm
I/O Options Fax/modem daughterboard, floppy drive interface, game port, IDE interface, multi-function connector (IDE interface LED, reset, keylock, turbo switch, turbo-LED, non-turbo LED), parallel port, PS/2 keyboard port, PS/2 mouse port, serial port, VGA port, video feature connector connector
NPU Options None



| CONNECTIONS | | | |
|------------------------------------|----------|-------------------------------------|----------|
| Purpose | Location | Purpose | Location |
| PS/2 keyboard | J1 | Floppy drive interface | J19 |
| PS/2 mouse | J2 | Proprietary fax/modem daughterboard | J21 |
| VGA port | J3 | External battery | J28 |
| Game port | J4 | External fan power (+12V DC) | J35 |
| Parallel port | J5 | Multi-function connector | J36 |
| Serial port | J6 | Keylock | J37 |
| Video feature connector | J10 | Speaker | J38 |
| Audio interface connector (unused) | J14 | Riser card | S1 |
| IDE interface | J18 | | |

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| USER CONFIGURABLE SETTINGS | | |
|--|---------------|-------------------|
| Function | Jumper/Switch | Position |
| í Onboard Game port enabled | J15 | Closed |
| Onboard Game port disabled | J15 | Open |
| í PS/2 mouse port enabled (IRQ12) | J27 | Closed |
| PS/2 mouse port disabled | J27 | Open |
| í Monitor type select color | J12 | Closed |
| Monitor type select monochrome | J12 | Open |
| í Onboard I/O ports enabled | J16 | Closed |
| Onboard I/O ports disabled | J16 | Open |
| í Hard drive boot from DOS boot block | J17 | pins 2 & 3 closed |
| Hard drive boot from custom boot block | J17 | pins 1 & 2 closed |
| í Flash BIOS write protect enabled | J20 | Open |
| Flash BIOS write protect disabled | J20 | Closed |
| í Onboard battery enabled | J24 | Closed |
| Onboard battery disabled | J24 | Open |
| í Speaker select internal | J39 | pins 1 & 2 closed |
| Speaker select external | J39 | pins 2 & 3 closed |
| Note: Parallel port, serial port, floppy drive interface, and IDE interface are configured through the BIOS setup options. J20 is only a trace, and has not been implemented in any production models of the board. | | |

| DRAM CONFIGURATION (NO MEMORY SOLDERED TO BOARD) | |
|--|---------------|
| Size | Bank 0 |
| 2MB | (1) 512K x 36 |
| 4MB | (1) 1M x 36 |
| 8MB | (1) 2M x 36 |
| 16MB | (1) 4M x 36 |
| 32MB | (1) 8M x 36 |

| DRAM CONFIGURATION (4MB OF MEMORY SOLDERED TO BOARD) | | | |
|--|------------|---------------|---------------|
| Size | Bank 0 | Parity 0 (P0) | Bank 1 |
| 4MB | (8) 441000 | (1) 441000 | NONE |
| 6MB | (8) 441000 | (1) 441000 | (1) 512K x 36 |
| 8MB | (8) 441000 | (1) 441000 | (1) 1M x 36 |
| 12MB | (8) 441000 | (1) 441000 | (1) 2M x 36 |
| 20MB | (8) 441000 | (1) 441000 | (1) 4M x 36 |
| 36MB | (8) 441000 | (1) 441000 | (1) 8M x 36 |
| Note: Bank 0 is soldered to the board. | | | |

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| ONBOARD VIDEO CONFIGURATION | | | |
|-----------------------------|------|-------------------|--------|
| Onboard Video | IRQ | J11 | J22 |
| í Enabled | IRQ9 | pins 2 & 3 closed | Closed |
| Enabled | None | pins 2 & 3 closed | Open |
| Disabled | N/A | pins 1 & 2 closed | N/A |

| VRAM CONFIGURATION | | | |
|-----------------------|-------------------|-------------------|-------------------|
| Size | Bank 0 (U23) | Bank 1 (U20) | Bank 1 (U22) |
| 512KB | (1) 256K x 16 DIP | NONE | NONE |
| 1MB factory installed | (1) 256K x 16 DIP | NONE | (1) 256K x 16 DIP |
| 1MB user installed | (1) 256K x 16 DIP | (1) 256K x 16 ZIP | NONE |

Note: If board is factory installed with 1MB of VRAM, a second 256K x 16 DIP will soldered on the board at U22. If board is factory configured with 512KB of VRAM, U22 will only be a trace, and a 40-pin ZIP socket will be installed at location U20. If the ZIP socket is present, there will also be traces for 2 additional zip sockets at U14 and U16. Sockets installed on ZIP socket traces will not function.

| PARALLEL PORT IRQ CONFIGURATION | |
|---------------------------------|-------------------|
| IRQ | J13 |
| í IRQ7 | pins 1 & 2 closed |
| IRQ5 | pins 2 & 3 closed |

| CPU TYPE CONFIGURATION | | | | |
|------------------------|------|----------|--------|-------------------|
| CPU | Type | Location | J29 | J34 |
| 80486SX | PQFP | U47 | Open | pins 1 & 3, 2 & 4 |
| 80487SX | PGA | U45 | Open | pins 1 & 3, 2 & 4 |
| 80486DX | PGA | U45 | Open | pins 3 & 5, 4 & 6 |
| ODPR486SX-25MHz | PGA | U45 | Closed | pins 3 & 5, 4 & 6 |
| ODP486SX-33MHz | PGA | U45 | Closed | pins 1 & 3, 4 & 6 |
| 80486DX2 | PGA | U45 | Closed | pins 3 & 5, 4 & 6 |

Note: Pins designated should be in the closed position.

| CPU SPEED CONFIGURATION | | | |
|-------------------------|--------|--------|--------|
| Speed | J23 | J25 | J26 |
| 20MHz | Closed | Open | Open |
| 25/50i MHz | Open | Closed | Closed |
| 33/66i MHz | Open | Closed | Open |
| 40MHz | Open | Open | Closed |

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| CACHE CONFIGURATION | | |
|---------------------|--------------|--------------|
| Size | Cache | TAG |
| í 32KB | (4) 8K x 8 | (1) 8K x 8 |
| 128KB | (4) 32K x 8 | (1) 32K x 8 |
| 512KB | (4) 128K x 8 | (1) 128K x 8 |

| CACHE JUMPER CONFIGURATION | | | | |
|----------------------------|--------|-------------------|-------------------|-------------------|
| Size | J30 | J31 | J32 | J33 |
| í 32KB | Open | pins 1 & 2 closed | pins 1 & 2 closed | pins 1 & 2 closed |
| 128KB | Closed | pins 2 & 3 closed | pins 2 & 3 closed | pins 1 & 2 closed |
| 512KB | Closed | pins 2 & 3 closed | pins 2 & 3 closed | pins 2 & 3 closed |