

Packard Bell 400/401T M/Board

Specification

- **Battery** : 3.6V DC NiCad soldered on motherboard
- **BIOS** : 128 KB - Phoenix BIOS V1.01.08. Press Ctrl-Alt-S after post to access.
- **Bus Architecture** : ISA based system bus
- **Cache** : Write Back: 8 KB Internal (Level 1) Cache External (Level 2) 0 - 256 Kb
- **CPU** : Intel 486 processor
- **Interfaces** :
 - 1 DB-25 Parallel Port
 - 1 DB-9 Serial port
 - 1 PS/2 Keyboard Port
 - 1 PS/2 mouse port
 - 1 15-pin VGA
 - 1 15 pin Game (only with CL5424 Systems)
- **RAM** : 2 MB or 4 MB Standard on Motherboard 6 MB or 18 MB or 20 MB Maximum
- **Speaker** : Piezoelectric soldered on motherboard
- **Video** : Built in Oak Extended VGA

Jumpers

Function	Jumper	Description
Battery (J8(Jbts))	IN OUT	* Onboard Battery Enabled External Battery in Use
Onboard VGA (J10(Jvgas))	1-2 2-3	* Enabled Disabled
Game Port (J12(Jgams))	2-3 1-2	* Enabled Disabled
VESA Select (J14(Jvnde))	IN OUT	* Normal VGA in use VESA Connector Enabled
Monitor Type (J16(Jvd))	IN OUT	* Colour Monochrome
PS/2 Mouse Port (J17(Jmrq))	IN OUT	* Enabled Disabled
Modem Port (J18(Jc13))	1-2 2-3	* COM1 COM3
Serial Port (J20(Jc24))	1-2 2-3	* COM2 COM4
LPT Port (J22(Jlpt))	1-2 2-3	* LPT1 LPT2
LPT IRQ (J23(Jlrq))	1-2 2-3	* IRQ7 IRQ5
IDE (J24(Jhdc))	1-2 2-3	* IDE1 IDE2
FDC (J26(Jfdc))	1-2 2-3	* FDC1 FDC2

Speaker (J29(Jspks))	1-2 2-3	* Onboard Buzzer External Speaker
CPU Select (J31(Jcpup))	IN OUT	Upgrade CPU Socket (U74) * Original CPU Socket (U73)
Fast CPU (J34(Jfcpu))	IN OUT	80486DX2/OVERDRIVE in use No Fast CPU
J101 (Jmod)	1-2 2-3	Enabled Disabled

Note - J101 - Not present on all motherboards.

Note - J14 - Enable VESA connector J13 for PBTv to function.

CPU Type (J30(Jcpus))

Processor	1-2	3-4	5-6	7-8	9-10
80486sx PGA	OUT	IN	OUT	OUT	OUT
80486sx PQFP	IN	IN	OUT	OUT	OUT
80486DX 80486DX2 OVERDRIVE	IN	OUT	IN	IN	OUT
80487sx	IN	OUT	IN	OUT	IN

CPU Clock (J35(Jfreq))

MHz	1-2	3-4
16	IN	IN
20	OUT	IN
25	IN	OUT
33	OUT	OUT

Cache Size (J36(Jcach))

Cache	1-2	3-4	5-6	7-8	9-10
0	OUT	OUT	OUT	OUT	OUT
64	OUT	OUT	OUT	OUT	OUT
128	IN	OUT	IN	IN	OUT
256	IN	IN	IN	OUT	IN

Note -

- 0K - No CACHE Installed
- 64K - 8Kx8 in both banks
- 128K - 32Kx8 in even banks
- 256K - 32Kx8 in both banks

Upgrades

- **Battery** : This computer can use a 3.6 volt Lithium battery. To install the external battery, remove the cap on jumper J8. Then connect the battery to connector J7. The positive terminal of the battery connects to pin 1, and the ground terminal is connected to pin 4.
- **Cache** : Cache can be upgraded as follows (See jumpers section for more information) -
 - 64K - 8Kx8 in both banks
 - 128K - 32Kx8 in even banks
 - 256K - 32Kx8 in both banks
- **CPU** : This system accepts the following processors (See jumpers section for more information)
 - 486SX/20 PGA
 - 486SX/20 PQFP
 - 486SX/25 PGA
 - 486SX/25 PQFP
 - 486DX/33
 - 486DX2/50
 - 486DX2/66
- **RAM** : There are 3 different configurations of this motherboard -
 - 2MB soldered DRAM and OPTi 82C495 System Controller - 256k or 1MB 30pin SIMMS up to a maximum of 6MB.
 - 2MB soldered DRAM and OPTi 82C495B1 System Controller - 1MB or 4MB 30pin SIMMS up to a maximum of 18MB.
 - 4MB soldered DRAM - 256k/1MB/4MB 30pin SIMMs up to a maximum of 20MB.
 - Recommended speed (all versions) 80ns, though 70ns should work.
- **Speaker** : Use an 8 ohm, 1/2 watt computer speaker. Set jumper J29 to short pins 2 and 3. Then connect the speaker to J28, with the positive terminal of the speaker connected to pin 4, and the ground connected to pin 1.
- **Video Memory** : The video DRAM sockets are 20-pin. The memory can be upgraded to 1MB. DRAM ordered for memory upgrade need to be 20-pin, speed 70ns. These are NOT proprietary DRAMs. Video mode 59h (1024x768, 256 colors) is always interlaced.