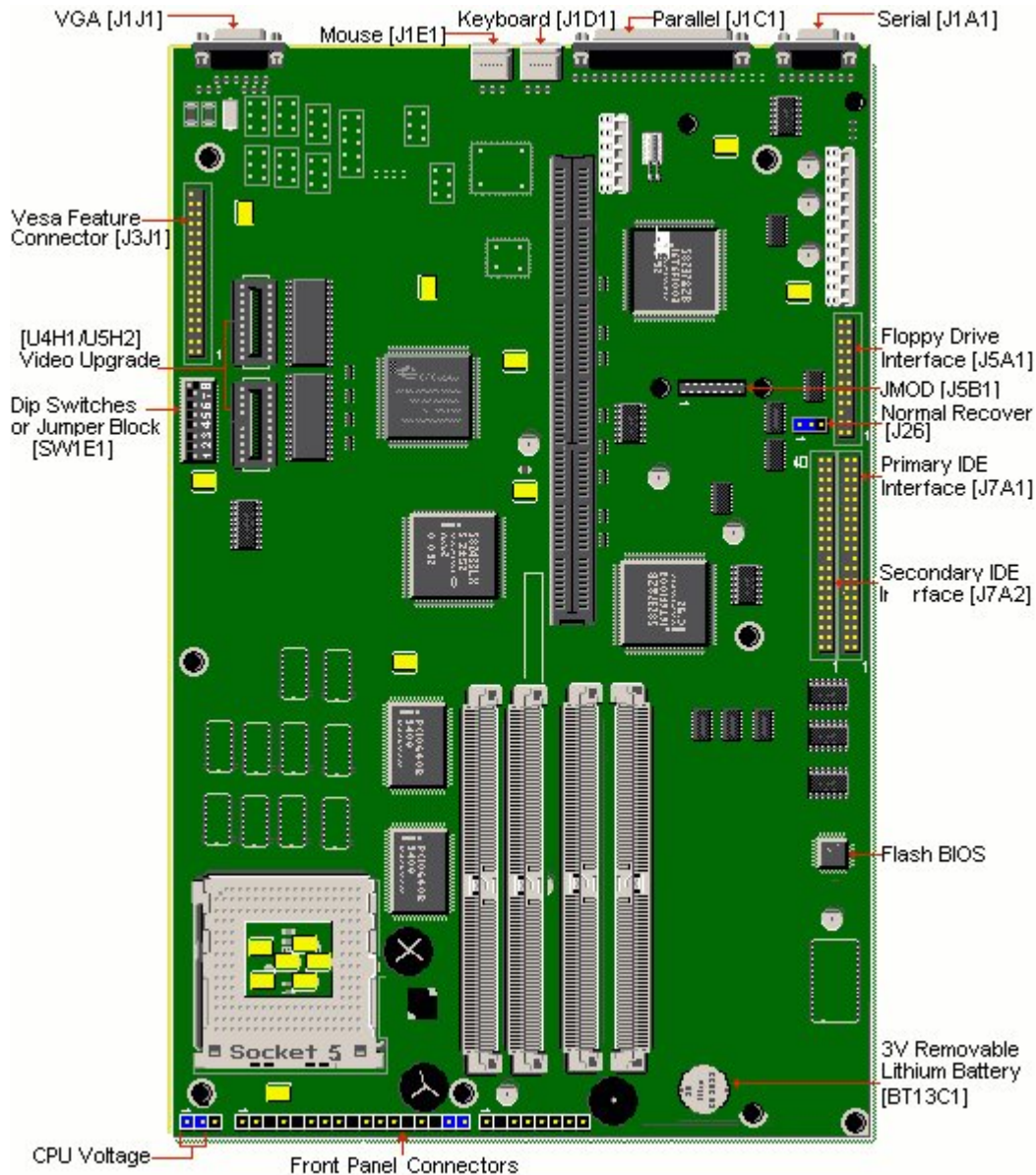# Packard Bell 570/580/590/620/630/650 M/Board

The on-board video chip of your computer will automatically be disabled by the installation of a separate video card.

Specification

- **Battery :** Clip in 3v replaceable Lithium battery at location BT13C1.
- **BIOS :** Flash EEPROM - AMI BIOS.
- **Bus Architecture :** PCI 2.0/ISA based system bus. 66MHz maximum bus speed
- **Cache :** 16K level 1 cache. A limited number of units include 256Kb asynchronous SOJ secondary cache.
- **Chipset :**
  - S82434NX PCI/Cache/Memory Controller.
  - FDC37C665GT Super I/O Controller.
  - S82378ZB System Controller.
  - S82433NX Local Bus Extension.
  - RZ1000BP PCI IDE Processor.

- **CPU :** Intel Pentium P75, P90, P100, P120 and P133MHz, and the 150, 166, 180 and 200MHz Intel Pentium Overdrive Processor with MMX technology.
- **Form Factor :** LPX.
- **Interfaces :**
  - 1 DB-9 Serial ports for COM1.
  - 1 DB-25 Parallel port.
  - 1 PS/2 Keyboard port.
  - 1 PS/2 Mouse port.
  - 1 15 pin VGA.
- **RAM :** No onboard Memory. 8MB installed standard, 128M maximum. Uses 1/2/4/8/16/32MB 72-pin SIMMs, @ 60-70ns. Parity SIMMs are supported
- **Speaker :** On-board piezo speaker.
- **UART :** Two 16C550A Compatible chips.
- **Video :** Built-in, Cirrus Logic Alpine GD5430 or 5434.
- **Video RAM :** Upgradable to 2 MB.

Jumper Block SW1E1

Switch	Function	Status	Configuration
1	Reserved	On * Off	Reserved Reserved
2	ISA Speed	On Off	60 or 66 MHz 50 MHz
3	Password	On * Off	Disabled Enabled
4	CMOS	On Off *	Clear Normal
5	Setup	On Off *	Disabled Enabled
6	Frequency Multiplier	On Off	2X 1.5X
7	CPU Clock 1	On Off	60 MHz 50 or 66 MHz
8	CPU Clock 0	On Off	66 MHz 50 or 60 MHz

* Indicates default settings.

Jumper	Function	Status	Configuration
J26	BIOS Recovery	1-2 2-3	Normal Recovery
J13J1	CPU Voltage	1-2 2-3	VR VRE

Note - Some configurations of this series of motherboards may list the BIOS Recovery Jumper as J5A2. Both designations are valid. The jumper is in the same location and the settings are the same.

Battery

Replace with 3 volt lithium battery.

BIOS Upgrade Procedure

1. Insert the BIOS update diskette into drive A: and reboot the system.
2. Press (enter). When the dialogue box appears.
3. The Main Menu will appear on the screen.
4. Select "Update Flash Memory Area from a file" using the Down Arrow key.
5. Press (enter).
6. The UPDATE FLASH AREA dialog box appears on the screen.
7. Select "Update System Bios".
8. Press (enter).
9. Select 1006AU0R.BIO file.
10. Press (enter).
11. Press (enter) at the following screen to proceed with programming.
12. After 2 message screens, the BIOS is now re-programmed with the updated BIOS file.
13. Remove the disk from drive A.
14. Press (enter) to reboot the computer system.
15. Complete the process by running the CMOS Setup program.

BIOS Recovery

1. Move the 'FLASH NORMAL/FLASH RECOVERY' jumper block, J5A2 from pins 1-2 to pins 2-3.
2. Insert the BIOS upgrade diskette and reboot the system. No video is available during the procedure.
3. The system beeps once and starts copying the recovery code into the CMOS Flash memory.
4. The system beeps twice as the recovery completes.
5. Turn off the system and move the jumper block, J5A2 from pins 2-3 to pins 1-2.
6. Leave the BIOS upgrade diskette in the floppy drive, and continue with the original upgrade following the procedure described in 'BIOS UPGRADE PROCEDURE'.

Cache Upgrade

This system has got 16KB Internal Cache (integrated into the CPU). The Cache memory on this motherboard CANNOT be upgraded.

CPU Upgrades

This motherboard can accommodate the Intel Pentium P75, P90, P100, P120 and P133MHz, and the 150, 166, 180 and 200MHz Intel Pentium Overdrive Processor with MMX technology.

The upgrade processor installs in the Zero Insertion Force (ZIF) Socket. (U11H1). In the table below you can find the correct jumper settings for each processor:

Speed	8	6	7	2
75MHZ	OFF	OFF	OFF	OFF
90MHZ	OFF	OFF	ON	OFF
100MHZ	ON	OFF	OFF	ON
120MHZ	OFF	ON	ON	ON
133MHZ	ON	ON	OFF	ON

MMX 150 Overdrive*	OFF	ON	OFF	ON
MMX 166 Overdrive*	ON	OFF	OFF	ON
MMX 180 Overdrive*	OFF	ON	ON	ON
MMX 200 Overdrive*	ON	OFF	ON	ON

* The Intel Pentium Overdrive Processor with MMX technology, is equipped with an on-package voltage regulator, which adapts the 3.3V system voltage to 2.8V processor voltage.

If you wish to install an MMX Overdrive processor, it may be necessary to have BIOS version 1.00.07 BY0R and at least 16MB of RAM installed. The current BIOS version will appear on the screen immediately after switching on the computer.

Memory Upgrades

- If you upgrade the system using EDO DRAM SIMMS, the speed of the SIMMS can be 60 or 70ns.
- If you upgrade the system using Fast Page Mode DRAM SIMMS the speed must be 70ns for ALL Pentium systems.
- The SIMMS are 4/8/16/32MB 72-pin and must be x32 because the motherboard design only supports non parity DRAM.
- Always use silver plated SIMMS. (Do not use gold plated SIMMS)
- Upgrade in pairs. This means you have to fill a bank completely. E.g. when up-grading the system with 8MB, you have to use two 4MB SIMMS instead of one 8MB.
- SIMMS in the same bank must be of the same type. Do not mix SIMM types within a bank. It is however possible to use EDO SIMMS in bank 0 and Fast Page Mode in bank 1.

Video Memory Upgrade

The video memory on this system can be upgraded to 2MB, by using two 256Kx16-70ns SOJ DRAM chips.