Packard Bell 686 M/Board

Specification

- **Battery :** Tadiran 3.6V Lithium. Rev C. Velcroed to front casing. Rev D. Soldered to motherboard.
- **BIOS :** 2 X 32 KB - Phoenix BIOS. Phoenix 3.10.00D Phoenix 3.10.03D. To access - Press F2 at boot before beep.
- **Cache :** N/A
- **Clock/Driver :** Not removable; on motherboard
- **Cover Removal :** 3 screws on back panel upper. 2 screws on each side
- **CPU :** 80286-12 MHz. Keyboard Switchable: (Ctrl)-(Alt)-(-) Toggles between 8 MHz and 12MHz
- **Drive Cavities :** 1 X 3 ½ half (enclosed). 2 X 5 ¼ half (exposed)
- **I/O Expansion slots :** 5 X 16-bit ISA
- **Interfaces :**
  - 1 DB-25 Parallel Port
  - 1 x RS232 DB-9 Serial Port
  - 1 x RS232,DB-25 Serial Port
  - 1 5-pin DIN Keyboard Port
- **Power Supply :** 135 watts. 115v:3.5a:60Hz:outlet 1a. 230v:1.0a:50Hz:outlet 0.5a
- **RAM :** Standard on motherboard: 640Kb (w/128Kb piggy board), 1MB (w/o piggy board). Maximum on motherboard : 1MB
- **Speaker :** Internal - front left , behind
- **Video :** Usually PBVGA MULTI 16-bit

Jumpers

The floppy controller is built-in on the motherboard and CANNOT be disabled.

Jumper	Function	Pins	Description
JP1	128k Piggy-Back	1-2 2-3 OPEN	Enable Piggy back board 640k Disables Piggy Back Board Disables Piggy Back Board (2-pin rev.)
JP2	Primary Display	1-2 2-3	Monochrome * Colour
JP5	RAM Size	OPEN CLOSED	Enable 1MB of MB memory Enable 640k of MB memory
JP23	Parallel Port	1-2 2-3	LPT2 IRQ5 * LPT1 IRQ7
JP27	Parallel Port	1-3 2-4	LPT2 IRQ5 * LPT1 IRQ7
JP24	Serial Port	1-3 2-4 1-2 3-4 2-4 1-2 3-4 1-3	* DB25 is COM1, DB9 is COM2 DB25 is COM2, DB9 is COM1 DB25 is COM1, DB9 disabled DB25 is COM2, DB9 disabled DB25 disabled, DB9 is COM1 DB25 disabled, DB9 is COM2
JP33	Serial Port	1-3, 2-4 1-2 3-4	* DB25 is COM1, DB9 is COM2 DB25 is COM2, DB9 is COM1

		1-3	DB25 is COM1, DB9 disabled
		1-2	DB25 is COM2, DB9 disabled
		3-4	DB25 disabled, DB9 is COM1
		2-4	DB25 disabled, DB9 is COM2

* Indicates default settings

On 640K motherboards, the sockets with a double line (between JP1 and J1-J3) are EMPTY and covered by a Piggy-back board. To upgrade to 1MB, you must fill the sockets with 6 RAM chips (4 x 256x4 and 2 x 256x1, 100 ns) and take out the JP5 jumper strap. On the 1MB motherboard, there is no longer a Piggy-back board because the sockets are already populated.

JP5 may not be present on the 1MB motherboard.

JP1 may have 2 or 3 pins. 2-3 and open are functionally the same.

Upgrades

- **Cache Memory :** This system does not support cache memory.
- **Maths Co-Processor :** This system supports the 80287-8 math co-processor. It is installed at location U19. No jumper setting are required.
- **RAM :** BASE MEMORY = 640 (always). EXTENDED MEMORY = 384. Maximum onboard memory : 1MB. Updrade using 256k, 100ns chips. More than 1 MB: Insert a memory expansionboard.
- **Video Memory :** This system has a video card installed. To upgrade video, the card would need to be replaced.