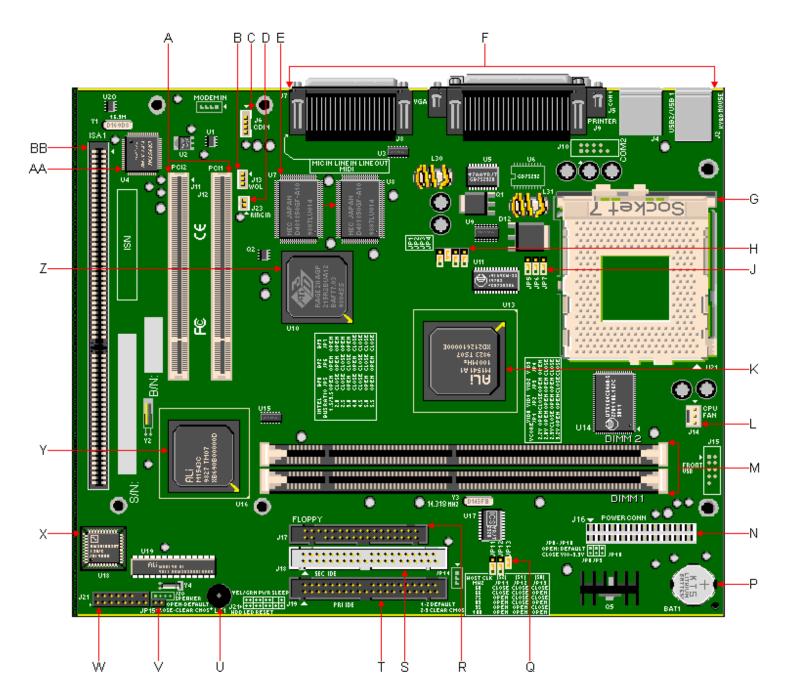# Packard Bell 930/950 M/Board

Item	Description	Item	Description
A	PCI Slots	P	Battery
B	Wake-On-Lan Connector (J13)	Q	Host Clock Speed Jumpers (JP11, JP12, JP13)
C	CD-In Connector (J6)	R	FDD Connector
D	Ring-In Connector (J23)	S	Secondary IDE Connector
E	Video Memory	T	Primary IDE Connector
F	Rear Connector Ports	U	Piezo Buzzer
G	CPU Socket 7	V	Clear CMOS Jumper (JP15)
H	CPU Core Voltage Selection (JP1, JP2, JP3, JP4)	W	Front Panel Connectors
J	CPU/Bus Speed Select Jumpers (JP5, JP6,	X	AMD AM29F002NT 2Mb CMOS Flash Memory

JP7)

K	ALi Aladdin V M1541 AGP/PCI/ISA Chipset	Y	ALi Aladdin V M1543C AGP/PCI/ISA Chipset
L	CPU Fan Connector	Z	ATI 3D Rage IIC AGP Video Controller Chipset
M	DIMM Sockets	AA	Cirrus Logic/Crystal CS4235 Audio Controller Chipset
N	Power Supply Connector	BB	ISA Slot

Specification

- **Audio :** Cirrus Logic CS4235 Audio Chipset with integrated CODEC & FM Synthesis
- **Battery :** Socketed 3 volt Lithium coin cell battery.
- **BIOS :** 2 M-bit Flash EEPROM. System BIOS by Award
- **Bus :** PCI 2.1/ISA based system bus. 100MHz maximum bus speed
- **Cache :** 0/512KB Pipeline Burst Cache soldered-on, non-upgradeable.
- **Chipset :** ALi Aladdin V M1541/M1543C AGP/PCI/ISA Chipset.
- **CPU :** Uses Type 7 CPU Zero Insertion Force (ZIF) CPU Socket. This motherboard supports the following CPUs:
    - Intel/AMD 166~350 MHz
    - Cyrix 6X86L, PR120+~200+
    - Cyrix 6X86MX, PR133~PR350
    - Cyrix 6X86 MII 266~350
- **Interfaces :**
    - DB-9 Serial port
    - DB-25 Parallel port
    - PS/2 keyboard port
    - PS/2 mouse port
    - Dual USB connector
    - VGA DB-15 VGA port
    - MIDI/Game port
    - 3 Stereo mini-jacks for Line-in, Line-out & Mic-in
- **RAM :** 256MB maximum. Uses 16/32/64/128 MB SDRAM DIMMs in 2 168-pin DIMM sockets. Supports 66 or 100 MHz SDRAM.
- **Speaker :** Speaker On-board piezo speaker.
- **Video :** ATI 3D RAGE IIC AGP Chipset.
- **Video RAM :** 2MB (930) or 4MB (950) Non-Upgradable.

Jumpers

Jumper	Function	Configuration
JP15	CMOS Clear	OPEN - Normal Operation CLOSED - Clear CMOS Data

CPU Core Voltage Selection Jumpers

Vcore	JP1	JP2	JP3	JP4
2.2v	OPEN	CLOSED	OPEN	OPEN
2.8v	OPEN	OPEN	OPEN	CLOSED
2.9v	CLOSED	OPEN	OPEN	CLOSED
3.2v	OPEN	OPEN	CLOSED	CLOSED

CPU Core Voltage Selection Jumpers

Intel CPU/Bus	BJ0 JP5	BJ1 JP6	BF2 JP7
X1.5/X3.5	OPEN	OPEN	OPEN
X2.0	CLOSED	OPEN	OPEN
X2.5	CLOSED	CLOSED	OPEN
X3.0	OPEN	CLOSED	OPEN
X4.0	CLOSED	OPEN	CLOSED
X4.5	CLOSED	CLOSED	CLOSED
X5.0	OPEN	CLOSED	CLOSED
X5.5	OPEN	OPEN	CLOSED

CPU Clock Selection Jumpers

CPU Clock (MHz)	JP11	JP12	JP13
60	CLOSED	CLOSED	CLOSED
66	CLOSED	CLOSED	OPEN
75	OPEN	CLOSED	CLOSED
83	OPEN	CLOSED	OPEN
95	OPEN	OPEN	CLOSED
100	OPEN	OPEN	OPEN

Upgrades

- **Cache Upgrade**. This motherboard comes with either 0 or 512K L2 cache soldered directly onto the motherboard. The size of the cache will be autodetected. The cache is non-upgradeable.

- **CPU Upgrade**. This motherboard has provisions to support Intel? Pentium?, Cyrix? and AMD? processors. The processor speeds are selectable with variable six jumper sets, three jumpers set to select the bus-to-core frequency ratio, and the other to select the CPU bus speed (60, 66, 75, 83, 95, 100 MHz). The bus-to-core ratio is either 2/11, 1/5, 2/9, 1/4, 2/7, 1/3, 2/5, 1/2 or 2/3 yielding the bus/core frequency. One Onboard DC/DC converter supply 2.2V, 2.8V, 2.9V and 3.2V to the CPU. Four 2-pin connectors. Zero Insertion Force (ZIF) socket. Uses the 321-pin Type 7 CPU Socket. Not keyboard switchable. Disable cache to slow down the system.

- **RAM Upgrade**. Maximum on Motherboard: 256MB. Uses 16/32/64/128 MB DIMMs, 60ns or faster SDRAM DIMMs. Supports only non-parity DIMM modules. The 168-pin DIMM sockets will accept 3.5V 2MBx64 (16MB), 4MBx64 (32MB), and 8MBx64 (64MB) and 16MBx64 (128MB) DIMMs. Bank 0 will be populated as the default from the factory. No configuration jumpers: BIOS detects memory size, and memory type (EDO or Fast Page Mode). This motherboard will not accept 36-bit DIMM modules (parity).

- **Video RAM :** Some configurations of this motherboard come with 2MB of 100MHz SGRAM soldered onto the motherboard, other configurations have 4MB. The video memory is not upgradeable.