

HP Consumer Support

Motherboard Layout and Information for Models With a Via 694X Chipset and an Intel Pentium (R) III Processor

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HP Pavilion models with this motherboard

The following HP Pavilion PC models ship with a motherboard containing the Via 694X Chipset and Pentium III Processor:

HP Pavilion X6xx Series	HP Pavilion X7xx and XLxxx Series
8628 (AP)	8700I (US)
8629 (AP)	8705I (US)
8631 (AP)	8722 (France)
8632 (AP)	8725 (France)
8636 (AP)	8740 (France)
8660 (Sweden)	8760C (US)
8660 (Norway)	8775C (US/Canada)
8674D (US)	8785C (US/Canada)
8674F (US)	XL766 (US)
8680 (France)	
8680 (Norway)	
8680 (Sweden)	

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Product (e.g. Deskjet D2680)

Question or keywords

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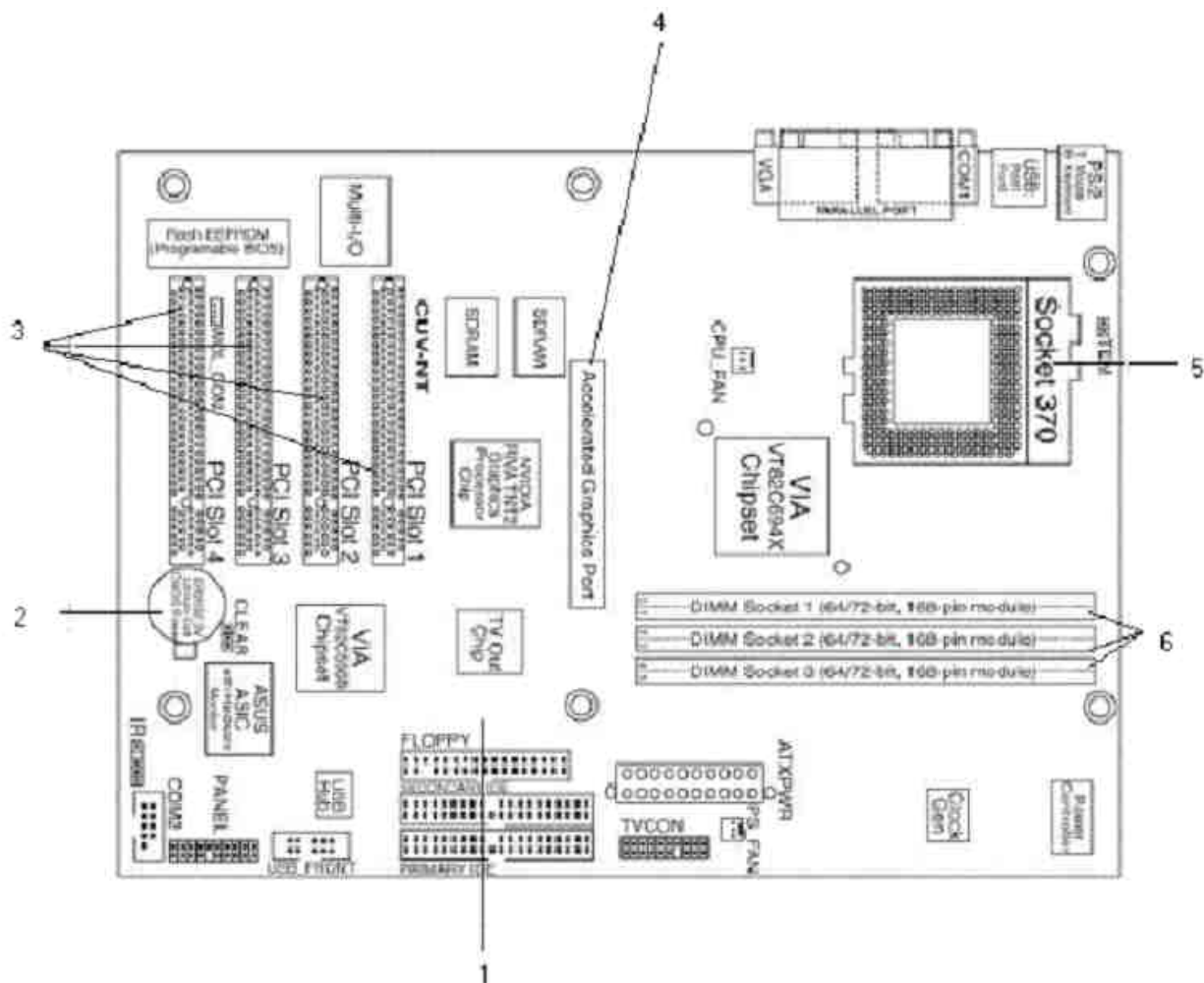
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System board layout

Figure 1: Motherboard layout



- 1 - TV out chip
- 2 - System battery
- 3 - PCI connectors
- 4 - AGP port
- 5 - Socket 370 processor connector
- 6 - DIMM sockets (memory)

Jumper locations and functions

There are no jumper blocks to set on this motherboard.

About system memory

The motherboard has three dual in-line memory module (DIMM) sockets. Minimum memory size is 16 MB; maximum memory size is 768 MB. The BIOS automatically detects memory type, size, and speed.

The motherboard supports the following memory features:

- 168-pin DIMMs with gold-plated contacts
- 100 MHz SDRAM depending on system
- Non-ECC (64-bit) and ECC (72-bit) memory
- 3 V memory only
- Single- or double-sided DIMMs

SDRAM

Synchronous DRAM (SDRAM) improves memory performance through memory access that is synchronous with the memory clock. This simplifies the timing design and increases memory speed because all timing is dependent on the number of memory clock cycles.



NOTE: To function properly, SDRAM DIMMs must meet the Intel 4-clock, 100 MHz, unbuffered SDRAM specification for either 64-bit or 72-bit SDRAM.

System memory configuration

SDRAM Bank 0	SDRAM Bank 1	SDRAM Bank 2	Total System Memory
Empty	Empty	16 MB	16 MB
Empty	Empty	32 MB	32 MB
Empty	Empty	64 MB	64 MB
Empty	Empty	128 MB	128 MB
Empty	16 MB	Empty	16 MB
Empty	16 MB	16 MB	32 MB
Empty	16 MB	32 MB	48 MB
Empty	16 MB	64 MB	80 MB
Empty	16 MB	128 MB	144 MB
Empty	32 MB	Empty	32 MB
Empty	32 MB	16 MB	48 MB
Empty	32 MB	32 MB	64 MB
Empty	32 MB	64 MB	96 MB
Empty	32 MB	128 MB	160 MB
Empty	64 MB	Empty	64 MB
Empty	64 MB	16 MB	80 MB
Empty	64 MB	32 MB	96 MB
Empty	64 MB	64 MB	128 MB
Empty	64 MB	128 MB	192 MB
Empty	128 MB	Empty	128 MB
Empty	128 MB	16 MB	144 MB
Empty	128 MB	32 MB	160 MB

Empty	128 MB	64 MB	192 MB
Empty	128 MB	128 MB	256 MB
16 MB	16 MB	16 MB	48 MB
256 MB	256 MB	256 MB	768 MB

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IDE support

The motherboard provides 2 independent high performance bus-mastering PCI IDE interfaces capable of supporting PIO Mode 3, Mode 4, and ATAPI devices (e.g., CD-ROM). The system BIOS supports logical block addressing (LBA) and extended cylinder sector head (ECSH) translation modes. IDE device transfer rate and translation mode are automatically detected by the system BIOS.

Usually programmed I/O operations require a substantial amount of processor bandwidth. However, in multitasking operating systems, the bandwidth freed by bus mastering IDE can be devoted to other tasks while disk transfers are occurring.

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Universal Serial Bus (USB) support

The motherboard features 4USB ports that permit the direct connection of 4 USB peripherals, one to each port. The motherboard fully supports the universal host controller interface (UHCI) and uses software drivers that are UHCI-compatible.

Features of USB include:

- Self-identifying peripherals that can be hot-plugged
- Automatic mapping of function to driver and configuration
- Support for isochronous and asynchronous transfer types over the same set of wires
- Support for up to 127 physical devices
- Guaranteed bandwidth and low latencies appropriate for telephony, audio, and other applications
- Error-handling and fault-recovery mechanisms built into the protocol

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Primary power supply connector

Pin	Signal Name	Pin	Signal Name
1	+3.3 V	11	+3.3 V
2	+3.3 V	12	-12 V
3	Ground	13	Ground
4	+5 V	14	PW_ON
5	Ground	15	Ground
6	+5 V	16	Ground
7	Ground	17	Ground
8	PWRGD (Power Good)	18	-5 V

9	+5 VSB (Standby for real-time clock)	19	+5 V
10	+12 V	20	+5 V

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Power supply fan connector

Pin	Signal Name
1	Rotation
2	+12 V (Suspend)
3	Ground

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CPU fan connector

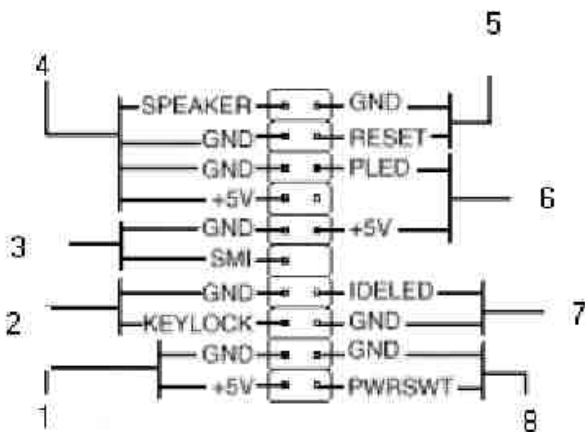
Pin	Signal Name
1	Rotation
2	+12 V
3	Ground

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Front panel connector

The front panel connector includes headers for the following connections; Power LED, Speaker, Reset switch, Power switch., Sleep switch.

Figure 2: Front Panel Connector



1 - Message LED

2 - Keyboard Lock

3 - SMI Lead

4 - Speaker Connector

5 - Reset SW

6 - Power LED

7 - IDE LED

8 - ATX Power Switch

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PS/2 keyboard and mouse ports

Pin	Signal Name
1	Data
2	No Connect
3	Ground
4	+5 Vcc (fused)
5	Clock
6	No Connect

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USB connectors

Pin	Signal Name
1	Power
2	USBP0# (USBP1#)
3	USBP0 (USBP1)
4	Ground

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Serial port connector

Pin	Signal Name
1	Data Carrier Detect (DCD)
2	Receive Data (RXD)
3	Transmit Data (TXD)
4	Data Terminal Ready (DTR)
5	Ground
6	Data Set Ready (DSR)
7	Request to Send (RTS)
8	Clear to Send (CTS)
9	Ring indicator

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Parallel port

Signal Name	Pin	Pin	Signal Name
STROBE-	1	14	AUTO FEED
Data Bit 0	2	15	ERROR*
Data Bit 1	3	16	INIT*
Data Bit 2	4	17	SELECT IN*
Data Bit 3	5	18	Ground
Data Bit 4	6	19	Ground
Data Bit 5	7	20	Ground
Data Bit 6	8	21	Ground
Data Bit 7	9	22	Ground
ACK*	10	23	Ground
BUSY	11	24	Ground
Error	12	25	Ground
SELECT	13		

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IDE connectors

Signal Name	Pin	Pin	Signal Name
Reset IDE	1	2	Ground
Host Data 7	3	4	Host Data 8
Host Data 6	5	6	Host Data 9
Host Data 5	7	8	Host Data 10
Host Data 4	9	10	Host Data 11
Host Data 3	11	12	Host Data 12
Host Data 2	13	14	Host Data 13
Host Data 1	15	16	Host Data 14
Host Data 0	17	18	Host Data 15
Ground	19	20	Key
DDRQ0(DDRQ1)	21	22	Ground
I/O Write	23	24	Ground
I/O Read	25	26	Ground
IORDY	27	28	Vcc pull-up
DDACK0(DDACK1)	29	30	Ground
IRQ14(IRQ15)	31	32	Reserved
Addr 1	33	34	Reserved
Addr 0	35	32	Addr 2

Chip Select 1P(1S)	37	38	Chip Select 3P (3S)
Activity	39	40	Ground

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Floppy connector

Signal Name	Pin	Pin	Signal Name
Ground	1	2	DENSEL
Ground	3	4	Reserved
Key	5	6	FDEDIN
Ground	7	8	Index
Ground	9	10	Motor Enable A
Ground	11	12	Drive Select B
Ground	13	14	Drive Select A
Ground	15	16	Motor Enable B
MSEN1	17	18	DIR
Ground	19	20	STEP
Ground	21	22	Write Data
Ground	23	24	Write Enable
Ground	25	26	Track 00
MSEN0	27	28	Write Protect
Ground	29	30	Read Data
Ground	31	32	Side 1 Select
Ground	33	34	Diskette Change

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