

Illustrated Parts & Service Map

HP Compaq 8200 Elite All-in-One Business PC



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Key Specifications

Processor Type	Intel® Core i7, i5, i3, Pentium
Form Factor	All-in one desktop, 23-inch
RAM Type	PC3-10600 (1333 MHz) Non-ECC SDRAM
Maximum RAM	8 GB
Expansion Slot	(1) full height Mini PCIe x1
Power	150W external
Chipset	Intel Q67
Graphics Adapter	Integrated Intel HD 2000 or Integrated Intel HD graphics
Drives	(1) optical drive, (1) hard drive
I/O Interfaces	Side: (2) USB 2.0 ports, microphone, headphone Rear: (4) USB 2.0 ports, RJ-45 Ethernet, line-out
Preinstalled Operating Systems	<ul style="list-style-type: none"> Windows 7 Professional 32/64, Ultimate 64, Home Premium 64, Home Basic 32, FreeLnx

Spare Parts

Mass Storage Devices (do not include bracket; reuse existing bracket)

4X DVD±RW drive (does not include bezel)	619239-001
8X DVD-ROM drive (does not include bezel)	637998-001
8X DVD drive, SuperMulti (does not include bezel)	597927-001
1 TB, 7200 rpm SATA hard drive	636930-001
750 GB, 7200 rpm SATA hard drive	639363-001
500 GB, 7200 rpm SATA hard drive	636929-001
320 GB, 7200 rpm SATA hard drive	634824-001
250 GB, 7200 rpm SATA hard drive	636927-001
300 GB Solid State Drive (SSD)	660283-001
160 GB Solid State Drive	646809-001
80 GB Solid State Drive	607817-001

Keyboards (not illustrated)

USB, Blue	658321-xx1		
Wireless	647446-xx1		
HP Smartcard, USB	631411-xx4		
Washable*	613125-xx1		
HP USB	537746-xx1		
Arabic	-17x	Norwegian	-09x
Belgian	-18x	The Netherlands	-33x
BHCSY	-B4x	People's Republic of China	-AAx
Brazilian Portuguese	-20x	Poland	-24x
Bulgaria	-26x	Portuguese	-13x
Czech	-22x	Romanian	-27x
Danish	-08x	Russian	-25x
Finnish	-35x	Saudi Arabia	-DEx
French	-05x	Slovakian	-23x
French Canadian	-12x	South Korea	-KDX
German	-04x	Spanish	-07x
Greek	-15x	Swedish	-10x
Hebrew	-BBx	Swiss	-11x
Hungarian	-21x	Taiwanese	-ABx
International	-37x	Thai	-28x
International English	-L3x	Turkish	-14x
Italian	-06x	U.S.	-00x
LA Spanish	-16x	U.K.	-03x
Japanese	-29x		

* -001, -121 only

System Unit

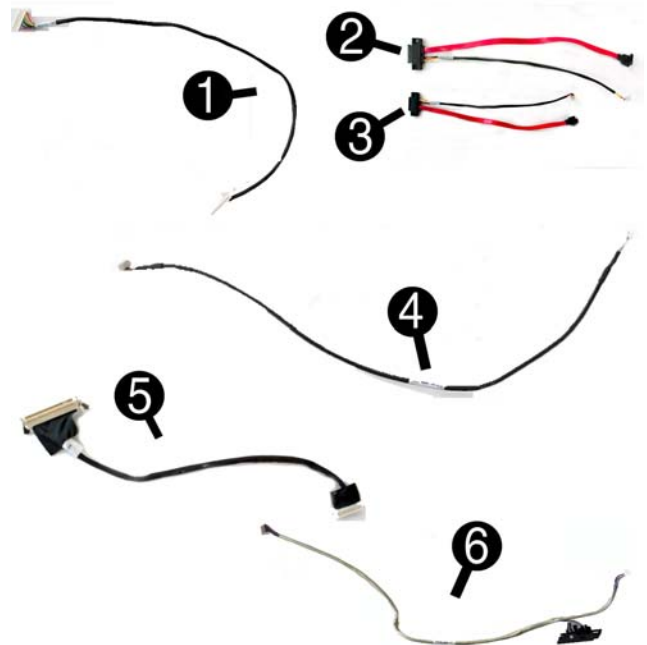


System Unit

1	Rear cover	663365-001
2	Top panel	663366-001
3	LCD assembly kit (includes backlight cable)	667458-001
4	Stand	663368-001
5	Hard drive door	663369-001
6	Stand cover	663367-001
7	Memory door	663370-001
*	Front bezel	670000-001
*	Power supply, 150W, external	651587-001

* Not shown

Cables

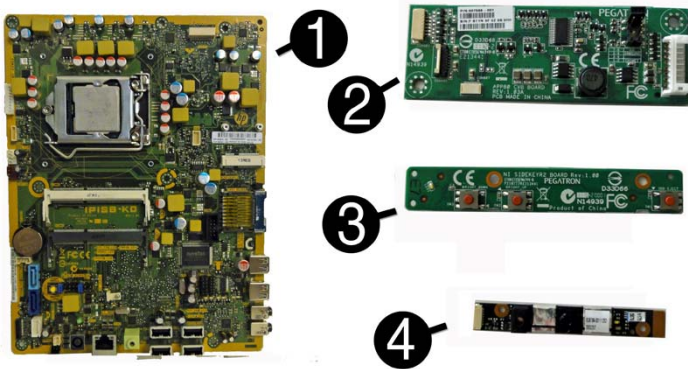


Cables

1	Converter cable	663358-001
2	Optical drive SATA cable	663361-001
3	Hard drive SATA cable	663362-001
4	Webcam cable	663360-001
5	LVDS display cable	663363-001
6	Side key cable with holder	663359-001
*	Antenna, coaxial	663352-001

*Not shown

Boards



Boards, Memory, Processors

1	System board (includes replacement thermal material)	655876-001
2	Converter board	668170-001
3	Sidekey board	663348-001
4	Webcam, 1.3MP with analog microphone	663354-001
*	Memory module, 2 GB (PC3-10600, CL9, SODIMM)	646800-001
*	Memory module, 4 GB (PC3-10600, CL9, SODIMM)	646801-001
Processors (include thermal replacement material)		
*	Intel Core i7 2600S processor, 2.8 GHz, 65W	638419-001
*	Intel Core i5 2500T processor, 2.3 GHz, 45W	663350-001
*	Intel Core i5 2500S processor, 2.7 GHz, 65W	638420-001
*	Intel Core i5 2400S processor, 2.5 GHz, 65W	640953-001
*	Intel Core i5 2390 processor, 2.7 GHz, 35W	663349-001
*	Intel Core i3 2120 processor, 3.3 GHz, 65W	638629-001
*	Intel Core i3 2105 processor, 3.1 GHz, 65W	655970-001
*	Intel Core i3 2100 processor, 3.1 GHz, 65W	638628-001
*	Intel Pentium Dual-Core G850 processor, 2.9 GHz, 65W	655973-001
*	Intel Pentium Dual-Core G840 processor, 2.8 GHz, 65W	655972-001
*	Intel Pentium Dual-Core G620 processor, 2.6 GHz, 65W	655971-001

* Not shown

Miscellaneous Parts



Miscellaneous Parts

1	CPU blower/fan assembly (includes two fans)	663353-001
2	Heat sink/thermal module (includes replacement thermal material)	663351-001
3	Speaker, right	663355-001
3	Speaker, left	663356-001
4	Grommet, rubber, hard drive	663357-001
*	Bezel, optical drive	663364-001
*	802.11a/b/g/n WLAN PCIe card	652165-001
*	Combo Bluetooth 2.1 and 802.11a/b/g/n WLAN PCIe card	652279-001
*	Mouse, optical, USB	596410-001
*	Mouse, wireless	621417-001
*	Mouse, optical, USB, black	537749-001
*	Mouse, USB, PS2, washable	608150-001

*Not shown

Password Security

Establishing a Setup or Power-On password:

1. Turn on or restart the computer.
2. As soon as the computer turns on, press the **Esc** key while "Press the ESC key for Startup Menu" message is displayed at the bottom of the screen.
3. Press the **F10** key to enter Computer Setup.
4. To establish Setup password, select **Security > Setup Password** and follow the instructions.
- or -
To establish a Power-On password, select **Security > Power-On Password** and follow the instructions on the screen.
5. Before exiting, click **File > Save Changes and Exit**.

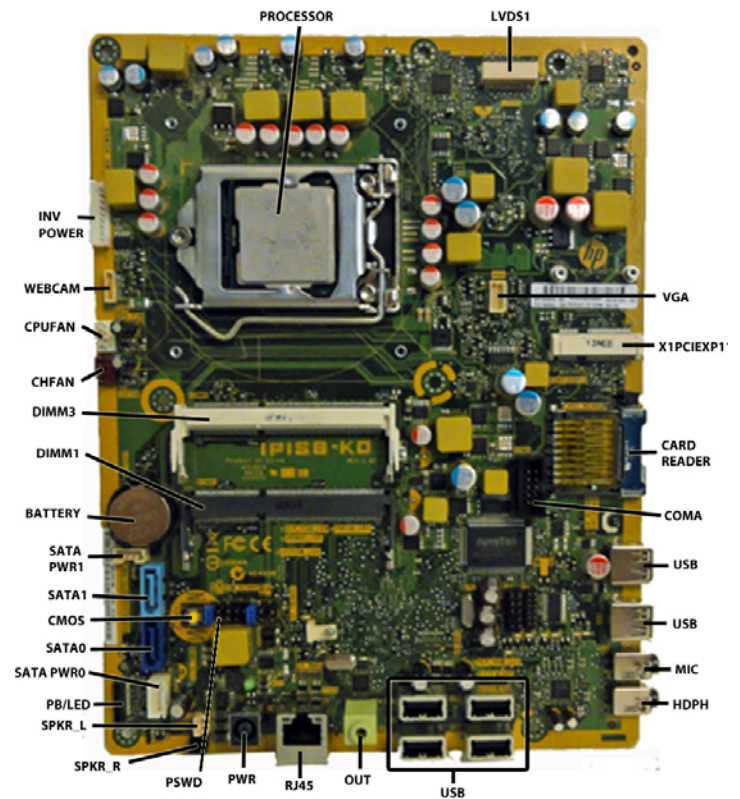
Resetting a Setup or Power-On password:

1. Turn off the computer and disconnect the power cord from the power outlet.
2. Remove the access panel.
3. On the system board, locate the header labeled PSWD.
4. Remove the jumper from the header.
5. Replace the jumper.
6. Replace the access panel and reconnect the power cord.
7. Turn on the computer and allow it to start.

Clearing CMOS

1. Turn off the computer and disconnect the power cord from the power outlet.
2. Remove the access panel.
3. On the system board, press and hold the CMOS button for 5 seconds.
4. Replace the chassis access panel and reconnect the power cord.
5. Turn on the computer and allow it to start.

System Board



System Board Connectors and Jumpers

PROCESSOR	Processor socket	SPKR R	Right speaker connector
LVDS1	Display connector	SPKR L	Left speaker connector
VGA	Display connector	PB/LED	Power switch/LED
X1PCIEXP1	PCIe X1 slot (WLAN)	SATA PWR0	Hard drive power
CARD READER	Card reader	SATA0	Hard drive data
COMA	Diskette drive connector	CMOS	CMOS reset button
USB	USB connectors (2)	SATA1	Optical drive data
MIC	Microphone connector	SATA PWR1	Optical drive power
HDPH	Headphone connector	BATTERY	RTC battery slot
USB	USB connectors (4)	DIMM1	Memory socket - Ch A
CHFAN	Main fan connector	DIMM3	Memory socket - Ch B
OUT	Audio out connector	CHFAN	Fan connector
RJ45	Network connector	WEBCAM	Camera connector
PWR	External power connector	INV POWER	Converter power connector
PSWD	Password header		

Common POST Error Messages

Screen Message	Probable Cause	Recommended Action
101-Option ROM Error	1. System ROM checksum error. 2. Expansion board option ROM checksum	1. Verify ROM, reflash if required 2. Remove suspected card, reboot 3. Clear CMOS memory, reboot 4. Replace system board
103-System Board Failure	DMA, timers	1. Clear CMOS memory. 2. Remove expansion boards. 3. Replace system board.
163-Time & Date Not Set	Invalid time or date in configuration memory. RTC battery may need to be replaced.	Reset the date and time under Control Panel (Computer Setup can also be used). If the problem persists, replace the RTC battery.
164-Memory Size Error and 201-Memory Error	Incorrect memory configuration	1. Run Setup (F10). 2. Check DIMMs for proper seating, type, and HP compatibility. 3. Remove DIMMs singularly and reboot to isolate faulty DIMM. 4. Replace system board.
214-DIMM Configuration Warning	Populated DIMM configuration is not optimized	Rearrange the DIMMs so that each channel has the same amount of memory.
301-, 304-Keyboard error	Keyboard failure.	Check keyboard connection or keys. Check connector for bent or missing pins. Replace keyboard. If 304, possible system board problem.
501-Display Adapter Failure	Graphics display controller.	1. Reseat graphics card. 2. Clear CMOS. 3. Check monitor connection. 4. Replace graphics card.
1720-SMART Hard Drive Detects Imminent Failure	Hard drive is about to fail.	1. Determine if hard drive is giving correct error message. Enter Computer Setup and run the Drive Protection System test under Storage > DPS Self-test . 2. Apply hard drive firmware patch if applicable. 3. Back up contents and replace hard drive.
The system is violating the thermal environment requirement.	Improper processor installed or add-in card installed in 50C mode.	1. Replace the processor with a 65W processor. 2. Remove any add-in cards.

Diagnostic LEDs

LED	Color	LED Activity	State/Message
Power	Green	On	Computer on
Power	Green	1 blink every 2 seconds.	Normal Suspend Mode.
Power	Red	1 blink every second followed by a 2 second pause.	CPU thermal shutdown.
Power	Red	3 blinks, 1 blink every second followed by a 2 second pause.	Processor not installed.
Power	Red	4 blinks, 1 blink every second followed by a 2 second pause.	Power failure (power supply overload).
Power	Red	5 blinks, 1 blink every second followed by a 2 second pause.	Pre-video memory error.
Power	Red	6 blinks, 1 blink every second followed by a 2 second pause.	Pre-video graphics error.
Power	Red	7 blinks, 1 blink every second followed by a 2 second pause.	System board failure (ROM).
Power	Red	8 blinks, 1 blink every second followed by a 2 second pause.	Invalid ROM based on Checksum.
Power	Red	9 blinks, 1 blink every second followed by a 2 second pause.	System powers on but is unable to boot.
Power	Red	10 blinks, 1 blink every second followed by a 2 second pause.	Bad option card.
Power	Red	12 blinks, 1 blink every second followed by a 2 second pause. Beeps stop after a third iteration and computer reboots.	Health timer expired.
none	none	System does not power on and LEDs are not flashing.	System unable to power on.

System Setup and Boot

Access the Setup Utility during the computer boot sequence by pressing the **Esc** key while "Press the ESC key for Startup Menu" message is displayed at the bottom of the screen, and then pressing the **F10** key. If you do not press **Esc** at the appropriate time, you must restart the computer and again press **Esc** when the monitor light turns green.

Computer Setup Menu

Heading	Option/Description
File	System Information - Lists the following main system specifications: <ul style="list-style-type: none"> Product name SKU number (some models) Processor type/speed/stepping Cache size (L1/L2/L3) Installed memory size/speed/ch Integrated MAC Address System BIOS Chassis serial number Asset tracking number ME firmware version ME Management mode
	About - Displays copyright notice.
	Set Time and Date - Allows you to set system time and date.
	Flash System ROM - Allows you to select a drive containing a new BIOS.
	Replicated Setup - Save to Rmvble Media and Restore from Rmvble Media
	Default Setup <ul style="list-style-type: none"> Save Current Settings as Default Restore Factory Settings as Default
	Apply Defaults and Exit - Applies the selected default settings and clears any established passwords.
	Ignore Changes and Exit - Exits Computer setup without saving changes.
	Save Changes and Exit - Saves changes to system configuration or default settings and exits Computer Setup.
	Storage
Storage Options - Allows you to set Removable Media Boot and SATA Emulation. SATA Emulation choices are AHCI or IDE.	
DPS Self-Test - Allows you to execute self-tests on ATA hard drives.	
Boot Order - Allows you to specify boot order. <ul style="list-style-type: none"> Shortcut to Temporarily Override Boot Order 	
Security	Setup Password - Allows you to set and enable the setup (Admin) password.
	Power-On Password - Allows you to set and enable power-on password.
	Password Options - When any password exists allows you to lock legacy resources, enable/disable Setup Browse Mode, set password prompt, enable/disable network server mode, specify password requirement for warm boot, and set stringent passwords.
	Device Security - Allows you to set Device Available/Device Hidden for: embedded security devices, system audio, network controller, and SATA ports.
	USB Security - Allows you to set Device Available/Device Hidden for front USB ports 1-2, rear USB ports 1-4, internal USB ports 1, 2, 3, 10.
	Slot Security - Allows you to disable the PCI Express x1 slot.
	Network Boot - Enables/disables boot from OS (NIC models only).
	System IDs - Allows you to set Asset tag, Ownership tag, Chassis serial number or UUID, and keyboard locale setting.
	System Security (some models) - Allows you to enable/disable: <ul style="list-style-type: none"> Data Execution Prevention (enable/disable) PAVP (Blu-ray models) (disable/min/max) Virtualization Technology (VTx) (enable/disable) Virtualization Technology Directed I/O (VTd) (enable/disable) Intel TXT (LT) (enable/disable) Embedded Security Device Support (enable/disable) OS management of Embedded Security Device (enable/disable) Reset of Embedded Security Device through OS (enable/disable)
	DriveLock Security - Allows you to assign or modify a master or user password for hard drives.
Power	OS Power Management - Allows you to enable/disable Runtime Power Management, Idle Power Savings, Unique Sleep State Blink Rates.
	Hardware Power Management - Allows you to enable/disable SATA bus power management and S5 maximum power savings.
	Thermal - Allows you to control minimum fan speed.
Advanced	Power-On Options - Allows you to set: <ul style="list-style-type: none"> POST mode-QuickBoot, FullBoot, Clear Memory, FullBoot every x days POST messages - Enable/disable Press the ESC key for Startup Menu - Enable/disable After Power Loss - Off/on/previous state POST Delay - None, 5, 10, 15, or 20 seconds System Recovery Boot Support - Enable/disable Remote Wakeup Boot Source - Remote server/local hard drive Bypass F1 Prompt on Configuration Changes - Enable/disable
	BIOS Power-On - Allows you to set the computer to turn on at a preset time.
	Bus Options (some models) - Allows you to enable/disable PCI SERR# Generation and PCI VGA palette snooping.
	Onboard Devices - Allows you to set resources for or disable on-board system devices.
	Device Options - Allows you to set: <ul style="list-style-type: none"> Turbo Mode - enable/disable Num Lock State at Power-on - off/on LVDS Panel Select - auto-select, LG, Samsung Internal Speaker - enable/disable NIC Option ROM Download - enable/disable Multi-Processor - enable/disable
	AMT Configuration - Allows you to set: <ul style="list-style-type: none"> AMT-enable/disable functions of the embedded Management Engine (ME) such as Active Management Technology (AMT). Unconfigure AMT/ME-unconfigure provisioned mgmt settings for AMT. Watchdog Timer-set amount of time for a operating system and BIOS watchdog alert to be sent if the timers are not deactivated.