

Illustrated Parts & Service Map

HP Pro 2000/2080 Business PC Microtower Chassis



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Key Specifications

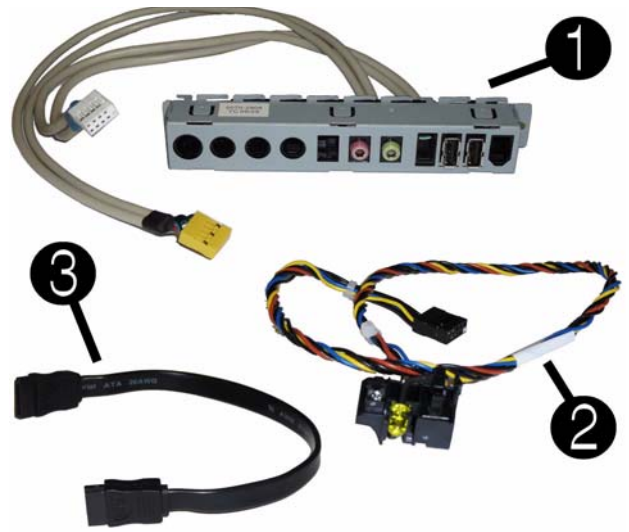
Processor Type	Intel® Core™ 2 Duo and Core™ 2 Quad, Intel Pentium® dual core, Intel Celeron®
RAM Type	DDR3-SDRAM DIMMs, PC2-10600 (1333 MHz) non-ECC
Maximum RAM Supported	4 GB
Expansion Slots	<ul style="list-style-type: none"> • (2) PCI 2.3 • (1) PCIe-x16 • (1) PCIe-x1
Graphics Adapter	Intel Graphics Media Accelerator X4500
Chipset	Intel G41Express
Drive Support	<ul style="list-style-type: none"> • (2) external 5.25-inch optical disk drives • (1) external 3.5-inch drive • (2) internal 3.5-inch hard disk drives
I/O Interfaces	(6) USB 2.0 ports; (2) front, (4) rear, (2) PS/2, (1) RJ-45, (1) VGA, (1) DVI-D, (1) serial port, (1) audio in, (1) audio out, (1) microphone
Operating Systems	<ul style="list-style-type: none"> • Windows 7 • Windows Vista • Windows XP Professional • SuSE Linux Enterprise Desktop 11 • FreeDOS

Spare Parts



System Unit

1	Access panel	586372-001
2	Power supply, 300W, PFC	508467-001
*	Power supply, 300W, 85% (APJ only)	575437-001
*	Power supply, 250W, PFC	508466-001
3	Chassis	not spared
4	Front bezel	591599-001
*	Front bezel for use in China	591606-001



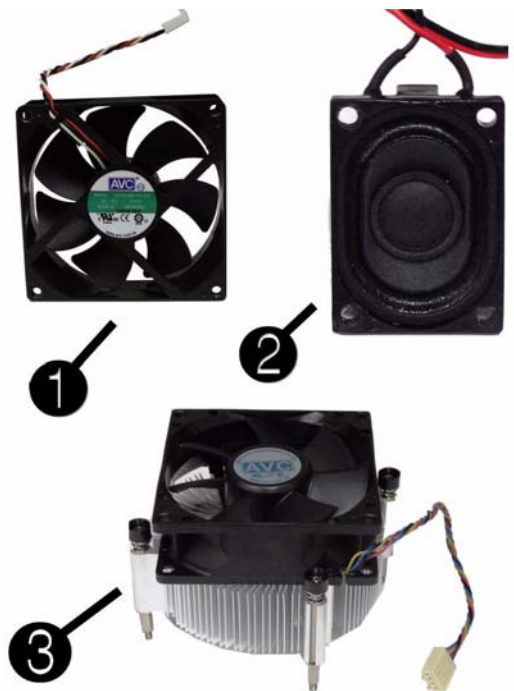
Cables

1	Front I/O assembly	508463-001
2	Power switch/LED assembly	508464-001
3	SATA cable, 8.66-inch (22-cm), 2 straight ends	591600-001
*	DMS-59 to dual DVI cable	463024-001

*Not shown

Mass Storage Devices (not illustrated)

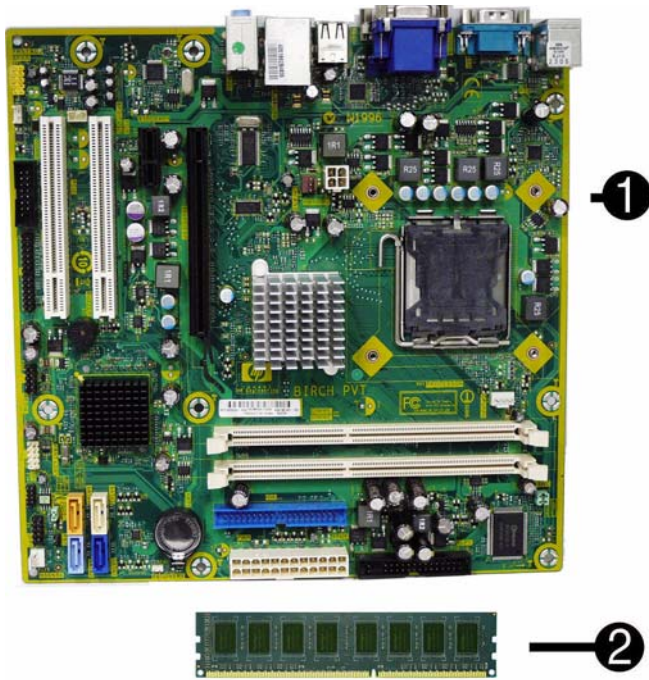
Blu-ray Disc ROM with SuperMulti DVD±R/RW DL Drive	581060-001
DVD±RW and CD-RW SuperMulti DL Combo Drive with LightScribe	581059-001
DVD-ROM drive	581058-001
500-GB SATA hard drive,	586720-001
320-GB hard drive	586969-001
250-GB SATA hard drive	586719-001
250-GB external USB hard drive	586383-001
320-GB external USB hard drive	591387-001
160-GB SATA hard drive	586718-001



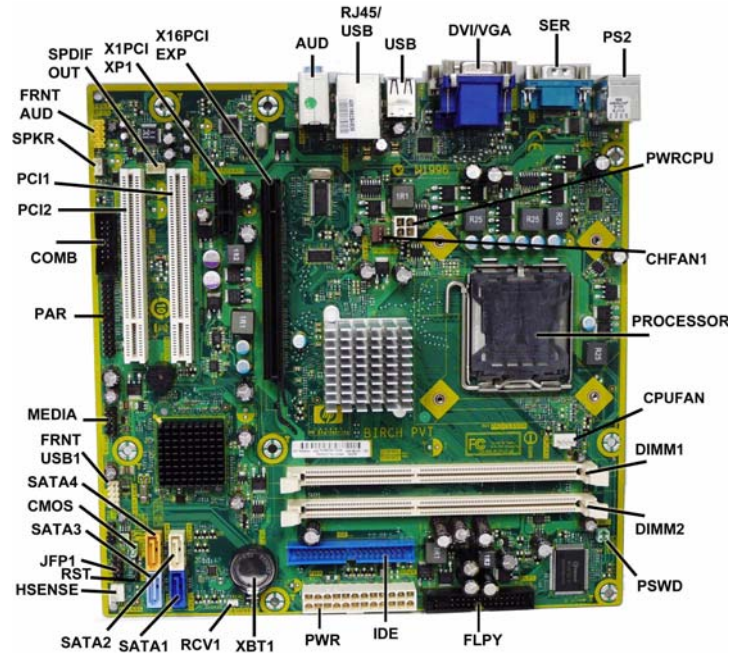
Miscellaneous Parts

1	Chassis fan	438741-001
2	Internal speaker	463316-001
3	Heatsink with alcohol pad and factory-applied thermal grease	592506-001
*	Media card reader	480032-001
*	Hood sensor	534484-001
*	USB powered speakers	571536-001
*	Hard drive conversion bracket	397117-001
*	PCI slot cover lock	580507-001
*	Printer port	465339-001
*	Foot kit	530593-001
*	Serial port	530599-001
*	Mouse, USB	537749-001
*	Mouse, optical	537748-001
*	Mouse, laser	570580-001
*	Rear I/O cover	592507-001

*Not shown



System Board



Standard and Optional Boards

System boards with thermal grease, alcohol pad, and CPU socket cover		
1	System board	593137-001
Memory modules (PC3-10600, CL9)		
2	1 GB	576109-001
*	2 GB	576110-001
Other boards		
*	Agere International 56K LSI v92 modem, includes bracket	490689-001
*	ATI Radeon HD4350 (RV710) PCIe x16 graphics card, 512 MB	586750-001
*	ATI Radeon HD4550 (RV710) PCIe x16 graphics card, 256 MB	538051-001
*	ATI Radeon HD4650 (RV730) PCIe x16 graphics card, 1 GB, 15 month warranty, EMEA only	578174-001
*	GeForce GT205 512-MB PCIe graphics card (for use in China only)	589145-001
*	GeForce GT315 512-MB PCIe graphics card (for use in China only)	589146-001
*	GeForce GT230 1.5-GB PCIe graphics card	586381-001
*	GeForce GT210 512-MB PCIe graphics card	586382-001
*	Intel Gigabit NIC, includes bracket	490367-001
*	Serial/parallel port PCI adapter	321722-001
*	HP FireWire IEEE 1394 PCI card, FH	585468-001
Intel Celeron Processors with alcohol pad and thermal grease:		
	E3300, 1-MB cache, 2.50 GHz	585886-001
	E3200, 1-MB cache, 2.40 GHz	585885-001
	E1600, 512-KB cache, 2.40 GHz	577416-001
	E1500, 512-KB cache, 2.20 GHz	516899-001
	450, 512-KB cache, 2.20 GHz	508256-001
	440, 512-KB cache, 2.00 GHz	449166-001
Intel Core2 Duo Processors with alcohol pad and thermal grease:		
	E8600, 6-MB cache, 3.33 GHz	497732-001
	E8500, 6-MB cache, 3.16 GHz	466170-001
	E8400, 6-MB cache, 3.00 GHz	466169-001
	E7600, 3-MB cache, 3.06 GHz	573954-001
	E7500, 3-MB cache, 2.93 GHz	531988-001
	E6300, 2-MB cache, 2.80 GHz	580748-001
	E5400, 2-MB cache, 2.70 GHz	586743-001
	E5300, 2-MB cache, 2.60 GHz	586747-001

* Not shown

System Board Connectors and Jumpers (component location may vary)

SPDIF OUT	Digital line-in/line-out audio connector	XBT1	Battery slot
X1PCEXP1	PCIe X1, slot 1	RCV1	Recovery header
X16PCIEXP	PCIe X16 connector	SATA1	Primary SATA hard drive
AUD	Double stack audio connector	SATA2	1st SATA optical drive
RJ45/USB	Stacked RJ-45/USB connectors	HSENSE	Hood sensor connector
USB	USB connector	RST	Reset header
DVI/VGA	Stacked DVI/VGA connector	JFP1	Power switch connector
SER	Serial port	SATA3	2nd SATA optical drive
PS2	PS/2 connectors	CMOS	CMOS header
PWRCPU	CPU power connector	SATA4	2nd SATA hard drive
CPUFAN	CPU/heat sink fan connector	FRNT_USB1	1st USB connector
PROCESSOR	Processor slot	MEDIA	Media card reader connector
CHFAN1	System fan connector	PAR	Parallel port connector
DIMM1	Memory socket 1	COMB	2nd serial port connector
DIMM2	Memory socket 2	PCI2	PCI slot 2
PSWD	Password header	PCI1	PCI slot 1
FLPY	Floppy drive connector	SPKR	Speaker connector
IDE	IDE connector	FRNT_AUD	Front panel connector
PWR	Main power connector		

Keyboards (not illustrated)

PS/2, Basic		537745-xxx	
USB, Standard		537746-xxx	
USB SmartCard		537747-xxx	
Hong Kong*	-AC1	Korean	-KD1
International English	-L31	S. Chinese	-AA1
Japanese	-291	Taiwanese	-AB1

*only for 537745-xxx

Computer Setup

Basic system information regarding system information, setup, power management, hardware, and passwords is maintained in the Setup Utility held in the system ROM. The Setup Utility is accessed by pressing the F10 key when prompted (on screen) to do so during the boot sequence. If the screen prompt opportunity is missed, a restart will be necessary...

Computer Setup Menu

Heading	Option / Description		
Main	System Information	Lists the following main system specifications: <ul style="list-style-type: none"> Product Name SKU Number Processor Type Processor Speed CPUID/PatchID Cache Size Memory Size Integrated MAC System BIOS Chassis Serial Number Asset Tag Number UUID 	
	Set Time and Date	Allows you to set system time and date.	
	SATA Port 1 SATA Port 2 SATA Port 3 SATA Port 4	Allows or displays the following for each SATA Port: <ul style="list-style-type: none"> Port Configuration — Disable/enable SATA Port Run HDD self-test for selected channel: SMART Status Check, HDD Short Self-Test, HDD Extended Self-Test View vendor, size, and firmware 	
	SATA Controller	Allows you to choose how the SATA controller and devices are accessed by the operating system. The following options are available: Native Mode, Compatible Mode	
	Onboard FDC Controller	Disables/enables the diskette drive controller.	
	Drive A	View only.	
	Halt On	Allows you to set POST error behavior to: all errors, no errors, all but keyboard.	
	POST Delay	Allows you to set POST delay to 0, 5, 10, 15, or 30 seconds	
	Advanced	Execute Disable Bit	Disables/enables hardware DEP function.
		Intel Virtualization Tech	Disables/enables Intel's Virtualization feature.
Init Display First		Allows you to set primary display device to OnChip VGA, PCI slot, or PCIEX.	
MAX DVMT Allocation		Allows you to specify the DVMT/system memory allocated for video memory to:128MB, 256MB, Max.	
Onboard HD Audio		Allows you to disable/enable onboard audio controller.	
OnChip USB Controller		Disables/enables the universal host controller interface for USB (Universal Serial Bus).	
USB Legacy Support		Disable/enable (USB keyboard, mouse, and flash media).	
Onboard LAN		Disable/enable onboard LAN controller.	
Onboard LAN Boot ROM		Disable/enable the boot ROM of the onboard LAN chip.	
Onboard Serial Port 1		Allows you to select: Disabled, 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, or 2E8/IRQ3.	
Boot	F9 Boot Menu	Disables/enables F9 Boot Menu.	
	F10 Setup Prompt	Disable/enable F10 Setup prompt on the logo screen.	
	F11 Recovery	Disables/enables F11 Recovery and provides the option of showing the F11 Recovery prompt message on the logo screen. Choose from the following: Disabled, Enabled no prompt, Enabled and prompt.	
	F12 Boot from LAN Prompt	Disables/enables the F12 Boot from LAN prompt message on the logo screen.	
	Hard Disk Boot Seq.	Allows you to specify the order of attached hard drive devices (USB HDD or flash media). The first attached drive in the order has priority and is recognized as drive C.	
	Optical Drive Boot Seq.	Allows you to specify the order in which attached optical drives (including USB ODD) are checked for a bootable operating system image.	
	Network Boot Seq.	Allows you to specify the order in which network devices (including UP NIC cards) are checked for a bootable operating system image.	
	First, Second, Third, and Fourth Boot Device	Allows you to specify which devices will boot in which sequence or to disable any of the four: removable, CDROM, hard disk, or network.	
	Set Supervisor Password	Allows you to establish a password to enter Computer Setup	
	BIOS Write Protection	Disables/enables BIOS upgrading.	
Power	After AC Power Loss	Allows you to select system power loss behavior: Off, On, Last State.	
	Wake on PCI Device from S5	Disables/enables waking up from S5 by PCI device.	
	RTC Resume Alarm	Disables/enables RTC (real-time clock) alarm.	

Computer Setup Menu (continued)

Heading	Option / Description	
PC Health	Chassis Opened Warning	Allows you to disable/enable the chassis intrusion function and clear the intrusion warning: Disabled, Enabled, Clear.
	System Fan Fail Check	Disables/enables detection of system fan during POST.
	Smart Fan Function	Disables/enables Smart Fan functionality. Enabling optimizes fan control for best acoustic behavior.
	Current CPU Temperature	View only
	Current System Temp	View only
	Current CPU Fan Speed	View only
	Current System Fan Speed	View only
	Exit	Save and Exit Setup
Discard Changes and Exit		Allows you to exit Computer Setup without saving changes.
Load Optimized defaults		Allows you to reset Computer Setup to factory defaults.

POST Audible Codes

Beeps	Meaning	Recommended Action
1 short beep and 1 long beep followed by a three second pause	Bad memory or memory configuration error.	Check that the memory modules have been installed correctly and that proper modules are used.
2 short beeps and 1 long beep followed by a three second pause	No graphics card installed or graphics card initialization failed.	For systems with a graphics card: <ol style="list-style-type: none"> Reseat the graphics card. Power on the system. Replace the graphics card. Replace the system board. For systems with integrated graphics, replace the system board.
3 short beeps and 1 long beep followed by a three second pause	CPU configuration error or invalid CPU detected before graphics card initialized.	<ol style="list-style-type: none"> Upgrade the BIOS to proper version. Change the processor.
1 short beep followed by a one second pause	No optical drive found.	<ol style="list-style-type: none"> Check cable connections. Run the Computer Setup utility and ensure the device port is enabled.
2 short beeps followed by a three second pause	No CD found.	<ol style="list-style-type: none"> Check the type of drive that you are using and use the correct media type. Replace the CD with a new one.
3 short beeps followed by a three second pause	Flashing not ready (missing utility or BIOS image file, etc.)	Upgrade the BIOS to proper version.
4 short beeps followed by a three second pause	Flashing operation has failed (checksum error, corrupted image, etc.)	<ol style="list-style-type: none"> Verify the correct ROM. Flash the ROM if needed. If an expansion board was recently added, remove it to see if the problem remains. Clear CMOS. If the message disappears, there may be a problem with the expansion card. Replace the system board.
5 short beeps followed by a three second pause	BIOS recovery was successful	No action required.

Password Security

Resetting the password jumper

- Shut down the operating system properly, then turn off the computer and any external devices, and disconnect the power cord from the power outlet.
- With the power cord disconnected, press the power button again to drain the system of any residual power.
- Remove the access panel.
- Locate the header and jumper labeled **PSWD**.
- Remove the jumper.
- Plug in the computer and turn on power.
- When you see the HP logo screen, turn off the computer. This clears the current passwords.
- Replace the jumper to its original position.
- Replace the access panel.
- reconnect external equipment.
- Plug in the computer and turn on power. Allow the operating system to start.

Resetting the CMOS jumper

- Turn off the computer and any external devices, and disconnect the power cord from the power outlet. The power must be disconnected from the system to clear CMOS.
- Disconnect the keyboard, monitor, and other external equipment connected to the computer.
- Remove the access panel.
- Locate the header and jumper labeled **CMOS**.
- Remove the CMOS jumper from pins 1 & 2 and put the jumper on pins 2 & 3 to clear CMOS.
- Put the jumper back on pins 1 and 2.
- Replace the access panel.
- Reconnect the external equipment.
- Plug in the computer and turn on power.

NOTE: Use Computer Setup to reset any special system setups along with the date and time.