

# Illustrated Parts & Service Map

## HP Compaq dc5800 Microtower Business PC



© 2008 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. HP shall not be liable for technical or editorial errors or omissions contained herein. Intel, Celeron, Core 2 Duo, Core Quad, and the Intel logo are trademarks or registered trademarks of the Intel Corporation and its subsidiaries in the U. S. and other countries.

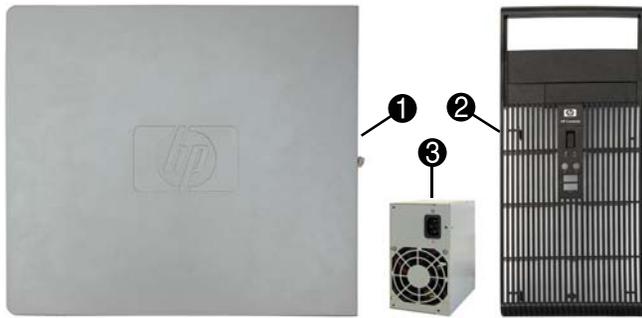
Document Number 481403-001. 1st Edition February 2008.



### Key Specifications

Processor Type	Intel Core 2 Duo, Intel Core 2 Quad, Pentium, Celeron
RAM Type	DDR2-SDRAM DIMMs, PC2-6400 (800 MHz) non-ECC
Maximum RAM Supported	8 GB
Expansion Slots	<ul style="list-style-type: none"> <li>• 1 PCIe-x16</li> <li>• 2 PCIe-x1</li> <li>• 1 PCI</li> </ul>
Graphics Adapter	Intel GMA 3100 integrated
Drive Support	<ul style="list-style-type: none"> <li>• (2) 5.25-inch external bays</li> <li>• (1) 3.5-inch external bay</li> <li>• (2) 3.5-inch internal hard drive bays (SATA 3.0 Gb/s)</li> <li>• (1) diskette drive or (1) media card reader</li> </ul>
I/O Interfaces	Serial (2, 1 optional), optional parallel, USB 2.0 (8), RJ-45, audio in (2), audio out (2), PS/2 ports (2), VGA, DVI-D

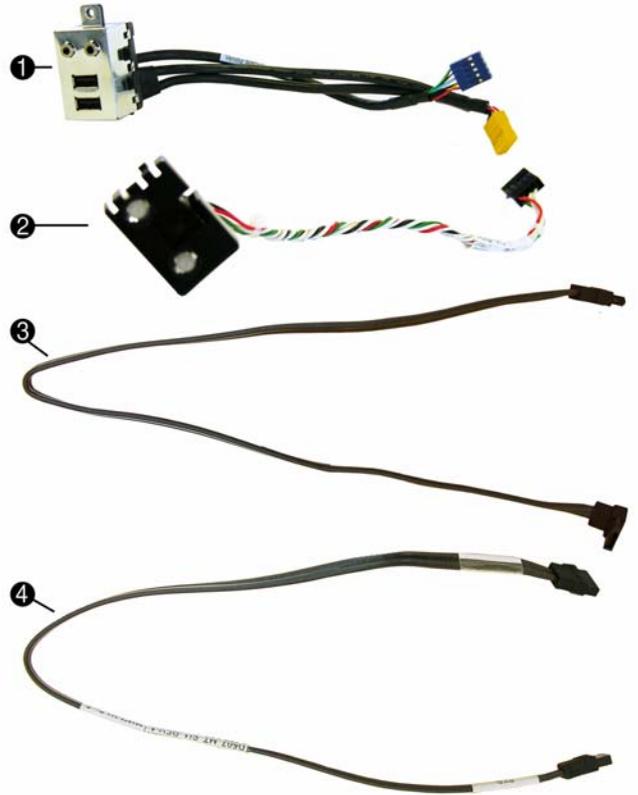
### Spare Parts



#### System Unit

1	Access panel	461859-001
2	Front bezel	460883-001
3	Power supply, 300W	460879-001
3	Power supply, 300W, 80% efficient	460880-001
*	5.25-inch bezel blank	335937-001
*	Chassis	not spared

\* Not shown



#### Cables

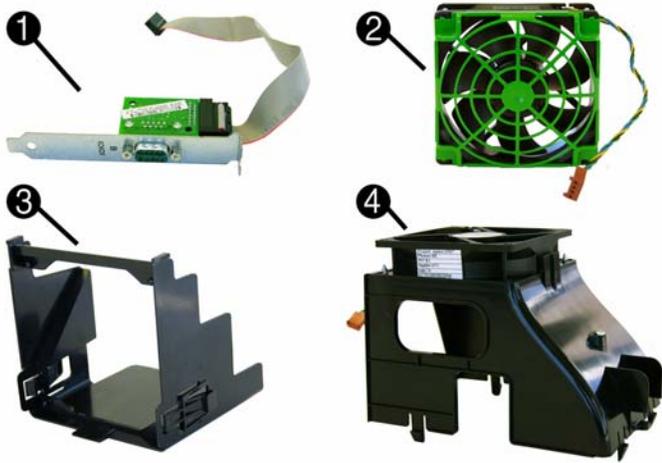
1	Front I/O with USB	460885-001
2	Power switch cable assembly	460886-001
3	SATA HDD cable, 18 inch, 1 straight end, 1 angled end	393958-001
4	SATA cable, 19 inch, 2 straight ends	391739-001
*	SATA cable, 17 inch, 2 straight ends	453317-001
*	DMS-59 to dual VGA cable	463023-001

\*Not shown

#### Keyboards (not illustrated)

<b>PS/2, Basic</b>	<b>435302-xxx</b>		
<b>USB, Basic</b>	<b>435382-xxx</b>		
<b>USB SmartCard</b>	<b>435385-xxx</b>		
Arabic	-171	Kazakh	-DF1
Belgian	-181	Korean (Hangul)	-AD1*
BHCSY	-B41	LA Spanish	-161
Brazilian Portuguese	-201	Norwegian	-091
Czech	-221	Polish	-241
Danish	-081	Portuguese	-131
Dutch	-331	Romanian	-271
Estonian	-CA1	Russian	-251
Finnish	-351	S. Chinese	-AA1
French	-051	Slovakian	-231
French Arabic	-DE1	Spanish	-071
French Canadian	-121	Swedish	-101
German	-041	Swiss	-111
Greek	-151	Taiwanese	-AB1
Hebrew	-BB1	Thai	-281
Hungarian	-211	Turkish "F"	-541
Icelandic	-DD1	Turkish "Q"	-141
International	-B31	U.S.	-001
Italian	-061	U.K.	-031
Japanese	-291		

\*For 435385, Korean = -KD1



**Miscellaneous Parts**

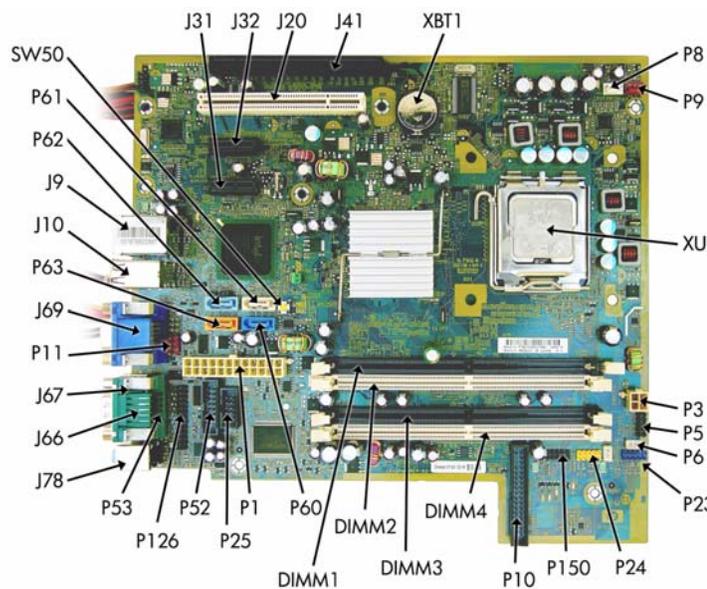
1	Second serial port, LP	392414-001
2	Chassis fan	460884-001
3	Fan duct	460882-001
4	Heatsink with alcohol pad and factory-applied thermal grease	460897-001
*	Fan duct	463721-001
*	System board tray	460881-001
*	Printer port, LP	465339-001
*	Mouse, PS2, optical	417966-001
*	Mouse, optical	390938-001
*	Mouse, USB laser	459821-001
*	Battery, real-time clock	153099-001
*	Internal speaker	392413-001

\*Not shown  
LP = Low profile

**Standard and Optional Boards (not illustrated)**

Memory modules:	
512 MB, PC2-6400, CL6	418952-001
1 GB, PC2-6400, CL6	418951-001
2 GB, PC2-6400, CL6	457624-001
Other boards:	
Belkin 802.11a/g WLAN adapter for use in the United States and most of the world	391866-002
Belkin 802.11a/g WLAN adapter for use in the rest of the world	391866-001
ATI HD X2400, PCIe x16, DMS-59 and TV outputs, 256MB graphics adapter	462477-001
nVidia Quadro NVS 290, 256MB, PCI-E graphics adapter	456137-001
Broadcom NetXtreme GbE PCI-E NIC, FH	430654-001
56K modem, Agere 2006 PCI Hi-Speed, FH	398661-001
nVidia GeForce 8400 GS 256-MB video card with DMS-59 and TV (S-Video) outputs, FH	461450-001
nVidia GeForce 8400 GS 256-MB video card with DMS-59 and TV (S-Video) outputs, LP	445743-001
Nvidia Quadro NVS290 256-MB PCIe graphics card	460815-001
DVI, SDVO graphics card, FH	398333-001
HP FireWire IEEE 1394 PCI card, 2 external, 1 internal port, FH	441448-001
Intel Pro 1000 PT Gigabit PCIe NIC, FH	398754-001
ReadyBoost module, 1 GB	462851-001
System boards with thermal grease, alcohol pad, and CPU socket cover:	
System board	461536-001
System board, for Russia only	462850-001
Intel Celeron Processors with alcohol pad and thermal grease:	
430, 512-KB cache, 1.80 GHz	449165-001
420, 512-KB cache, 1.60 GHz	449164-001
Intel Celeron Dual-Core Processors with alcohol pad and thermal grease:	
E1200, 512-KB cache, 1.60 GHz	468589-001
Intel Core 2 Quad Processors with alcohol pad and thermal grease:	
Q6600, 8-MB cache, 2.40 GHz	452451-001
Intel Core 2 Duo Processors with alcohol pad and thermal grease:	
E8400, 6-MB cache, 3.00 GHz	466169-001
E8200, 6-MB cache, 2.67 GHz	466171-001
E6750, 4-MB cache, 2.66 GHz	450791-001
E6550, 4-MB cache, 2.33 GHz	450694-001
E4600, 2-MB cache, 2.40 GHz	462569-001
E4500, 2-MB cache, 2.20 GHz	449452-001
Intel Pentium Dual-Core 2 Processors with alcohol pad and thermal grease:	
E2200, 1-MB cache, 2.20-GHz	465216-01
E2180, 1-MB cache, 2.00-GHz	457656-01

**System Board**



**System Board Connectors and Jumpers (position of some untitled components may vary in location)**

J9	RJ-45 over dual USB	P5	Power button/LED
J10	Quad stack USB	P52	Second serial port
J20	PCI slot 1	P53	Serial port connector
J31	PCIe X1, slot 1	P6	Internal speaker
J32	PCIe X1, slot 2	P60	SATA0
J41	PCIe X16	P61	SATA1
J66	Keyboard	P62	SATA4
J67	Mouse	P63	SATA5
J69	VGA connector	P8	CPU fan
J78	Double stack audio connector	P9	System fan
P1	Main power	SW50	Clear CMOS
P10	Diskette drive	XBT1	Real-time-clock battery
P126	Parallel connector	XMM1	DIMM 1
P150	Media reader	XMM2	DIMM 2
P23	Front audio	XMM3	DIMM 3
P24	Front USB	XMM4	DIMM 4
P25	ReadyBoost	XU1	Processor
P3	CPU power		

**Mass Storage Devices (not illustrated)**

Diskette drive with bezel	431452-001
Media card reader, 3.5-inch	407187-001
16X SATA DVD±RW and CD-RW drive with LightScribe	447310-001
16X SATA DVD-ROM drive	419496-001
48X CD-RW/DVD-ROM combo drive	419497-001
500 GB SATA hard drive	457909-001
250 GB, 7200-RPM SATA hard drive, 8-MB cache	449980-001
250 GB, 7200-RPM SATA hard drive, 8-MB cache	440747-001
160 GB, 7200-RPM SATA hard drive, 8-MB cache	449979-001
160 GB, 7200-RPM SATA hard drive, 8-MB cache	440499-001
160 GB, 10000-RPM SATA hard drive, 16-MB cache	439995-001
80 GB, 7200-RPM SATA hard drive, 8-MB cache	449978-001
80 GB, 7200-RPM SATA hard drive, 8-MB cache	440754-001
80 GB, 10000-RPM SATA hard drive, 16-MB cache	439994-001

## Setup Utility

Basic system information is maintained in the Setup Utility held in the system ROM, accessed by pressing the F10 key when prompted (on screen) during the boot sequence.

### Computer Setup Menu

Heading	Option/Description			
File	System Information - Lists the following main system specifications: <ul style="list-style-type: none"> <li>Product name</li> <li>SKU number (some models)</li> <li>Processor type/speed/stepping</li> <li>Cache Size (L1/L2)</li> <li>Memory size/speed/channels</li> <li>Integrated MAC Address</li> <li>System BIOS</li> <li>Chassis serial number</li> <li>Asset tracking number</li> <li>ME firmware version</li> <li>ME management mode</li> </ul>			
	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 Removable Media and restore from Removable Media			
	Default Setup: 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 Setup without applying or saving any changes.			
	Save Changes and Exit - Saves changes to system configuration or default settings and exits Computer Setup.			
	Storage	Device Configuration - Lists all installed BIOS-controlled storage devices. The following options are available: <ul style="list-style-type: none"> <li>Diskette Type(Legacy Diskettes only)-3.5" 1.44 MB and 5.25" 1.2 MB</li> <li>Drive Emulation</li> <li>Emulation Type - ATAPI Zip drive, hard disk, legacy diskette, CD-ROM drive, and ATAPI LS-120 drive</li> <li>Multisector Transfers (ATA disks only)</li> <li>Translation Mode (ATA disks only)</li> <li>Translation Parameters (ATA disks only)</li> <li>SATA Default Values</li> </ul>		
Storage Options <ul style="list-style-type: none"> <li>Removable Media Boot</li> <li>Legacy Diskette Write</li> </ul>				
DPS Self-Test - Allows you to execute self-tests on ATA hard drives.				
Boot Order - Allows you to specify boot order. Shortcut to Temporarily Override Boot Order				
Security		Setup Password - Allows you to set and enable the setup (Administrator) 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 network server mode, specify password requirement for warm boot, and allows you to enable/disable Setup Browse Mode.			
	Smart Cover (some models) - Allows you to lock/unlock cover lock and set status of cover removal sensor.			
	Device Security - Enables/disables all I/O ports, audio, network controllers, SMBus controller, and embedded security devices.			
	Network Service Boot - Enables/disables boot from OS on a server.			
	System IDs - Allows you to set Asset tag, ownership tag, Chassis serial number, UUID, and keyboard locale setting.			
	DriveLock Security - Allows you to assign/modify a hard drive password for added security.			
System Security (some models) - Allows you to enable/disable: <ul style="list-style-type: none"> <li>Data Execution Prevention</li> <li>Virtualization Technology</li> <li>Virtualization Technology Directed I/O</li> <li>Trusted Execution Technology</li> <li>Embedded Security Device Support</li> <li>OS management of Embedded Security Device through OS</li> <li>Virtual Appliance options</li> <li>Smart Card BIOS Password Support</li> </ul>				
Setup Security Level - Provides method to allow users limited access to change specified setup options without knowing Setup password.				
Power	OS Power Management - Allows you to enable/disable Runtime Power Management, Idle Power Savings, ACPI S3 Hard Disk Reset, ACPI S3 PS2 Mouse Wakeup, USB Wake on Device Insertion (some models), Unique Sleep State Blink Rates.			
	Hardware Power Management - Allows you to enable/disable SATA bus power management.			
	Thermal - Allows you to control minimum permitted fan idle speed.			
Advanced	Power-On Options - Allows you to set: <ul style="list-style-type: none"> <li>POST mode - QuickBoot, FullBoot, or FullBoot every 1-30 days.</li> <li>POST messages - Enable/disable</li> <li>MEBx Setup prompt - Enable/disable or hidden/displayed</li> <li>F9 prompt - Enable/disable</li> <li>F10 prompt - Enable/disable</li> <li>F11 prompt - Enable/disable</li> <li>F12 prompt - Enable/disable</li> <li>Factory Recovery Boot Support - Enable/disable</li> <li>Option ROM prompt - Enable/disable</li> <li>Remote wakeup boot source - Remote server/local hard drive</li> <li>After Power Loss - Off/on/previous state</li> <li>POST Delay - None, 5, 10, 15, or 20 seconds</li> <li>Limit CPUID Maximum Value to 3</li> </ul>			
	Execute Memory Test (some models) -Restarts computer and executes POST memory test.			
	BIOS Power-On - Allows you to set the computer to turn on at a preset time.			
	Onboard Devices - Allows you to set resources or disable onbrd system devices.			
	PCI Devices - Lists installed PCI devices with their IRQ settings and allows you to reconfigure IRQ or disable devices.			
	PCI VGA Configuration - Allows you to specify which VGA controller will be used when multiple video adapters are available.			
	Bus Options (some models) - Allows you to enable/disable PCI SERR# Generation and PCI VGA palette snooping.			
	Device Options - Allows you to set: <ul style="list-style-type: none"> <li>Printer Mode - Bi-Directional, EPP &amp; ECP, Output Only</li> <li>Num Lock state at power-on - off/on</li> <li>S5 Wake on LAN - enable/disable</li> <li>Integrated Video - enable/disable</li> <li>Multi-Processor - enable/disable</li> <li>Internal speaker (some models) - enable/disable</li> <li>Monitor Tracking - enable/disable</li> <li>NIC PXE Option ROM Download - enable/disable</li> </ul>			
	Diagnostic LEDs	Color		
		Beeps		
		LED Activity		
		State/Message		
		Green	none	On
Green		none	1 blink every 2 seconds	Suspend to RAM Mode
Red		2	2 blinks every second followed by a 2 second pause	<ul style="list-style-type: none"> <li>Processor thermal protection activated.</li> <li>Fan blocked or not turning.</li> <li>Heatsink not properly attached.</li> </ul>
Red		3	3 blinks, 1 blink every second followed by a 2 second pause	Processor not installed (not indicator of bad processor).
Red		4	4 blinks, 1 blink every second followed by a 2 second pause	Power failure (power supply overload).
Red		5	5 blinks, 1 blink every second followed by a 2 second pause	Pre-video memory error.
Red	6	6 blinks, 1 blink every second followed by a 2 second pause	Pre-video graphics error.	
Red	7	7 blinks, 1 blink every second followed by a 2 second pause	System board failure (ROM detected failure prior to video).	
Red	8	8 blinks, 1 blink every second followed by a 2 second pause	Invalid ROM based on bad checksum.	
Red	9	9 blinks, 1 blink every second followed by a 2 second pause	System powers on but is unable to boot.	
Red	10	10 blinks, 1 blink every second followed by a 2 second pause	Bad option card.	
none	none	System does not power on and LEDs are not flashing	System unable to power on.	

### Diagnostic LEDs

Color	Beeps	LED Activity	State/Message
Green	none	On	Computer on
Green	none	1 blink every 2 seconds	Suspend to RAM Mode
Red	2	2 blinks every second followed by a 2 second pause	<ul style="list-style-type: none"> <li>Processor thermal protection activated.</li> <li>Fan blocked or not turning.</li> <li>Heatsink not properly attached.</li> </ul>
Red	3	3 blinks, 1 blink every second followed by a 2 second pause	Processor not installed (not indicator of bad processor).
Red	4	4 blinks, 1 blink every second followed by a 2 second pause	Power failure (power supply overload).
Red	5	5 blinks, 1 blink every second followed by a 2 second pause	Pre-video memory error.
Red	6	6 blinks, 1 blink every second followed by a 2 second pause	Pre-video graphics error.
Red	7	7 blinks, 1 blink every second followed by a 2 second pause	System board failure (ROM detected failure prior to video).
Red	8	8 blinks, 1 blink every second followed by a 2 second pause	Invalid ROM based on bad checksum.
Red	9	9 blinks, 1 blink every second followed by a 2 second pause	System powers on but is unable to boot.
Red	10	10 blinks, 1 blink every second followed by a 2 second pause	Bad option card.
none	none	System does not power on and LEDs are not flashing	System unable to power on.

## Boot Block Emergency Recovery Mode

failure. For example, if a power failure were to occur during a BIOS upgrade, the ROM flash would be incomplete. This would render the system BIOS unusable. The Boot Block is a flash-protected section of the ROM that contains code that checks for a valid system BIOS image when the system is turned on.

- If the system BIOS image is valid, the system starts normally.
- If the system BIOS image is not valid, a failsafe Boot Block BIOS provides enough support to search removable media for BIOS image files. If an appropriate BIOS image file is found, it is automatically flashed into the ROM.

When an invalid system BIOS image is detected, the system power LED will blink red 8 times, one blink every second. Simultaneously, the speaker will beep 8 times. If the portion of the system ROM containing the video option ROM image is not corrupt, Boot Block Emergency Recovery Mode will be displayed on the screen.

To recover the system after it enters Boot Block Emergency Recovery Mode, complete the following steps:

- Turn off the computer.
- Insert a flash drive or CD containing the BIOS image in the root directory. The media must be formatted using the FAT12, FAT16, or FAT32 file system.
- Turn on the computer. If no appropriate BIOS image is found, you will be prompted to insert media containing a BIOS image file. The system will automatically flash the ROM. After a successful flash, the system will either automatically restart or prompt the user to unplug the unit, wait 5 seconds, reattach the power cord, and then press the power button.
- Remove the removable media used to upgrade the BIOS.
- Turn the power on to restart the computer.

NOTE: BitLocker prevents Windows Vista from booting when a CD containing the BIOS image file is in an optical drive. If BitLocker is enabled, remove this CD before attempting to boot to Windows Vista.

## Password Security

### Establishing a Setup password using computer setup

- Turn on or restart the computer. If you are in Windows, click **Start > Shut Down > Restart**.
- As soon as the computer is turned on, press F10 when the monitor light turns green to enter Computer Setup. Press Enter to bypass the title screen, if necessary. If you do not press F10 when prompted, a restart will be necessary.
- Select **Security > Setup Password** and follow the instructions on the screen.
- Before exiting, click **File > Save Changes and Exit**.

### Changing a Power-on or Setup password

- Turn on or restart the computer. If you are in Windows, click **Start > Shut Down > Restart**.
- If you want to change the Setup password, as soon as the computer is turned on, press F10 when the monitor light turns green to enter Computer Setup. Press Enter to bypass the title screen, if necessary.
- If you want to change the Power-On password, when the key icon appears, type your current password, a slash (/) or alternate delimiter character, your new password, another slash (/) or alternate delimiter character, and your new password again as shown:

current password/new password/new password.

NOTE: Type the new password carefully since the characters do not appear on the screen.

- Press Enter.

The new password will take effect the next time the computer is restarted.

### Deleting a Power-on or Setup password

- Turn on or restart the computer. If you are in Windows, click **Start > Shut Down > Restart**.
- To delete the Setup password, as soon as the computer is turned on, press F10 when the monitor light turns green to enter Computer Setup. Press Enter to bypass the title screen, if necessary.
- To delete the Power-on password, when the key icon appears, type the current password followed by a slash (/) or alternate delimiter character as shown: **currentpassword/**
- Press Enter.

## HP Insight Diagnostics

The HP Insight Diagnostics utility allows you to view information about the hardware configuration of the computer and perform hardware diagnostic tests on the subsystems of the computer. The utility simplifies the process of effectively identifying, diagnosing, and isolating hardware issues.

The Survey tab is displayed when you invoke HP Insight Diagnostics. This tab shows the current configuration of the computer. From the Survey tab, there is access to several categories of information about the computer. Other tabs provide additional information, including diagnostic test options and test results. The information in each screen of the utility can be saved as an html file and stored on a diskette or USB HP flash drive.

Use HP Insight Diagnostics to determine if all the devices installed on the computer are recognized by the system and functioning properly. Running tests is optional but recommended after installing or connecting a new device.

You should run tests, save the test results, and print them so that you have printed reports available before placing a call to the Customer Support Center.

Insight Diagnostics may be found on the *Documentation and Diagnostics* CD that shipped with the computer. The tool may also be downloaded from the HP Web site using the following procedure:

1. Go to [www.hp.com](http://www.hp.com)
2. Click the **Software & Download driver** link.
3. Enter the product number (for example, dc5800) in the text box and press the **Enter** key.
4. Select the specific product.
5. Select the OS.
6. Click the **Diagnostics** link.
7. Select **HP Insight Diagnostics Offline Edition**.
8. Select the proper language and click **Download**.

NOTE: The download includes instructions on how to create a bootable CD.

### Clearing CMOS

1. Turn off the computer and any external devices, 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 access panel, external devices, and reconnect the power cord.
5. Turn on the computer.

You will receive POST error messages after clearing CMOS and rebooting advising you that configuration changes have occurred. Use Computer Setup to reset any special system setups along with the date and time.

### Common POST Error Messages

Screen Message	Description	Recommended Action
101-Option ROM Error	1. System ROM checksum. 2. Expansion board option ROM checksum.	1. Verify ROM, reflash if required 2. Remove suspected card, reboot 3. If expansion board recently added, remove to see if problem remains. 4. Clear CMOS. 5. If message disappears, may be problem with expansion card. 6. Replace system board.
103-System Board Failure	DMA, timers	1. Clear CMOS. 2. Remove expansion boards. 3. Replace system board.
162-System Options Not Set	Configuration incorrect. RTC battery may need to be replaced.	Run Computer Setup and check configuration in <b>Advanced &gt; Onboard Devices</b> . Reset date and time in Control Panel. If problem persists, replace RTC battery.
163-Time & Date Not Set	Invalid time or date in configuration memory. RTC (real-time clock) 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.
163-Time & Date Not Set	CMOS jumper may not be properly installed.	Check for proper placement of the CMOS jumper if applicable.
164-Memory Size Error	Memory amount has changed since the last boot (memory added or removed).  Incorrect memory configuration.	Press the F1 key to save the memory changes. -or- 1. Run Setup (F10). 2. Make sure the memory module(s) are installed properly. 3. If third-party memory has been added, test using HP-only memory. 4. Verify proper memory module type.
201-Memory Error	RAM failure.	1. Run Setup (F10). 2. Ensure memory modules are correctly installed. 3. Verify proper memory module type. 4. Remove and replace the identified faulty memory module(s). 5. If the error persists after replacing memory modules, replace the system board.
213-Incompatible Memory Module in Memory Socket(s) X, X, ...	A memory module in memory socket identified in the error message is missing critical SPD information, or is incompatible with the chipset.	1. Verify proper memory module type. 2. Try another memory socket. 3. Replace DIMM with a module conforming to the SPD standard.
214-DIMM Configuration Warning	Populated DIMM configuration is not optimized.	Rearrange the DIMMs so that each channel has the same amount of memory.

219-ECC Memory Module Detected ECC Modules not supported on this Platform	Recently added memory module(s) support ECC memory error correction.	If additional memory was recently added, remove it to see if the problem remains.
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.
510-Flash Screen Image Corrupted	Flash Screen image has errors.	Reflash the system ROM with the latest BIOS image.
511-CPU, CPUA, or CPUB Fan not Detected	CPU fan is not connected or may have malfunctioned.	1. Reseat CPU fan. 2. Reseat fan cable. 3. Replace CPU fan.
512-Chassis, Rear Chassis, or Front Chassis Fan not Detected	Chassis, rear chassis, or front chassis fan is not connected or may have malfunctioned.	1. Reseat chassis, rear chassis, or front chassis fan. 2. Reseat fan cable. 3. Replace chassis, rear chassis, or front chassis fan.
514-CPU or Chassis Fan not Detected	CPU or chassis fan is not connected or may have malfunctioned.	1. Reseat CPU or chassis fan. 2. Reseat fan cable. 3. Replace CPU or chassis fan.
912-Computer Cover Has Been Removed Since Last System Startup	Computer cover was removed since last system startup.	No action required.
1151-Serial Port A Address Conflict Detected 1152-Serial Port B Address Conflict Detected 1155-Serial Port Address Conflict Detected	• Both external and internal serial ports are assigned to COM1. • Both external and internal serial ports are assigned to COM2. • Both external and internal serial ports are assigned to same IRQ.	1. Remove any serial port expansion cards. 2. Clear CMOS. 3. Reconfigure card resources and/or run Computer Setup or Windows utilities.
1720-SMART Hard Drive Detects Imminent Failure	Hard drive is about to fail. (Some hard drives have a hard drive firmware patch that will fix an erroneous error message.)	1. Determine if hard drive is giving correct error message. Enter Computer Setup and run the Drive Protection System test under <b>Storage &gt; DPS Self-test</b> . 2. Apply hard drive firmware patch if applicable. 3. Back up contents and replace hard drive.
1796-SATA Cabling Error	One or more SATA devices are improperly attached. For optimal performance, the SATA 0 and SATA 1 connectors must be used before SATA 4 and SATA 5.	Ensure SATA connectors are used in ascending order. For one device, use SATA 0. For two devices, use SATA 0 and SATA 1. For three devices, use SATA 0, SATA1, and SATA 4.
1797-SATA Drivelock is not supported in RAID mode.	Drivelock is enabled on one or more SATA hard drives, and they cannot be accessed while the system is configured for RAID mode.	Either remove the Drivelocked SATA device or disable the Drivelock feature. To disable the Drivelock feature, enter Computer Setup, change <b>Storage &gt; Storage Options &gt; SATA Emulation</b> to IDE, and select <b>File &gt; Save Changes and Exit</b> . Re-enter Computer Setup and select <b>Security &gt; Drivelock</b> . For each listed Drivelock-capable SATA device, ensure Drivelock is Disabled. Lastly, change <b>Storage &gt; Storage Options &gt; SATA Emulation</b> back to RAID and select <b>File &gt; Save Changes and Exit</b> .
1801-Microcode Patch Error	Processor not supported by ROM BIOS.	1. Upgrade BIOS to proper version. 2. Change the processor.
2200-PMM Allocation Error during MEBx Download	Memory error during POST execution of the Management Engine (ME) BIOS Extensions option ROM	1. Reboot the computer. 2. Unplug the power cord, re-seat the memory modules, and reboot the computer. 3. If the memory configuration was recently changed, unplug the computer, restore the original memory configuration, and reboot the computer. 4. If the error persists, replace the system board.
Invalid Electronic Serial Number	Electronic serial number is missing.	Enter the correct serial number in Computer Setup.
Network Server Mode Active and No Keyboard Attached	Keyboard failure while Network Server Mode enabled.	1. Reconnect keyboard with computer turned off. 2. Check connector for bent or missing pins. 3. Ensure that none of the keys are depressed. 4. Replace keyboard.
Parity Check 2	Parity RAM failure. Third-party graphics card may be causing a problem.	Run Computer Setup and Diagnostic utilities. Remove third-party graphics card to see if problem goes away.
System will not boot without fan	CPU fan not installed or disconnected.	1. Remove computer cover, press power button, see if processor fan spins. If processor fan not spinning, make sure fan's cable is plugged onto system board header. Ensure heatsink is properly seated and installed. 2. If fan is plugged in and heatsink is properly seated but fan does not spin, then replace heatsink assembly.