

Computer Setup (F10) Utility Guide—dc5700 Models

HP Compaq Business PC



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Computer Setup (F10) Utility Guide

HP Compaq Business PC

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About This Book

This guide provides instructions on how to use Computer Setup. This tool is used to reconfigure and modify computer default settings when new hardware is installed and for maintenance purposes.



WARNING! Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.



CAUTION Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.



NOTE Text set off in this manner provides important supplemental information.

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Computer Setup (F10) Utility

Computer Setup (F10) Utilities

Use Computer Setup (F10) Utility to do the following:

- Change factory default settings.
- Set the system date and time.
- Set, view, change, or verify the system configuration, including settings for processor, graphics, memory, audio, storage, communications, and input devices.
- Modify the boot order of bootable devices such as hard drives, diskette drives, optical drives, or USB flash media devices.
- Enable Quick Boot, which is faster than Full Boot but does not run all of the diagnostic tests run during a Full Boot. You can set the system to:
 - always Quick Boot (default);
 - periodically Full Boot (from every 1 to 30 days); or
 - always Full Boot.
- Select Post Messages Enabled or Disabled to change the display status of Power-On Self-Test (POST) messages. Post Messages Disabled suppresses most POST messages, such as memory count, product name, and other non-error text messages. If a POST error occurs, the error is displayed regardless of the mode selected. To manually switch to Post Messages Enabled during POST, press any key (except [F1](#) through [F12](#)).
- Establish an Ownership Tag, the text of which is displayed each time the system is turned on or restarted.
- Enter the Asset Tag or property identification number assigned by the company to this computer.
- Enable the power-on password prompt during system restarts (warm boots) as well as during power-on.
- Establish a setup password that controls access to Computer Setup (F10) Utility and the settings described in this section.
- Secure integrated I/O functionality, including the serial, USB, or parallel ports, audio, or embedded NIC, so that they cannot be used until they are unsecured.
- Enable or disable removable media boot ability.
- Enable or disable legacy diskette write ability (when supported by hardware).

- Solve system configuration errors detected but not automatically fixed during the Power-On Self-Test (POST).
- Replicate the system setup by saving system configuration information on diskette and restoring it on one or more computers.
- Execute self-tests on a specified ATA hard drive (when supported by drive).
- Enable or disable DriveLock security (when supported by drive).

Using Computer Setup (F10) Utilities

Computer Setup can be accessed only by turning the computer on or restarting the system. To access the Computer Setup Utilities menu, complete the following steps:

1. Turn on or restart the computer. If you are in Microsoft Windows, click **Start > Shut Down > Restart**.
2. 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.



NOTE If you do not press **F10** at the appropriate time, you must restart the computer and again press **F10** when the monitor light turns green to access the utility.

3. Select your language from the list and press **Enter**.
4. A choice of five headings appears in the Computer Setup Utilities menu: File, Storage, Security, Power and Advanced.
5. Use the arrow (left and right) keys to select the appropriate heading. Use the arrow (up and down) keys to select the option you want, then press **Enter**. To return to the Computer Setup Utilities menu, press **Esc**.
6. To apply and save changes, select **File > Save Changes and Exit**.
 - If you have made changes that you do not want applied, select **Ignore Changes and Exit**.
 - To reset to factory settings or previously saved default settings (some models), select **Apply Defaults and Exit**. This option will restore the original factory system defaults.



CAUTION Do NOT turn the computer power OFF while the BIOS is saving the Computer Setup (F10) changes because the CMOS could become corrupted. It is safe to turn off the computer only after exiting the F10 Setup screen.

Table 1 Computer Setup (F10) Utility

Heading	Table
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Power	Table 5 Computer Setup—Power
Advanced	Table 6 Computer Setup—Advanced (for advanced users)

Computer Setup—File



NOTE Support for specific Computer Setup options may vary depending on the hardware configuration.

Table 2 Computer Setup—File

Option	Description
System Information	Lists: <ul style="list-style-type: none">• Product name• SKU number (some models)• Processor type/speed/stepping• Cache size (L1/L2) (dual core processors have this listed twice)• Installed memory size/speed, number of channels (single or dual) (if applicable)• Integrated MAC address for embedded, enabled NIC (if applicable)• System BIOS (includes family name and version)• Chassis serial number• Asset tracking number
About	Displays copyright notice.
Set Time and Date	Allows you to set system time and date.
Flash System ROM (some models)	Allows you to select a drive containing a new BIOS.
Replicated Setup	Save to Removable Media Saves system configuration, including CMOS, to a formatted 1.44-MB diskette, a USB flash media device, or a diskette-like device (a storage device set to emulate a diskette drive). Restore from Removable Media Restores system configuration from a diskette, a USB flash media device, or a diskette-like device.
Default Setup	Save Current Settings as Default Saves the current system configuration settings as the default. Restore Factory Settings as Default Restores the factory system configuration settings as the default.
Apply Defaults and Exit	Applies the currently selected default settings and clears any established passwords.
Ignore Changes and Exit	Exits Computer Setup without applying or saving any changes.
Save Changes and Exit	Saves changes to system configuration or default settings and exits Computer Setup.

Computer Setup—Storage



NOTE Support for specific Computer Setup options may vary depending on the hardware configuration.

Table 3 Computer Setup—Storage

Option	Description
Device Configuration	<p>Lists all installed BIOS-controlled storage devices.</p> <p>When a device is selected, detailed information and options are displayed. The following options may be presented.</p> <p>Diskette Type (Legacy Diskettes only)</p> <p>Identifies the highest capacity media type accepted by the diskette drive. Options are 3.5" 1.44 MB and 5.25" 1.2 MB.</p> <p>Drive Emulation</p> <p>Allows you to select a drive emulation type for a certain storage device. (For example, a Zip drive can be made bootable by selecting diskette emulation.)</p> <p>Drive Type Emulation Options</p> <p>ATAPI Zip drive:</p> <ul style="list-style-type: none">• None (treated as Other).• Diskette (treated as diskette drive). <p>Legacy Diskette: No emulation options available.</p> <p>CD-ROM: No emulation options available.</p> <p>ATAPI LS-120:</p> <ul style="list-style-type: none">• None (treated as Other).• Diskette (treated as diskette drive). <p>Hard Disk</p> <ul style="list-style-type: none">• None (prevents BIOS data accesses and disables it as a boot device).• Hard Disk (treated as hard disk). <p>Multisector Transfers (ATA disks only)</p> <p>Specifies how many sectors are transferred per multi-sector PIO operation. Options (subject to device capabilities) are Disabled, 8, and 16.</p> <p>Transfer Mode (IDE devices only)</p> <p>Specifies the active data transfer mode. Options (subject to device capabilities) are PIO 0, Max PIO, Enhanced DMA, Ultra DMA 0, and Max UDMA.</p> <p>Translation Mode (ATA disks only)</p> <p>Lets you select the translation mode to be used for the device. This enables the BIOS to access disks partitioned and formatted on other systems and may be necessary for users of older versions of UNIX (e.g., SCO UNIX version 3.2). Options are Automatic, Bit-Shift, LBA Assisted, User, and None.</p>

Table 3 Computer Setup—Storage (continued)



CAUTION Ordinarily, the translation mode selected automatically by the BIOS should not be changed. If the selected translation mode is not compatible with the translation mode that was active when the disk was partitioned and formatted, the data on the disk will be inaccessible.

Translation Parameters (*ATA disks only*)



NOTE This feature appears only when User translation mode is selected.

Allows you to specify the parameters (logical cylinders, heads, and sectors per track) used by the BIOS to translate disk I/O requests (from the operating system or an application) into terms the hard drive can accept. Logical cylinders may not exceed 1024. The number of heads may not exceed 256. The number of sectors per track may not exceed 63. These fields are only visible and changeable when the drive translation mode is set to User.

Default Values IDE/SATA

Allows you to specify the default values for the Multisector Transfers, Transfer Mode, and Translation Mode for ATA devices.

Storage Options

Removable Media Boot

Enables/disables ability to boot the system from removable media.

Legacy Diskette Write

Enables/disables ability to write data to legacy diskettes.

BIOS DMA Data Transfers

Allows you to control how BIOS disk I/O requests are serviced. When **Enable** is selected, the BIOS will service ATA disk read and write requests with DMA data transfers. When **Disable** is selected, the BIOS will service ATA disk read and write requests with PIO data transfers.

SATA Emulation

Allows you to choose how the SATA controller and devices are accessed by the operating system. There are up to two supported options: IDE and AHCI.

IDE is the default option. Use this option for "normal" (non-AHCI) configurations.

Select the **AHCI** option to enable DOS and boot accesses to SATA devices using the AHCI interface. Select this mode, if the target operating system supports accessing the SATA devices via AHCI (e.g., Windows Vista) and AHCI accesses are desired.



NOTE Windows 2000 and Windows XP require a third-party device driver to access SATA devices using the AHCI interface. If you attempt to boot either of these operating systems in AHCI mode without the required device driver, the system will crash (blue screen).

SATA 0 and 2

Allows you to enable or disable DOS and boot accesses to the Primary channel of the first SATA controller. This feature only applies when SATA Emulation = IDE.








NOTE Advanced operating systems like Windows may reenable the channel.

SATA 1 and 3

Allows you to enable or disable DOS and boot accesses to the Secondary channel of the first SATA controller. This feature only applies when SATA Emulation = IDE.

Table 3 Computer Setup—Storage (continued)

	NOTE Advanced operating systems like Windows may reenble the channel.
SATA 4 (some models)	
Allows you to enable or disable DOS and boot accesses to the Primary channel of the second SATA controller. This feature only applies when SATA Emulation = IDE.	
	NOTE Advanced operating systems like Windows may reenble the channel.
SATA 5 (some models)	
Allows you to enable or disable DOS and boot accesses to the Secondary channel of the second SATA controller. This feature only applies when SATA Emulation = IDE.	
	NOTE Advanced operating systems like Windows may reenble the channel.
DPS Self-Test	Allows you to execute self-tests on ATA hard drives capable of performing the Drive Protection System (DPS) self-tests.
	NOTE This selection will only appear when at least one drive capable of performing the DPS self-tests is attached to the system.
Boot Order	Allows you to: <ul style="list-style-type: none">• Specify the order in which attached devices (such as a USB flash media device, diskette drive, hard drive, optical drive, or network interface card) are checked for a bootable operating system image. Each device on the list may be individually excluded from or included for consideration as a bootable operating system source.• Specify the order of attached hard drives. The first hard drive in the order will have priority in the boot sequence and will be recognized as drive C (if any devices are attached).
	NOTE MS-DOS drive lettering assignments may not apply after a non-MS-DOS operating system has started.
Shortcut to Temporarily Override Boot Order	
To boot one time from a device other than the default device specified in Boot Order, restart the computer and press F9 when the monitor light turns green. After POST is completed, a list of bootable devices is displayed. Use the arrow keys to select the preferred bootable device and press Enter . The computer then boots from the selected non-default device for this one time.	

Computer Setup—Security



NOTE Support for specific Computer Setup options may vary depending on the hardware configuration.

Table 4 Computer Setup—Security






Option	Description
Smart Card Options (some models)	Allows you to enable/disable the Smart Card to be used in place of the Power-On Password.
Setup Password	<p>Allows you to set and enable setup (administrator) password.</p> <p> NOTE If the setup password is set, it is required to change Computer Setup options, flash the ROM, and make changes to certain plug and play settings under Windows.</p> <p>See the <i>Troubleshooting Guide</i> on the <i>Documentation and Diagnostics CD</i> for more information.</p>
Power-On Password	<p>Allows you to set and enable power-on password. The power-on password prompt appears after a power cycle. If the user does not enter the correct power-on password, the unit will not boot.</p> <p> NOTE This password does not appear on warm boots , such as Ctrl + Alt + Delete or Restart from Windows, unless enabled in Password Options, below.</p> <p>See the <i>Troubleshooting Guide</i> on the <i>Documentation and Diagnostics CD</i> for more information.</p>
Password Options (This selection appears only if a power-on password or setup password is set.)	<p>Allows you to:</p> <ul style="list-style-type: none"> • Lock legacy resources (appears if a setup password is set) • Enable/disable network server mode (appears if a power-on password is set) • Specify whether the password is required for warm boot (Ctrl + Alt + Delete) (appears if a power-on password is set) • Enable/Disable Setup Browse Mode (appears if a setup password is set) (allows viewing, but not changing, the F10 Setup Options without entering setup password) <p>See the <i>Desktop Management Guide</i> on the <i>Documentation and Diagnostics CD</i> for more information.</p>
Embedded Security (This menu item only appears after the Embedded Security Device is made available under Device Security.)	<p>Allows you to:</p> <ul style="list-style-type: none"> • Enable/disable the Embedded Security device • Reset the device to Factory Settings • Enable/disable power-on authentication support. (some models) • Reset authentication credential. (some models) <p>This feature is supported on some models only. See the <i>Desktop Management Guide</i> on the <i>Documentation and Diagnostics CD</i> for more information.</p>
Device Security	<p>Allows you to set Device Available/Device Hidden for</p> <ul style="list-style-type: none"> • Serial ports • Parallel port • All USB ports • Front USB ports

Table 4 Computer Setup—Security (continued)


	<ul style="list-style-type: none">• System audio• Network controllers (some models)• Embedded security device (some models)
Network Service Boot	Enables/disables the computer's ability to boot from an operating system installed on a network server. (Feature available on NIC models only; the network controller must be either a PCI expansion card or embedded on the system board.)
System IDs	Allows you to set: <ul style="list-style-type: none">• Asset tag (18-byte identifier) and ownership tag (80-byte identifier displayed during POST). See the <i>Desktop Management Guide</i> on the <i>Documentation and Diagnostics CD</i> for more information.• Ownership Tag. This tag is a string that is displayed under the POST splash screen that may be used to identify the owner of the computer.• Chassis serial number or Universal Unique Identifier (UUID) number. The UUID can only be updated if the current chassis serial number is invalid. (These ID numbers are normally set in the factory and are used to uniquely identify the system.)• Keyboard locale setting (for example, U.S. or Deutsch) for System ID entry.
DriveLock Security	Allows you to assign or modify a master or user password for hard drives. When this feature is enabled, the user is prompted to provide one of the DriveLock passwords during POST. If neither is successfully entered, the hard drive will remain inaccessible until one of the passwords is successfully provided during a subsequent cold-boot sequence.  NOTE This selection will only appear when at least one drive that supports the DriveLock feature is attached to the system. See the <i>Desktop Management Guide</i> on the <i>Documentation and Diagnostics CD</i> for more information.
OS Security (some models)	 NOTE An OS Security selection is in effect only if the processor and operating system being used comprehend and utilize the security feature. <ul style="list-style-type: none">• Data Execution Prevention (some models) (enable/disable) Helps prevent OS security breaches.• Intel Virtualization Technology (some models) (enable/disable) Changing this setting requires turning the computer off and then back on.
Setup Security Level	Provides a method to allow end-users limited access to change specified setup options, without having to know the Setup Password. This feature allows the administrator the flexibility to protect changes to essential setup options, while allowing the user to view system settings and configure nonessential options. The administrator specifies access rights to individual setup options on a case-by-case basis via the Setup Security Level menu. By default, all setup options are assigned Setup Password, indicating the user must enter the correct Setup Password during POST to make changes to any of the options. The administrator may set individual items to None, indicating the user can make changes to the specified options when setup has been accessed with invalid passwords. The choice, None, is replaced by Power-On Password if a Power-On Password is enabled.  NOTE Setup Browse Mode must be set to Enable in order for the user to enter Setup without knowing the setup password.

Computer Setup—Power



NOTE Support for specific Computer Setup options may vary depending on the hardware configuration.

Table 5 Computer Setup—Power

Option	Description
OS Power Management	<ul style="list-style-type: none"> • Runtime Power Management— Enable/Disable. Allows certain operating systems to reduce processor voltage and frequency when the current software load does not require the full capabilities of the processor. • Idle Power Savings—Extended/Normal. Allows certain operating systems to decrease the processors power consumption when the processor is idle. • ACPI S3 Hard Disk Reset—Enabling this causes the BIOS to ensure hard disks are ready to accept commands after resuming from S3 before returning control to the operating system. • ACPI S3 PS2 Mouse Wakeup—Enables or disables waking from S3 due to PS2 mouse activity. • USB Wake on Device Insertion (some models)—Allows system to wake from Standby on USB device insertion. • Unique Sleep Blink Rates—This feature is designed to give the user a visual indication of the sleep state the system is in. Each sleep state has a unique blink pattern: <ul style="list-style-type: none"> • S0 = Solid green LED. • S3 = 3 blinks at 1Hz (50% duty cycle) followed by a pause of 2 seconds (green LED), i.e., repeated cycles of 3 blinks and a pause. • S4 = 4 blinks at 1Hz (50% duty cycle) followed by a pause of 2 seconds (green LED), i.e., repeated cycles of 4 blinks and a pause. • S5 = LED is off. <p>If this feature is disabled, S4 and S5 both have the LED off. S1 (no longer supported) and S3 use 1 blink per second.</p>
Hardware Power Management	SATA power management enables or disables SATA bus and/or device power management.
Thermal	<ul style="list-style-type: none"> • Fan idle mode—This bar graph controls the minimum permitted fan speed.
	 <p>NOTE This setting only changes the minimum fan speed. The fans are still automatically controlled.</p>

Computer Setup—Advanced



NOTE Support for specific Computer Setup options may vary depending on the hardware configuration.

Table 6 Computer Setup—Advanced (for advanced users)


Option	Heading
Power-On Options	<p>Allows you to set:</p> <ul style="list-style-type: none"> • POST mode (QuickBoot, FullBoot, or FullBoot every 1–30 days). • POST messages (enable/disable). • F9 prompt (enable/disable or hidden/displayed). Enabling this feature will display the text F9 = Boot Menu during POST. Disabling this feature prevents the text from being displayed. However, pressing F9 will still access the Shortcut Boot [Order] Menu screen. See Storage > Boot Order for more information. • F10 prompt (enable/disable or hidden/displayed). Enabling this feature will display the text F10 = Setup during POST. Disabling this feature prevents the text from being displayed. However, pressing F10 will still access the Setup screen. • F12 prompt (enable/disable or hidden/displayed). Enabling this feature will display the text F12 = Network Service Boot during POST. Disabling this feature prevents the text from being displayed. However, pressing F12 will still force the system to attempt booting from the network. • Option ROM prompt (enable/disable) Enabling this feature will cause the system to display a message before loading option ROMs. (This feature is supported on some models only.) • Remote wakeup boot source (remote server/local hard drive). • After Power Loss (off/on/previous state): Setting this option to: <ul style="list-style-type: none"> • Off—causes the computer to remain powered off when power is restored. • On—causes the computer to power on automatically as soon as power is restored. • On—allows you to power on the computer using a power strip switch, if the computer is connected to an electric power strip. • Previous state—causes the computer to power on automatically as soon as power is restored, if it was on when power was lost.
	<p> NOTE If you turn off power to the computer using the switch on a power strip, you will not be able to use the suspend/sleep feature or the Remote Management features.</p> <ul style="list-style-type: none"> • POST Delay (None, 5, 10 15, or 20 seconds). Enabling this feature will add a user-specified delay to the POST process. This delay is sometimes needed for hard disks on some PCI cards that spin up very slowly, so slowly that they are not ready to boot by the time POST is finished. The POST delay also gives you more time to select F10 to enter Computer (F10) Setup. • I/O APIC Mode (enable/disable). Enabling this feature will allow Microsoft Windows Operating Systems to run optimally. This feature must be disabled for certain non-Microsoft Operating Systems to work properly. • Hyper-threading (enable/disable) • Limit CPUID Maximum Value to 3. Restricts the number of CPUID functions reported by the microprocessor. Enable this feature if booting to Windows NT.
Execute Memory Test (some models)	Restarts the computer and executes the POST memory test.

Table 6 Computer Setup—Advanced (for advanced users) (continued)

BIOS Power-On	Allows you to set the computer to turn on automatically at a time you specify.
Onboard Devices	Allows you to set resources for or disable onboard system devices (diskette controller, serial port, or parallel port).
PCI Devices	<ul style="list-style-type: none">• Lists currently installed PCI devices and their IRQ settings.• Allows you to reconfigure IRQ settings for these devices or to disable them entirely. These settings have no effect under an ACPI-based operating system.
PCI VGA Configuration	Displayed only if there are one or more PCI graphics controllers in the system and the integrated video is enabled. Allows you to specify which VGA controller will be the “boot” or primary VGA controller.
Bus Options	On some models, allows you to enable or disable: <ul style="list-style-type: none">• PCI SERR# generation.• PCI VGA palette snooping, which sets the VGA palette snooping bit in PCI configuration space; only needed when more than one graphics controller is installed.
Device Options	Allows you to set: <ul style="list-style-type: none">• Printer mode (Bi-Directional, EPP + ECP, Output Only).• Num Lock state at power-on (off/on).• S5 Wake on LAN (enable/disable).<ul style="list-style-type: none">• To disable Wake on LAN during the off state (S5), use the arrow (left and right) keys to select the Advanced > Device Options menu and set the S5 Wake on LAN feature to Disable. This obtains the lowest power consumption available on the computer during S5. It does not affect the ability of the computer to Wake on LAN from suspend or hibernation, but will prevent it from waking from S5 via the network. It does not affect operation of the network connection while the computer is on.• If a network connection is not required, completely disable the network controller (NIC) by using the arrow (left and right) keys to select the Security > Device Security menu. Set the Network Controller option to Device Hidden. This prevents the network controller from being used by the operating system and reduces the power used by the computer in S5.• Processor cache (enable/disable).• Integrated Video (enable/disable) Allows you to use integrated video and PCI Up Solution video at the same time (available on some models only).• Internal speaker (some models) (enable/disable) (does not affect external speakers)• Monitor Tracking (enable/disable). Allows BIOS to save monitor asset information.• NIC PXE Option ROM Download (enable/disable). The BIOS contains an embedded NIC option ROM to allow the unit to boot through the network to a PXE server. This is typically used to download a corporate image to a hard drive. The NIC option ROM takes up memory space below 1MB commonly referred to as DOS Compatibility Hole (DCH) space. This space is limited. This F10 option will allow users to disable the downloading of this embedded NIC option ROM thus giving more DCH space for additional PCI cards which may need option ROM space. The default will be to have the NIC option-ROM-enabled.

Recovering the Configuration Settings

This method of recovery requires that you first perform the **Save to Removable Media** command with the Computer Setup (F10) Utility before **Restore** is needed. (See [Save to Removable Media](#) in the Computer Setup—File table.)



NOTE It is recommended that you save any modified computer configuration settings to a diskette, a USB flash media device, or a diskette-like device (a storage device set to emulate a diskette drive) and save the diskette or device for possible future use.

To restore the configuration, insert the diskette, USB flash media device, or other storage media emulating a diskette with the saved configuration and perform the **Restore from Removable Media** command with the Computer Setup (F10) Utility. (See [Restore from Removable Media](#) in the Computer Setup—File table.)