



# F10 Setup overview for 2012 HP Business Notebooks and Desktops

2012 Business PC Models

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## Executive summary

For more than 20 years HP has provided unique customer value through our internally developed Read Only Memory Basic Input/Output System (ROM BIOS). The BIOS is the set of routines that enable a computer to load the operating system and communicate with various devices such as the keyboard, the display, storage drives, slots, and ports. The HP BIOS allows a high degree of integration between the firmware and HP Professional Innovations<sup>1</sup> such as HP ProtectTools, HP Power Assistant, and HP Client Management Solutions. HP F10 Setup, the BIOS configuration GUI provided with HP PCs, gives you access to the impressive set of features supported by our BIOS. This overview details the F10 Setup configuration options available to you for many of these features.

## Supported models

The new F10 Setup is available on select models introduced in 2012.

- 2012 HP EliteBook p series
- 2012 HP ProBook b series
- 2012 HP ProBook m series
- 2012 HP ProBook s series
- 2012 HP Compaq 8300 Elite series
- 2012 HP Compaq 6300 Pro series
- 2012 HP Compaq 6305 Pro series

## Enhancements

HP has added several options to the new version of HP F10 Setup.

### Business notebook enhancements

- Capability to create a backup image of the System BIOS
- Secure Erase feature
- USB charging port
- Power control feature
- Automatic power-on when AC is detected

### Business desktop enhancements

- Secure Erase feature
- EFI Diagnostics

## HP business notebook F10 Setup features

HP F10 Setup features for business notebooks include file, security, and system configuration categories.

### File menu

The File menu provides access to general options such as the following:

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<sup>1</sup> You can find more information about HP Professional Innovations at <http://www.hp.com/go/professionalinnovations>.

- View system information
- Set date and time
- Exit F10 Setup with and without saving changes to settings
- View system diagnostics

## Security menu

The security menu provides access to security related options such as:

- Power-on and DriveLock passwords
- Integrated security device configuration
- Disk Sanitizer<sup>2</sup>
- Intel® Anti-Theft<sup>3</sup>
- Asset tag configuration

## System configuration menu

The system configuration menu provides access to:

- Boot options
- integrated device configuration
- Port options
- AMT options<sup>4</sup> (on select models)
- F10 Setup feature access options

## Language support

HP F10 Setup for business notebooks has extensive language support. You can display the GUI in English, French, German, Spanish, Italian, Dutch, Danish, Japanese, Norwegian, Portuguese, Swedish, Finnish, Chinese Traditional, or Chinese Simplified. Switch languages by using the Language options on the System Configuration page.

## F10 Setup options for HP business notebooks

Table 1 provides a detailed list of F10 Setup options for HP business notebooks.

**Table 1:** Key features for F10 Setup on select 2012 HP business notebook PCs

Feature	Function	Default Setting, if applicable
<b>File Menu</b>		
System Information	Provides key system information, such as serial number, model number, CPU type, and memory configuration	N/A
Set System Date and Time	Configures the date and time	N/A

<sup>2</sup> For the use cases outlined in the Department of Defense 5220.22 M Supplement.

<sup>3</sup> Intel AT security requires a separately purchased Absolute Computrace service subscription and must be activated and configured. Check with Absolute for availability in your country. Windows® required. Intel and HP assume no liability for lost or stolen data and/or systems, or any other damages resulting therefrom. See <http://www.absolute.com/en/partners/alliances/intel>.

<sup>4</sup> Intel Active Management Technology requires an Intel AMT-enabled chipset, network hardware and software, connection to a power source, and a corporate network connection. Setup of this technology requires configuration by the purchaser. To enable certain functionality, setup may also require further integration into existing security frameworks or scripting using the management console. Implementation of new business processes may also require modification.

<b>Feature</b>	<b>Function</b>	<b>Default Setting, if applicable</b>
System Diagnostics	Provides access to diagnostic features, such as the start-up test, run-in test, and hard disk test	N/A
• System Information	Provides system information, such as serial number, model, CPU, and memory	N/A
• Start-Up Test	Runs diagnostics on memory and storage	N/A
• Run-In Test	Performs a continuous diagnostics check on memory and hard disk	N/A
• Hard Disk Test (non HP image)	Performs a hard drive diagnostics check	N/A
• Hard Disk Test (HP image)	Performs a memory test, battery test, and system tune-up, as well as providing BIOS management, an error log, and language options	N/A
Update System BIOS	Updates system firmware from the FAT 32 partition on the hard drive or from a USB Disk-on-key	N/A
Create a backup image of the System BIOS	Puts an image of the System BIOS on the HP_TOOLS partition. Does not work if a BIOS administrator has been set	N/A
Restore Defaults	Restores F10 settings to factory defaults	N/A
Reset BIOS security to factory default	Resets BIOS and Protect Tool Users, clears fingerprint tokens, and resets the TPM	N/A
Ignore Changes and Exit	Exits F10 Setup without saving any changes made during the current session	N/A
Save Changes and Exit	Exits F10 Setup and saves all changes made during the current session	N/A

### **Security Menu**

#### **Administrator Tools**

Setup BIOS Administrator Password	Establishes a power-on password that grants Administrator privileges	N/A
User Management	Manages BIOS and ProtectTools users (creates/deletes/resets passwords)	N/A
• Create New BIOS User Account	Creates additional BIOS user accounts. Enables the administrator to specify User ID Privilege level. Creates passwords set to User ID by default, but individual users can change their assigned password.	N/A
Password Policy	Allows the selection of various rules to govern BIOS password authentication <sup>5</sup>	N/A
• Password Minimum Length	Allows the administrator to specify the minimum number of characters required for the F10 power-on password	N/A
• At least one symbol required	Allows the administrator to require at least one symbol, such as \$, %, ^, &, or #, for the F10 power-on password	Disabled
• At least one number required	Allows the administrator to require at least one number, such as 1, 2, or 3, for the F10 power-on password	Disabled
• At least one uppercase character required	Allows the administrator to require at least one uppercase character, such as A, B, C, or D, for the F10 power-on password	Disabled
• At least one lowercase character required	Allows the administrator to require at least one lowercase character, such as a, b, c, or d, for the F10 power-on password	Disabled
• Are spaces allowed in Password?	Allows the administrator to permit spaces, such as New York, in the F10 power-on password	Disabled

<sup>5</sup> A BIOS Administrator password is required.

<b>Feature</b>	<b>Function</b>	<b>Default Setting, if applicable</b>
System Management Command	Allows authorized personnel to reset security settings during a service event	Enabled
HP SpareKey	Allows users to establish a set of failsafe questions to recover a lost power-on password	Enabled
Fingerprint Reset on Reboot (if present)	Clears all registered fingerprints	Disabled
Save/Restore Master Boot Record (MBR) of the system Hard Drive	Saves a baseline MBR that can be restored if a change is detected	Disabled
<b>User Tools</b>		
Change Password	Changes BIOS user password	N/A
HP SpareKey Enrollment	Allows user configure of HP SpareKey by answering any three of ten questions for enrollment	N/A
Anti-Theft	Allows configuration of Intel Anti-Theft feature	Enabled
DriveLock	Allows configuration of DriveLock Master and User passwords	Disabled
Automatic DriveLock	Requires BIOS Admin password	Disabled
TPM Embedded Security	Manages TPM module settings	
• Embedded Security Device Availability	Exposes the integrated TPM module	Available
• Embedded Security Device State	Enables the integrated TPM module	Disabled
• TPM Reset to Factory Defaults	Returns the TPM Embedded Security settings to factory default	No
• Power-On Authentication Support	Enables multifactor authentication at power-on	Disabled
• Reset Authentication Credential	Resets credentials	No
• OS Management of TPM	Allows the operating system to manage the TPM module	Enabled
• Reset of TPM from OS	Allows the reset of the TPM module from within the operating system	Disabled
<b>Utilities</b>		
Disk Sanitizer	Erases all data on the selected hard drive, typically prior to repurposing or donating the computer (not supported under RAID mode or on SSDs)	N/A
Secure Erase	Runs inside the drive hardware to overwrite data contained on the drive	N/A
<b>System IDs</b>		
• Asset Tracking Number	Allows custom configuration of an asset tag (up to 18 characters)	Serial Number
• Ownership Tag	Allows custom configuration of an ownership tag (up to 40 characters)	Blank
• Ownership Tag 2	Allows custom configuration of a second ownership tag (up to 40 characters)	Blank
<b>System Configuration Menu</b>		
Language	Selects from among 14 languages	English
<b>Boot Options</b>		
• Startup Menu Delay (Sec.)	Allows user configuration of the amount of time the Startup Menu is displayed during POST	0

<b>Feature</b>	<b>Function</b>	<b>Default Setting, if applicable</b>
• Multiboot Express Boot Popup Delay (Sec)	Allows user configuration of the amount of time the Express Boot option is displayed	0
• Audio alerts during boot	Enables audible error beeps during POST	Disabled
• Custom Logo	Enables use of a custom logo screen during POST <sup>6</sup>	Disabled
• Display Diagnostics URL	Displays a web address for diagnostics	Enabled
• Custom Help and URL message	Allows the display of a customized message and URL during POST	Disabled
• Require acknowledgement of battery errors	Displays the battery error screen until the user presses ENTER	Disabled
• Fast Boot	Reduces POST time by bypassing boot to USB, optical drive, PXE, and DOS	Enabled
• CD-ROM boot	Allows boot from optical media	Enabled
• SD Card boot	Allows boot from an SD Card	Enabled
• Floppy boot	Allows boot from a USB floppy drive	Enabled
• PXE Internal NIC boot	Allows boot from the LAN	Enabled
• PXE Internal IPV4 NIC boot	Allows PXE boot to IPv4	Disabled
• PXE Internal IPV6 NIC boot	Allows PXE boot to IPv6	Disabled
• USB device boot	Allows boot from a USB storage device	Disabled
• mSATA Drive boot	Allows boot from an mSATA storage device	Enabled
• Upgrade Bay Hard Drive boot	Allows boot from a hard disk drive mounted in an upgrade bay	Enabled
• eSATA boot	Allows boot from and eSATA storage device	Enabled
• Customized Boot	Allows boot from a custom boot path. Loads the boot loader from the path defined in “Define Customized Boot Option”	Enabled
• Secure Boot Configuration	Provides settings that enable and disable the SecureBoot function, in addition to clearing the Secure Boot Keys	Disabled
• SecureBoot	Enables the SecureBoot function, which verifies the boot loader signature before loading the OS.	Disabled
• Clear Secure Boot Keys	Clears the Secure Boot Keys	Disabled
• User Mode	Selects which keys the BIOS uses	HP Factory Keys, Customer Keys
• Boot Mode	Controls how the OS is booted. Dependent on the OS. Provides the following options: Legacy or UEFI Hybrid (with CSM) or UEFI Native (without CSM)	Legacy
• UEFI Boot Order	Specifies the UEFI boot order	NB Upgrade Bay (UEFI), OS Boot Manager, NB Ethernet (UEFI)

<sup>6</sup> For more information, refer to the HP Business Notebook EFI Guidelines white paper.

<b>Feature</b>	<b>Function</b>	<b>Default Setting, if applicable</b>
• Legacy Boot Order	Specifies the legacy boot order	NB Upgrade Bay, NB Hard Drive, NB Hard Drive 2 (on select models), USB Floppy, USB CD-ROM, USB Hard Drive, NB Ethernet, SD Card, Dock Upgrade Bay, eSATA
• Define Customized Boot Option	Specifies the customized boot option path Boots from this path only when Customized Boot is enabled	N/A
<b>Device Configurations</b>		
• USB Legacy Support	Enables mouse/keyboard support	Enabled
• Parallel port mode	Specifies parallel port mode	ECP
• Fan Always on while on AC	Leaves the fan on while running on AC power	Enabled
• Data Execution Prevention	Enables DEP on Intel-based systems	Enabled
• SATA Device Mode	Enables SATA for internal drives	AHCI; For Smart Response Technology models, RAID, IDE
• Wake on USB	Allows the system to be resumed from Sleep when a USB input device is triggered	Enabled
• USB Charging Port	Allows an external device to charge until a specified battery charge level is reached	Enabled, 10%
• Secondary Battery Fast Charge	Stops charging the primary battery at 90% and begins charging a secondary battery to optimize the charge cycle	Enabled
• Virtualization Technology	Enables VT on Intel-based systems	Disabled
• Virtualization Technology for Directed I/O	Grants virtual machines direct access to peripheral devices on select Intel platforms	Disabled
• TXT Technology	Enables Trusted Execution Technology on select Intel platforms	Disabled
• Multi Core CPU	Enables dual/quad processor cores	Enabled
• Intel HT Technology	Enables HT on select Intel-based systems	Enabled
• NumLock on at boot	Enables NumLock at boot	Disabled
• Max SATA Speed	Selects the maximum SATA port speed	3.0 Gbps / 6.0 Gbps
• Ctrl I Prompt	Enables the Ctrl +I Prompt, which allows the user to enter the RAID Configuration Utility	Disabled
• HP Hypervisor	Enables the HP Hypervisor, which allows multiple operating systems to run concurrently and share the hardware	Disabled
• HP Hypervisor Version Control	Enables BIOS to check the specific version of the HP Hypervisor package to the allowed version stored in BIOS. The platform boots only to the default boot loader configuration file that is distributed with the target HP Hypervisor package.	Disabled
• HP Hypervisor Configuration Lockdown	Enables the Hypervisor to verify its current configuration against a saved setting	Disabled

Feature	Function	Default Setting, if applicable
• Intel Rapid Start Technology	Enables Intel Rapid Start Technology, which improves battery life and system resume time above the current Standby and Hibernate levels. This option operates only when an SSD is detected and is currently supported only in mSATA SSD-based solutions.	Disabled
• Entry on S3 RTC wake	Enables RTC wake to trigger the transition from S3 to Intel Rapid Start Technology	Disabled
• S3 Wake Timer	Specifies the length of time the system remains in S3 before an RTC wake event is triggered	5 minutes
• Entry on S3 Critical Battery wake event	Enables critical battery event support on Intel Rapid Start Technology.	Disabled
• Express Card Link Speed	Sets speed for Express Card Link	Generation 2
• Dynamic Platform and Thermal Framework (DPTF) 6.0	Allows users to set maximum power consumption on select Intel platforms	Enabled
• Configurable TDP <sup>7</sup> Lock	Thermal Design Power (TDP) Locks power consumption to a nominal value on select Intel platforms	Disabled
• LPM	Uses Low Power Mode (LPM) setting requested by OS	OS specific
• Configurable TDP Boot Mode	Allows the user to select the default power consumption on select Intel platforms	TDP Down
• Smart Card Reader Power Setting	Disables the power-saving feature of the Smart Card reader. Used to maintain a session when the card is removed.	Powered on if card is present
• Power Control	Allows the scheduling of a peak shift period and a battery charging period	Enabled
• Power on unit when AC is detected	Turns on the unit when AC power is applied	Disabled
• Deep Sleep	Turns off power to the chipset during Sleep, resulting in greater battery life	Off, On, Auto
<b>Built-In Device Options<sup>8</sup></b>		
• Wireless Button State	Enables the wireless button	Enabled
• Embedded WLAN Device	Enables an integrated 802.11 device	Enabled
• Embedded WWAN Device	Enables an integrated WWAN device	Enabled
• WWAN Quick Connect	Maintains power to the WWAN device to provide faster network connection	Enabled
• Embedded GPS Device	Enables integrated GPS device	Enabled
• Embedded Bluetooth	Enables integrated Bluetooth device	Enabled
• Embedded LAN Controller	Enables integrated NIC device	Enabled
• LAN/WLAN Switching	Enables automatic switching	Disabled
• Wake on LAN	Enables system to wake when a magic packet is received via LAN	Boot to Network
• Wake on LAN in Battery/DC Mode	Enables system to wake up when powered by battery via LAN	Disabled
• Notebook mSATA Drive	Enables the mSATA Drive and allows you to use an mSATA drive as a bootable drive.	Enabled
• NB Upgrade Bay	Enables integrated Upgrade Bay	Enabled
• Fingerprint Device	Enables fingerprint reader	Enabled

<sup>7</sup> Thermal Design Power (TDP)

<sup>8</sup> Device not supported on all platforms



<b>Feature</b>	<b>Function</b>	<b>Default Setting, if applicable</b>
• Integrated Camera	Enables integrated camera	Enabled
• Power Monitor Circuit	Enables power monitor circuit	Enabled
• Audio Device	Enables integrated audio device	Enabled
• Modem Device	Enables integrated modem	Enabled
• Microphone	Enables integrated microphone	Enabled
• Speakers and Headphones	Enables internal speakers and headphone jack	Enabled
• Wake unit from sleep when lid is opened	Opening the lid wakes the computer from Sleep mode	Disabled
• Power on unit when lid is opened	Opening the lid powers on the computer	Disabled
• mSATA	Enables mSATA support	Enabled
• Boost Converter	Draws power from the battery to give the CPU a momentary performance gain.	Enabled
• Backlit keyboard timeout	Allows you to specify the timeout period for the keyboard backlit LEDs	15 secs
<b>Port Options</b>		
• Serial Port	Enables integrated serial port	Enabled
• Parallel Port	Enables integrated parallel port	Enabled
• Flash media reader	Enables integrated media card reader	Enabled
• USB Port	Enables integrated USB port	Enabled
• 1394 Port	Enables integrated 1394 port	Enabled
• Express Card Slot	Enables integrated ExpressCard slot	Enabled
• Smart Card	Enables integrated smart card slot	Enabled
• eSATA Port	Enables integrated eSATA port	Enabled
<b>AMT Options</b>		
• USB Key Provisioning Support	Allows AMT provisioning using USB Disk-on-key	Disabled
• Unconfigure AMT on next boot	Resets AMT configuration options on next boot	Disabled
• SOL Terminal Emulation Mode	Specifies terminal emulation mode	ANSI
• Firmware Progress Event Support	Enables AMT progress events, which allows remote monitoring of machine status of client units	Disabled
• Initiate Intel CIRA	Enables Intel CIRA feature	Disabled
Set Security Level	Allows administrator to restrict visibility or configurability of F10 Setup options for standard users	N/A
Restore Security Defaults	Restores the security level of F10 Setup options to default	N/A
BIOS Power-On	Automatically powers system on based on preset schedule. <ul style="list-style-type: none"> <li>• Shuts down Windows gracefully and ensures feature is on in F10 Setup</li> <li>• Enables from Windows 7 and Vista "Allow wake timers"; Power Options -&gt; Advanced settings -&gt; Sleep -&gt; Allow Wake timers - Plugged in: Enable</li> <li>• Supported ONLY on AC power</li> </ul>	Disabled

# HP business desktop F10 Setup features

HP business desktop F10 Setup features include file, storage, security, power, and advanced categories.

## File menu

The file menu provides access to general options such as:

- View system information
- Set date and time
- Exit F10 Setup with and without saving changes to settings
- Updating system ROM

## Storage menu

The storage menu provides access to configure mass storage devices, general options, and boot order.

## Security menu

The security menu provides access to security related options such as:

- Power-on and DriveLock passwords
- Integrated security device configuration
- Disk Sanitizer
- Asset tag configuration.

## Power menu

The power menu provides access to OS and hardware power management configuration and system thermal controls.

## Advanced menu

The advanced menu provides access to:

- Power-on options
- Integrated device configuration
- Port options
- AMT options (on select models)

## F10 Setup options for HP business desktops

Table 2 provides a detailed list of F10 Setup options for HP business desktops.

**Table 2:** Key features for F10 Setup on select 2012 HP business desktop PCs

Feature	Function	Default Setting, if applicable
<b>File Menu</b>		
System Information	Provides key system information, such as serial number, model number, CPU type, and memory configuration	N/A
Set Time and Date	Configures date and time	N/A
Flash System ROM	Updates system firmware from a FAT 32 partition on a USB Disk-on-key	N/A
Replicated Setup	Saves or restores setting using USB Disk-on-key	N/A
Default Setup	Selects factory defaults for Apply Defaults action, or saves current settings as new defaults	N/A
Apply Defaults and Exit	Exits F10 Setup and restores settings to current defaults	N/A
Ignore Changes and Exit	Exits F10 Setup without saving any changes made during current session	N/A
Save Changes and Exit	Exits F10 Setup and saves all changes made during current session	N/A
<b>Storage Menu</b>		
Device Configuration	Displays storage device information and allows setting of SATA translation mode	Automatic
Storage Options		
• eSATA Port	Enables or disables eSATA port	Disabled
• SATA Emulation	Sets SATA emulation mode	AHCI
• Removable Media Boot	Boots from removable media	Enabled
• Max eSATA speed	Selects maximum eSATA port speed	1.5 Gbps
Boot Order	Allows configuration of UEFI and Legacy boot order	N/A
EFI Boot Sources	Specifies UEFI boot order	USB Floppy/CD, ATAPI CD/DVD Drive, USB Hard Drive
Legacy Boot Sources	Specifies legacy boot order	ATAPI CD/DVD Drive, USB Floppy/CD, Hard Drives: USB, SATA Network Controller
<b>Security Menu</b>		
<b>Administrator Tools</b>		
Setup Password	Establishes an administrator password (access to Setup utility)	N/A
Power-on Password	Establishes a power-on password (Setup password will also authenticate for this function)	N/A
Password Options		
• Lock Legacy Resources	Limits ACPI control of legacy COM and LPT ports	Disabled
• Setup Browse Mode	Allows non-Administrator limited access to BIOS Setup	Enabled

<b>Feature</b>	<b>Function</b>	<b>Default Setting, if applicable</b>
• Password Prompt on F9, F11, & F12	Requires Administrator password for BIOS hotkeys	Enabled
• Network Server Mode	Enables Network Server Mode	Disabled
Smart Cover	Chassis cover functions (if options are present)	N/A
• Cover Lock (optional)	Engage cover lock solenoid	Disabled
• Cover Removal Sensor (optional)	Set policy for system when cover is removed (Notify User, Setup Password)	Disabled
Device Security	Securely disables or hides devices and ports	N/A
• Embedded Security Device	Sets Embedded Security Device availability	Device Available
• System Audio	Sets System Audio availability	Device Available
• Network Controller	Sets Network Controller availability	Device Available
• SATA0	Sets SATA0 availability	Device Available
• SATA1	Sets SATA1 availability	Device Available
• SATA2	Sets SATA2 availability	Device Available
• SATA4	Sets SATA4 availability	Device Available
USB Security		
• Front USB Ports 1-4	Sets USB port status	Enabled
• Rear USB Ports 1-6	Sets USB port status	Enabled
• Accessory USB Ports 1-4	Sets USB port status	Enabled
Slot Security		
• PCI Express x1 slot	Sets PCI Express x1 slot status	Enabled
• PCI Express x4 slot	Sets PCI Express x4 slot status	Enabled
• PCI Express x16 slot	Sets PCI Express x16 slot status	Enabled
• PCI Slot	Sets PCI slot status	Enabled
Network Boot	Sets network boot status	Enabled
System IDs	Sets Asset Tag, Ownership Tag, and Keyboard	N/A
MBR Security	Protects MBR from corruption	Disabled
System Security		
• Data Execution Prevention	Protects against certain types of malware	Enabled
• Virtualization Technology (VTx) (Intel only)	Enables hardware virtualization support	Disabled
• SVM CPU Virtualization (AMD only)		
• Virtualization Technology Directed I/O (Intel only in some configurations)	Grants virtual machines direct access to peripheral devices	Disabled
• Trusted Execution Technology (Intel only in some configurations)	Enables Trusted Execution Technology	Disabled
• Embedded Security Device	Enables the Trusted Platform Module (TPM)	Disabled
• Reset to Factory Settings	Disables TPM and resets credentials	Do not reset
• OS Management of Embedded Security Device	Allows operating system to manage TPM module	Enabled
• Reset of Embedded Security Device through OS	Allows reset of TPM module from within the operating system	Disabled

<b>Feature</b>	<b>Function</b>	<b>Default Setting, if applicable</b>
DriveLock Security	Allows configuration of DriveLock Master and User passwords	N/A
<b>Power Menu</b>		
OS Power Management		
• Runtime Power Management	Enables Runtime Power Management	Enabled
• Idle Power Savings	Increases OS Idle Power Savings	Extended
• Unique Sleep State Blink Rates	Assigns a unique LED blink pattern to S3, S4	Disabled
Hardware Power Management		
• SATA Power Management	Permits the SATA bus to enter low power states when idle	Enabled
• S5 Maximum Power Savings	Minimizes power consumption of system while in S5 state. Also disables Wake on LAN functionality from S5 state.	Disabled
Thermal	Adjusts minimum fan speed in Idle Mode	0
<b>ADVANCED MENU</b>		
Power-On Options		
• POST Mode	Selects between fast startup (QuickBoot) or self testing during power-on	QuickBoot
• POST Messages	Displays messages during Power-On Self Test (POST)	Disabled
• Press the ESC key for Startup Menu	Displays the “Press Esc for startup menu” prompt	Enabled
• Option ROM Prompt	Displays the Option ROM prompt	Enabled
• After Power Loss	Specifies system state after power loss	Off
• POST Delay (in seconds)	Specifies the amount of delay to add during POST	None
• Remote Wakeup Boot Source	Specifies boot device after a remote wakeup event	Remote Server
• Factory Recovery Boot Support	Enables BIOS support for HP Backup and Recovery tools	Disabled
• Bypass F1 Prompt on Configuration Changes	Allows system to boot without user input after configuration change (e.g. memory size change)	Disabled
BIOS Power-On	Specifies date and time when system automatically wakes from off	Disabled
Onboard Devices	Adjusts settings for integrated IO ports	Serial Port A IO=3F8h; IRQ=4 Serial Port B IO=2F8h; IRQ=3
Bus Options		
• PCE SERR# Generation	Enables PCI Device to Generate SERR#	Enabled
• PCI VGA Palette Snooping	Enables VGA Palette Registers Snooping	Disabled
Device Options		
• Printer Mode	Specifies parallel port mode	EPP+ECP
• NumLock State at Power-On	Enables NumLock at boot	Off
• Integrated Video	Controls whether or not the integrated video controller is enabled	Disabled
• Internal Speaker	Controls whether or not the internal speaker is enabled	Enabled
NIC Option ROM Download	Controls whether or not NIC option ROM is downloaded and executed. Some systems may need to disable this feature to save NIC Option ROM address space for use by other devices.	Enabled

<b>Feature</b>	<b>Function</b>	<b>Default Setting, if applicable</b>
• Multi-Processor	Controls whether or not the BIOS reports multiple processor cores to the OS	Enabled
• Hyperthreading <sup>9</sup>	Controls Hyperthreading capability on Intel processors. Some programs may run better with this feature disabled.	Enabled
• Turbo Mode	Controls a feature of the processor where processor core frequencies can be optimized for performance based on the load on each core	Enabled
VGA Configuration	Chooses the primary (POST) graphics output in systems with multiple graphics adapters.	N/A
Management Operations (Intel only)		
• AMT	Allows disabling all AMT functions	Enabled
• Unconfigure AMT/ME	Clears all AMT configuration settings on the next boot	Disabled
• Hide Un-configure ME Confirmation Prompt	Grants virtual machines direct access to peripheral devices	Disabled
• WatchDog Timer	Enables Trusted Execution Technology	Enabled
• OS WatchDog Timer	Sets OS WatchDog Timer (minutes)	5
• BIOS WatchDog Timer	Sets BIOS WatchDog Timer (minutes)	5

<sup>9</sup> Intel HT Technology (HT) is designed to improve the performance of multithreaded software products and requires a computer system equipped with a processor that supports HT and an HT-enabled chipset, the BIOS, and the OS. Please contact your software provider to determine compatibility. Not all customers or software applications will benefit from the use of HT. See <http://www.intel.com/info/hyperthreading> for more information.

## For more information

Visit the websites listed below if you need additional information.

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Resource description	Web address
HP Business Notebook Innovations	<a href="http://www.hp.com/go/professionalinnovations">http://www.hp.com/go/professionalinnovations</a>
HP Professional Innovations Quick Reference Guide	<a href="http://www.hp.com/sbso/solutions/pc_expertise/professional_innovations/hp-professional-innovations-quick-reference-guide.pdf">http://www.hp.com/sbso/solutions/pc_expertise/professional_innovations/hp-professional-innovations-quick-reference-guide.pdf</a>

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## Call to action

To learn more about HP business notebooks and desktops, contact your local HP sales representative or visit <http://www.hp.com/go/notebooks> and <http://www.hp.com/go/desktops>.

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