**Intel® Desktop Boards**
**BIOS Settings Dictionary – Alphabetical**

The BIOS Setup program can be used to view and change the BIOS settings for the computer. The BIOS Setup program is accessed by pressing the <F2> key after the Power-On Self-Test (POST) memory test begins and before the operating system boot begins. The following menus are available:

| Menu Title | Purpose |
|---|---|
| Maintenance | Clears passwords and displays processor information<br><br>*The maintenance menu is displayed only when the Desktop Board is in configure mode.* |
| Main | Displays processor and memory configuration |
| Advanced | Configures advanced features available through the chipset. |
| Security | Sets passwords and security features |
| Power | Configures power management features and power supply controls |
| Boot | Selects boot options |
| Exit | Saves or discards changes to Setup program options |

**The presence of many BIOS settings are dependent on your board model, hardware components installed, and the BIOS version. BIOS menu titles may differ.**

If any problems occur after making BIOS settings changes (poor performance, intermittent issues, etc.), reset the desktop board to default values:

1. During boot, enter the BIOS setup by pressing F2.
2. Press F9 to set defaults.
3. Press F10 to Save and Exit.

If the system locks or won't boot after making BIOS settings changes, perform a BIOS recovery as described at http://support.intel.com/design/motherbd/recoverybios.htm.

**0 – 9**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| 1394<br><br>*This BIOS setting is present only on Intel® Desktop Boards that include IEEE 1394.* | Advanced > Peripheral Configuration | • Enabled<br>• Disabled | Disables or enables IEEE 1394 support |
| +1.5Vin | Advanced > Hardware Monitoring | No changeable options | Displays voltage level of the +1.5V in supply |
| +12Vin | Advanced > Hardware Monitoring | No changeable options | Displays voltage level of the +12V in supply |
| +3.3Vin | Advanced > Hardware Monitoring | No changeable options | Displays voltage level of the +3.3V in supply |
| +5Vin | Advanced > Hardware Monitoring | No changeable options | Displays voltage level of the +5V in supply |
| 1st ATAPI CD-ROM Drive<br><br>*This boot device submenu is present only if at least one boot device of this type is installed. This list will display up to four ATAPI CD-ROM drives, the maximum number of ATAPI CD-ROM drives supported by the BIOS.* | Boot > ATAPI CD-ROM Drives | Dependent on installed ATAPI CD-ROM drives | Specifies the boot sequence from the available ATAPI CD-ROM drives. To specify boot sequence:<br><br>1. Select the boot device with <↑> or <↓>.<br>2. Press <Enter> to set the selection as the intended boot device. |
| 1st Boot Device | Boot > Boot Device Priority | • Removable Device<br>• Hard Drive<br>• ATAPI CD-ROM<br>• Disabled | Specifies the boot sequence from the available devices. To specify boot sequence:<br><br>1. Select the boot device with <↑> or <↓>.<br>2. Press <Enter> to set the selection as the intended boot device.<br><br>The operating system assigns a drive letter |

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|---|---|---|---|
| 1st Hard Disk Drive<br><br>*This boot device submenu appears only if at least one boot device of this type is installed. This list will display up to 12 hard disk drives, the maximum number of hard disk drives supported by the BIOS.* | Boot > Hard Disk Drives | Dependent on installed hard drives | Specifies the boot sequence from the available hard disk drives. To specify boot sequence:<br><br>1. Select the boot device with <↑> or <↓>.<br>2. Press <Enter> to set the selection as the intended boot device. |
| 1st Removable Device<br><br>*This boot device submenu is present only if at least one boot device of this type is installed. This list will display up to four removable devices, the maximum number of removable devices supported by the BIOS.* | Boot > Removable Devices | Dependent on installed removable devices | Specifies the boot sequence from the available removable devices. To specify boot sequence:<br><br>1. Select the boot device with <↑> or <↓>.<br>2. Press <Enter> to set the selection as the intended boot device. |
| 2nd Boot Device | Boot > Boot Device Priority | • Removable Device<br>• Hard Drive<br>• ATAPI CD-ROM<br>• Disabled | Specifies the boot sequence from the available devices. To specify boot sequence:<br><br>1. Select the boot device with <↑> or <↓>.<br>2. Press <Enter> to set the selection as the intended boot device.<br><br>The operating system assigns a drive letter |
| 3rd Boot Device | Boot > Boot Device Priority | • Removable Device<br>• Hard Drive<br>• ATAPI CD-ROM<br>• Disabled | Specifies the boot sequence from the available devices. To specify boot sequence:<br><br>1. Select the boot device with <↑> or <↓>.<br>2. Press <Enter> to set the selection as the intended boot device.<br><br>The operating system assigns a drive letter |

**A**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| ACPI | Power | No changeable options | Opens the sub-menu for ACPI (Advanced Configuration and Power Interface). |
| ACPI Suspend Mode (or ACPI Suspend State) | Power > ACPI | • S1 State<br>• S3 State | Specifies the ACPI sleep state. |
| AddOn ROM Display Mode | Boot | • Enabled<br>• Disabled | **Enabled**: the logo screen will be followed by the "AddOn ROM" initial screen (the screen showing the add-on card BIOS message).<br><br>**Disabled:** no "Add-On ROM" screen is followed. |
| After Power Failure | Power | • Stay Off<br>• Last State<br>• Power On | Determines the mode of operation if a power loss occurs.<br><br>**Stay Off** keeps the power off until the power button is pressed.<br><br>**Last State** restores the previous power state before power loss occurrs.<br><br>**Power On** restores power to the computer. |
| AGP/PCI Burn-in Mode | Advanced > Chipset Configuration > Burn-in Mode | • Default<br>• 63.88/31.94 MHz<br>• 68.05/34.02 MHz<br>• 69.44/34.72 MHz<br>• 70.83/35.41 MHz<br>• 72.22/36.11 MHz<br>• 73.60/36.80 MHz | Enables the selection of specific AGP/PCI clock frequencies. The host clock (system bus speed) is not changed.<br><br>If this option is set to anything other than Default, the Host and I/O Burn-In Mode is automatically set to Default. |
| Aperture Size | Advanced > Video Configuration | • 4MB<br>• 8MB<br>• 16MB<br>• 32MB<br>• 128MB<br>• 256MB<br><br>Options may vary depending on board model. | Amount of system memory available for direct access by the graphics device. |
| APM | Power > APM | • Enabled<br>• Disabled | Disables or enables APM (Advanced Power Management). |
| ASF Support | Advanced > Peripheral Configuration<br><br>or<br><br>Advanced > Boot Configuration | • Enabled<br>• Disabled | Disables or enables Alert Standard Format (ASF). For more information, refer to http://www.intel.com/support/motherboards/desktop/sb/cs-010502.htm |

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|---|---|---|---|
| ATA/IDE Configuration | Advanced > Drive Configuration | • Disabled<br>• Legacy<br>• Enhanced | Specifies the integrated IDE controller.<br><br>**Disabled** disables the integrated IDE controller.<br><br>**Legacy** enables up to two IDE channels for OS requiring legacy IDE operation.<br><br>**Enhanced** enables all SATA and PATA resources. |
| ATAPI CD-ROM Drives | Boot | No changeable options | Opens the ATAPI CD-ROM Drive sub-menu where you may specify the boot sequence from the available ATAPI CD-ROM drives. |
| Audio<br><br>*This BIOS setting is present only on Intel® Desktop Boards that include onboard audio.* | Advanced > Peripheral Configuration | • Enabled<br>• Disabled | Enables or disables onboard audio. |

**B**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| Base I/O Address *(for the Parallel Port)*<br><br>*This BIOS setting is present only when Parallel Port is set to Enabled* | Advanced > Peripheral Configuration | • 378<br>• 278 | Specifies the base I/O address for the parallel port, if Parallel Port is Enabled. |
| Base I/O Address *(for the Serial Port)*<br><br>*This BIOS setting is present only when Serial Port A is set to Enabled* | Advanced > Peripheral Configuration | • 3F8<br>• 2F8<br>• 3E8<br>• 2E8 | Specifies the base I/O address for serial port A if serial port A is enabled. |
| BIOS Version | Main | No changeable options | Displays the version of the BIOS currently installed on the PC. |
| Block Mode | Advanced > Drive Configuration > SATA/PATA | • Disabled<br>• Auto | Check the hard disk drive's specifications for optimum setting. |
| Boot Device Priority | Boot | No changeable options | Opens the Boot Device Priority sub-menu where you may specify the boot sequence from the available types of boot devices. |

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|---|---|---|---|
| Burn-In Mode | Advanced > Chipset Configuration | • Default<br>• -2.0%<br>• -1.0%<br>• +1.0%<br>• +2.0%<br>• +3.0%<br>• +4.0% | Alters host and I/O clock frequencies.<br><br>**Warning**: This setting is intended for validation and test purposes only. Altering clock frequencies may reduce system stability and/or the useful life of hte system and processor. Operation at settings beyond component specification is not covered by Intel component warranties. If any problems occur during operation at non-default settings, reset the board to default values. |

**C**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| Cable Detected<br><br>*This BIOS setting is present only if an IDE device is installed.* | Advanced > Drive Configuration > SATA/PATA | No changeable options | Displays the type of cable connected to the IDE interface: 40-conductor or 80-conductor (for ATA-66/100 devices) or Serial ATA. |
| Cache RAM | Main | No changeable options | Displays the size of second-level cache and whether it is ECC-capable. |
| Chassis Intrusion | Security | • Enabled<br>• Disabled | Enables or disables the chassis intrusion feature. |
| Clear All Passwords | Maintenance | • OK<br>• Cancel | Clears both the user and supervisor passwords. |
| Clear Event Log | Advanced > Event Log Configuration | No changeable options | Discards all events in the event log. |
| Clear Trusted Platform Module<br><br>*This BIOS setting is present only on Intel® Desktop Boards that include support for Trusted Platform Module (TPM).* | Maintenance | • OK<br>• Cancel | Used to clear the TPM if you are transfering ownership of the platform to a new owner. For more information, refer to your Trusted Platform Module Quick Reference Guide. |
| Clear User Password<br><br>*This BIOS setting is present only if a user password has been set.* | Security | • Yes<br>• No | Clears the user password. |
| Compliance Test Pattern | Advanced > PCI Express Configuration | • Enabled<br>• Disabled | Used for making sure a PCI Express slot remains functional and enabled per PCI Express specification for Compliance test card testing of PCI Express cards. |
| CPU Frequency Multiplier<br><br>*This BIOS setting is present only when Default Frequency Ratio is disabled.* | Maintenance | User Defined | Sets the ratio between CPU Core Clock and the Front Side Bus (FSB) |

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|---|---|---|---|
| CPC Override | Advanced > Chipset Configuration<br><br>or<br><br>Advanced > Memory Configuration | • Auto<br>• Enabled<br>• Disabled | Controls Command Per Clock/1n rule mode. When enabled, allows DRAM controller to attempt Chip Select assertions in two consecutive common clocks. |
| CPU Microcode Update Revision | Maintenance | No changeable options | Displays processor's Microcode Update Revision. |
| CPU Stepping Signature | Maintenance | No changeable options | Displays processor's Stepping Signature. |
| CSA Device | Advanced > Chipset Configuration | • Auto<br>• Disable | Enables or disables Communication Streaming Architecture interface.<br><br>**Auto** leaves the CSA device enabled if a device is found on the bus, else the device is disabled.<br><br>For more information, refer to http://www.intel.com/design/network/papers/25245102.pdf |

**D**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| Default Frequency Ratio | Maintenance | • Enabled<br>• Disabled | **Enabled** uses processor default frequency ratio.<br><br>**Disabled** allows programming of frequency ratio. |
| Discard Changes | Exit | No changeable options | Discards changes without exiting Setup. The option values present when the computer was turned on are used. |
| Diskette Controller | Advanced > Diskette Configuration | • Enabled<br>• Disabled | Configures the integrated floppy controller. |
| Diskette Write Protect | Advanced > Diskette Configuration | • Enabled<br>• Disabled | Disables or enables diskette drive write protection. |
| DMA Mode | Advanced > Drive Configuration > SATA/PATA | • Auto<br>• SWDMA 0<br>• SWDMA 1<br>• SWDMA 2<br>• MWDMA 0<br>• MWDMA 1<br>• MWDMA 2<br>• UDMA 0<br>• UDMA 1<br>• UDMA 2<br>• UDMA 3<br>• UDMA 4<br>• UDMA 5 | Specifies the Ultra DMA mode for the drive. |

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| Drive Installed | Advanced > Drive Configuration > SATA/PATA | No changeable options | Displays the type of drive installed. |
| DVMT Mode | Advanced > Video Configuration | • DVMT<br>• Fixed<br>• Both | Dynamic Video Memory Technology<br><br>**DVMT** mode is memory that is dynamically allocated based on memory requests made by application and are released back to the system once the requesting application has been terminated.<br><br>**Fixed** mode is non-contiguous pagelocked memory allocated during driver initialization to provide a static amount of memory.<br><br>**Both** allows the combination of both Fixed and DVMT type driver allocation methods, used to guarantee a minimum amount of memory but give the flexibility of DVMT allocation scheme and performance enhancement. These mode options will ensure that a certain minimum amount of memory will always be dedicated to graphics.<br><br>For additional information, refer to the Intel® Graphics Media Accelerator 900 White Paper at http://www.intel.com/design/chipsets/applnots/30262403.pdf. |

**E**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| ECC Event Logging | Advanced > Event Log Configuration | • Enabled<br>• Disabled | Enables or disables event logging of ECC events. |
| Event Log | Advanced > Event Log Configuration | No changeable options | Indicates if there is space available in the event log. |
| Event Logging | Advanced > Event Log Configuration | • Enabled<br>• Disabled | Enables or disables event logging. |
| Exit Discarding Changes | Exit | No changeable options | Exits without saving any changes made in the BIOS Setup program. |
| Exit Saving Changes | Exit | No changeable options | Exits and saves the changes in CMOS SRAM. |
| Extended Burn-in Mode | Advanced > Chipset Configuration > Burn-in Mode | • Enabled<br>• Disabled | Enabling this option allows the user to select additional values for system performance margining.<br><br>**Warning:** This setting is intended for validation and test purposes only. Altering clock frequencies may reduce system stability and/or the useful life of hte system and processor. Operation at settings beyond component specification is not covered by Intel component warranties. If any problems occur during operation at non-default settings, reset the board to default values. |
| Extended Configuration | Advanced > Chipset Configuration | • Default<br>• User Defined | Chooses the default or user defined settings for the extended configuration options. |

**F**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| Fan Control | Advanced > Fan Control Configuration | • Enabled<br>• Disabled | Disables or enables system fan control. |
| Floppy A | Advanced > Diskette Configuration | • Disabled<br>• 360 KB 5¼”<br>• 1.2 MB 5¼”<br>• 720 KB 3½”<br>• 1.44 MB 3½”<br>• 2.88 MB 3½” | Selects the floppy drive type. |
| Frame Buffer Size | Advanced > Video Configuration | • 1 MB<br>• 8 MB<br>• 16 MB<br><br>*Options may vary depending on board model.* | Sets the frame buffer size.<br><br>Frame buffer size is the total amount of system memory locked by the BIOS for video. A larger frame buffer size should result in higher video performance. |
| Front Fan Speed | Advanced > Hardware Monitoring | No changeable options | Displays front fan speed. |

**H**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| Hard Disk Drives | Boot | No changeable options | Opens the Hard Disk Drives sub-menu where you may specify the boot sequence from the available hard disk drives. |
| Hard Disk Pre-Delay | Advanced > Drive Configuration | • Disabled<br>• 3 Seconds<br>• 6 Seconds<br>• 9 Seconds<br>• 12 Seconds<br>• 15 Seconds<br>• 21 Seconds<br>• 30 Seconds | Specifies the hard disk drive pre-delay. Causes the BIOS to insert a delay before attempting to detect IDE drives in the system. |
| Hard Drive | Power > APM | • Enabled<br>• Disabled | Enables power management for hard disks during APM standby mode. |
| High Speed USB | Advanced > USB Configuration | • Enabled<br>• Disabled | Disable this option when a USB 2.0 driver is not available. |

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| Host Burn-in Mode | Advanced > Chipset Configuration > Burn-in Mode | • Default<br>• -2.0%<br>• -1.0%<br>• +1.0%<br>• +2.0%<br>• +3.0%<br>• +4.0%<br>• +5.0%<br>• +6.0%<br>• +7.0%<br>• +8.0%<br>• +9.0%<br>• +10.0% | This setting alters host clock frequencies.<br><br>**Warning:** This setting is intended for validation and test purposes only. Altering clock frequencies may reduce system stability and/or the useful life of hte system and processor. Operation at settings beyond component specification is not covered by Intel component warranties. If any problems occur during operation at non-default settings, reset the board to default values. |
| Host Spread Spectrum | Advanced > Chipset Configuration | • Down<br>• Center | Adjust the mean frequencies for core system clocks. Requires additional POST time. |
| Hyper-Threading Technology<br><br>*This BIOS setting is present only on Intel® Desktop Boards that support Hyper-Threading Technology if a processor supporting Hyper-Threading Technology is installed.* | Main | • Enabled<br>• Disabled | Enables or disables Hyper-Threading Technology. |

**I**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| IGD Aperture Size | Advanced > Video Configuration | • 4MB<br>• 8MB<br>• 16MB<br>• 32MB<br>• 128MB<br>• 256MB<br><br>Options may vary depending on board model. | Establishes the maximum amount of system memory that the Operating System can use for video memory. This is primarily used for buffering textures for the AGP video device. |
| IGD DVMT Memory | Advanced > Video Configuration | • 32MB<br>• 64 MB<br>• 128 MB<br>• Maximum DVMT | Intel Dynamic Video Memory Technology 3.0 (DVMT 3.0) allows additional memory to be allocated for graphics usage based on application need. Once the application is closed, the memory that was allocated for graphics usage is then released and made available for system use.<br><br>**Maximum DVMT** allows up to 224 MB of memory to be allocated for graphics. |

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|---|---|---|---|
| Inactivity Timer | Power > APM | • Off<br>• 1 Minute<br>• 5 Minutes<br>• 10 Minutes<br>• 20 Minutes<br>• 30 Minutes<br>• 60 Minutes<br>• 120 Minutes | Specifies the amount of time before the computer enters APM standby mode. |
| Intel Enhanced Debug | Maintenance | • Enabled<br>• Disabled | Processor option RECOMMENDED by the Netburst BIOS writer's guide for allowing operating system level debug of system issues that may be processor related. |
| Intel Rapid BIOS Boot | Boot | • Enabled<br>• Disabled | Allows BIOS to skip certain tests while booting. |
| Intel® RAID Technology<br><br>*This BIOS setting is present only on Intel® Desktop Boards that include support for RAID.* | Advanced > Drive Configuration | • Enabled<br>• Disabled | Enables or disables Intel® RAID technology. If you plan on configuring your system for Intel® Matrix Storage Technology, enable this setting before installing your operating system. For additional information, refer to http://support.intel.com/support/motherboards/desktop/sb/CS-012075.htm. |
| Interrupt *(for the Parallel Port)*<br><br>*This BIOS setting is present only when Parallel Port is set to Enabled* | Advanced > Peripheral Configuration | • IRQ 5<br>• IRQ 7 | Specifies the interrupt for the parallel port, if Parallel Port is Enabled. |
| Interrupt *(for the Serial Port)*<br><br>*This BIOS setting is present only when Serial Port A is set to Enabled* | Advanced > Peripheral Configuration | • IRQ 3<br>• IRQ 4 | Specifies the interrupt for serial port A if serial port A is enabled. |
| IOAPIC Enable | Advanced > Chipset Configuration | • Enabled<br>• Disabled | Enables or disables I/O Programmable Interrupt Controller. |
| ISA Enable Bit | Advanced > Chipset Configuration | • Enabled<br>• Disabled | Some older expansion devices require this to be enabled. |

**L**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| Language | Main | • English<br>• French | Selects the current default language used by the BIOS. |
| LBA Mode Control<br><br>*This BIOS setting is present only if an IDE device is installed.* | Advanced > Drive Configuration > SATA/PATA | No changeable options | Specifies LBA mode control. |

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| Legacy FP Audio | Advanced > Peripheral Configuration | • Enabled<br>• Disabled | When enabled, the system assumes that a High Definition audio connector is not present in the system (Legacy audio is present)<br><br>When disabled, the system assumes that a High Definition audio connector is present in the system. |
| Legacy IDE Channels | Advanced > Drive Configuration | • PATA Pri only<br>• PATA Sec only<br>• PATA PRI and Sec<br>• SATA P0/P1 only<br>• SATA P0/P1, PATA Sec<br>• SATA P0/P1, PATA Pri<br><br>Options may vary depending on board model. | Configures PATA and SATA resources for OS requiring legacy IDE operation.<br><br>*PATA = Parallel ATA*<br>*SATA = Serial ATA* |
| Legacy USB Support | Advanced > USB Configuration | • Enabled<br>• Disabled | Enables support for legacy USB. |
| Link Stability Algorithm | Advanced > PCI Express Configuration | • Enabled<br>• Disabled | Used for verifying PCIe Link is up and running for x16 slot for x16 graphics cards and is part of the Intel Chipset BIOS Spec documentation for 915/925. |
| Load Custom Defaults | Exit | No changeable options | Loads the custom defaults for Setup options. |
| Load Optimal Defaults | Exit | No changeable options | Loads optimal defaults. |
| Lowest Fan Speed | Advanced > Fan Control Configuration<br><br>or<br><br>Advanced > Boot Configuration | • Slow<br>• Off | This option defines the fan speed at the lowest system temperature.<br><br>**Slow** allows the fans to continue to run at a reduced speed at low system temperatures.<br><br>**Off** turns off the fans at low system temperatures. |

**M**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| Mark Events As Read | Advanced > Event Log Configuration | [Enter] | Marks all DMI events in the event log as read. |
| Max CPUID Value Limit | Advanced > Boot Configuration | • Enabled<br>• Disabled | Enable for legacy operating systems to boot processors with extended CPUID functions. |
| Maximum Capacity | Advanced > Drive Configuration > SATA/PATA | No changeable options | Displays the capacity of the drive. |

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| Memory Configuration<br><br>*This BIOS setting is present only on Desktop Boards that support ECC memory when ECC DIMMs are installed.* | Main | • Non-ECC<br>• ECC | Allows you to turn error reporting on or off if the system and all the memory installed supports ECC (Error Correction Code). |
| Memory Mode | Main<br><br>or<br><br>Advanced > Memory Configuration | No changeable options | Displays single or dual channel operation. |
| Mode | Advanced > Peripheral Configuration | • Output only<br>• Bi-directional<br>• EPP<br>• ECP | Selects the mode for the parallel port. Not available if the parallel port is disabled.<br><br>Output Only operates in AT*-compatible mode.<br><br>Bi-directional operates in PS/2-compatible mode.<br><br>EPP is Extended Parallel Port mode, a high-speed bi-directional m |

**N**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| Numlock | Advanced > Boot Configuration | • Off<br>• On | Specifies the power-on state of the Numlock feature on the numeric keypad of the keyboard. |
| NX Technology | Security | • Enabled<br>• Disabled | Enables or disables "No Execute" memory protection. For more information refer to http://www.intel.com/business/bss/infrastructure/security/xdbit.htm |

**O**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
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| Onboard Audio<br><br>*This BIOS setting is present only on Intel® Desktop Boards that include onboard audio.* | Advanced > Peripheral Configuration | • Enabled<br>• Disabled | Enables or disables the onboard audio. |

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| Onboard LAN<br><br>*This BIOS setting is present only on Intel® Desktop Boards that include onboard LAN.* | Advanced > Peripheral Configuration | • Enabled<br>• Disabled | Enables or disables the onboard LAN. |

**P**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| Parallel Port | Advanced > Peripheral Configuration | • Disabled<br>• Enabled<br>• Auto | Configures the parallel port.<br><br>**Auto** assigns LPT1 the address 378h and the interrupt IRQ7.<br><br>An * (asterisk) displayed next to an address indicates a conflict with another device. |
| PCI Burn-in Mode | Advanced > Chipset Configuration > Burn-in Mode | • Default<br>• 36.36 MHz<br>• 40.00 MHz | Enables the selection of specific PCI clock frequencies.<br><br>**Warning:** This setting is intended for validation and test purposes only. Altering clock frequencies may reduce system stability and/or the useful life of hte system and processor. Operation at settings beyond component specification is not covered by Intel component warranties. If any problems occur during operation at non-default settings, reset the board to default values. |
| PCI Express Burn-in Mode<br><br>*This BIOS setting is present only on Intel® Desktop Boards that include PCI Express slots.* | Advanced > Chipset Configuration > Burn-in Mode | • Default<br>• 101.32 MHz<br>• 102.64 MHz<br>• 103.96 MHz<br>• 105.28 MHz<br>• 106.6 MHz<br>• 107.92 MHz<br>• 109.24 MHz | Enables the selection of specific PCI Express clock frequencies.<br><br>**Warning**: This setting is intended for validation and test purposes only. Altering clock frequencies may reduce system stability and/or the useful life of hte system and processor. Operation at settings beyond component specification is not covered by Intel component warranties. If any problems occur during operation at non-default settings, reset the board to default values. |
| PCI IDE Bus Master | Advanced > Drive Configuration | • Disabled<br>• Enabled | Allows a PCI device to initiate a transaction as a master. |
| PCI Latency Timer | Advanced > Chipset Configuration | • 32<br>• 64<br>• 96<br>• 128<br>• 160<br>• 192<br>• 224<br>• 248 | Sets PCI latency time. |

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| PCI Latency Timer | Advanced > Memory Configuration | • 32<br>• 64<br>• 96<br>• 128<br>• 160<br>• 192<br>• 224<br>• 248 | Sets PCI latency time. |
| PCI Slot x IRQ Priority | Advanced > PCI Configuration | • Auto<br>• 3<br>• 5<br>• 9<br>• 10<br>• 11 | Allows selection of IRQ priority. |
| PCIE x16 Link Retrain<br><br>*This BIOS setting is present only on Intel® Desktop Boards that include PCI Express slots.* | Advanced > PCI Express Configuration | • GFX Card<br>• Disabled<br>• Enabled | Used to adjust configuration for any devices such as PCIe graphics cards which may need accommodations to function properly when link training such as:<br><br>**GFX Card** - Reduce retry buffer depth to a lower than typically required value; bypass scrambler and DO |
| PEG Allow > x1<br><br>*This BIOS setting is present only on Intel® Desktop Boards that include PCI Express slots.* | Advanced > Chipset Configuration > Burn-in Mode | • Enabled<br>• Disabled | Enabling this option allows the system to link train PCI express devices of width x4, x8, and x16 in the GMCH x16 slot while leaving the Intel Integrated Graphics (PCIe graphics) enabled as well.<br><br>With this option disabled, all devices plugged into the GMCH x16 slot will link train as x1 PCIe devices if the Intel Integrated Graphics (PCIe graphics) controller is enabled. |
| PEG Negotiated Width<br><br>*This BIOS setting is present only on Intel® Desktop Boards that include PCI Express slots.* | Advanced > PCI Express Configuration | No changeable options | This option is read only and provides the link train width (x1, x4, x8, x16) of the PCIe device connected in the x16 PCIe slot.<br><br>This information is provided for determining performance issues with x4, x8, and x16 PCIe cards if they are inserted into the x16 PCI slot while the Intel Integrated video (PCIe graphics) is enabled and the "PEG Allow > 1" option is disabled. |
| PIO Mode<br><br>*This BIOS setting is present only if an IDE device is installed.* | Advanced > Drive Configuration > SATA/PATA | • Auto<br>• 0<br>• 1<br>• 2<br>• 3<br>• 4 | Specifies the PIO mode. |
| Plug & Play O/S | Advanced > Boot Configuration | • No<br>• Yes | Specifies if manual configuration is desired.<br><br>**No** lets the BIOS configure all devices in the system. This setting is appropriate when using a Plug and Play operating system.<br><br>**Yes** lets the operating system configure Plug & Play (PnP) devices not require |

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|---|---|---|---|
| Power Management | Power > APM | • Enabled<br>• Disabled | Enables or disables the APM feature. |
| Primary Video Adapter | Advanced > Video Configuration | • Ext PCI Express Graphics<br>• Ext PCI<br>• Auto<br><br>Options may vary depending on your configuration. | Allows selecting a specific video controller as the display device that will be active when the system boots. |
| Processor Fan Speed | Advanced > Hardware Monitoring | No changeable options | Displays processor fan speed. |
| Processor Speed | Main | No changeable options | Displays processor speed. |
| Processor Type | Main | No changeable options | Displays processor type. |
| Processor Temp | Advanced > Hardware Monitoring | No changeable options | Displays processor zone temperature. |
| Processor Zone Temperature | Advanced > Hardware Monitoring | No changeable options | Displays processor zone temperature. |
| PXE Boot to LAN | Boot | • Enabled<br>• Disabled | Disables or enables PXE boot to LAN. |

**R**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| Ratio Actual Value | Maintenance | No changeable options | Displays processor's Bus Ratio. |
| Rear Fan Speed | Advanced > Hardware Monitoring | No changeable options | Displays rear fan speed. |
| Removable Devices | Boot | No changeable options | Opens the Removable Devices sub-menu where you may specify the boot sequence from the available removable devices. |

**S**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| SATA AHCI Mode | Advanced > Drive Configuration | • Enabled<br>• Disabled | Enables the SATA controllers in an "Advanced Host Controller Interface" mode that improves system performance if the drives attached support AHCI.<br><br>This setting will be auto enabled if the onboard RAID controller is enabled. NOTE: This changes the device class of the SATA controllers and can cause driver reload in the OS. |

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|---|---|---|---|
| Save Custom Defaults | Exit | No changeable options | Saves the current values as custom defaults. Normally, the BIOS reads the Setup values from flash memory. If this memory is corrupted, the BIOS reads the custom defaults. If no custom defaults are set, the BIOS reads the factory defaults. |
| Scan User Flash Area | Boot | • Disabled<br>• Enabled | Enables the BIOS to scan the flash ROM for user binary files that are executed at boot time. |
| SDRAM CAS# Latency | Advanced > Chipset Configuration<br><br>or<br><br>Advanced > Memory Configuration | • 2.0<br>• 2.5<br>• 3.0 | Selects the number of clock cycles required to address a column in memory. Corresponds to CL. |
| SDRAM Frequency | Advanced > Chipset Configuration<br><br>or<br><br>Advanced > Memory Configuration | • Auto<br>• 266 MHz<br>• 333 MHz<br>• 400 MHz | Allows override of detected memory frequency value. |
| SDRAM RAS Act. To Pre. | Advanced > Chipset Configuration<br><br>or<br><br>Advanced > Memory Configuration | • 8<br>• 7<br>• 6<br>• 5 | Selects length of time from read to pre-change. Corresponds to tRAS, min. |
| SDRAM RAS# Precharge | Advanced > Chipset Configuration<br><br>or<br><br>Advanced > Memory Configuration | • 4<br>• 3<br>• 2 | Selects the length of time required before accessing a new row. |
| SDRAM RAS# to CAS# delay | Advanced > Chipset Configuration<br><br>or<br><br>Advanced > Memory Configuration | • 4<br>• 3<br>• 2 | Selects the number of clock cycles between addressing a row and addressing a column. Corresponds to tRCD. |

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|---|---|---|---|
| SDRAM Timing Control | Advanced > Chipset Configuration<br><br>or<br><br>Advanced > Memory Configuration | • Auto<br>• Manual – Aggressive<br>• Manual – User Defined | ***Auto*** *allows timings to be programmed according to the memory detected.*<br><br>***Manual – Aggressive*** *selects the most aggressive user defined timings.*<br><br>***Manual – User Defined*** *allows manual override of detected SDRAM settings.* |
| Secondary Video Adapter | Advanced > Video Configuration | • Ext PCI Express Graphics<br>• Ext PCI<br>• Auto<br><br>Options may vary depending on your configuration. | Allows selecting a specific video controller as the scondary display device. |
| Serial Port A | Advanced > Peripheral Configuration | • Disabled<br>• Enabled<br>• Auto | Configures serial port A.<br><br>**Auto** assigns the first free COM port, normally COM1, the address 3F8h, and the interrupt IRQ4.<br><br>An * (asterisk) displayed next to an address indicates a conflict with another device. |
| Set Supervisor Password | Security | Password can be up to seven alphanumeric characters. | Specifies the supervisor password. |
| Set User Password | Security | Password can be up to seven alphanumeric characters. | Specifies the user password. |
| Silent Boot | Boot | • Enabled<br>• Disabled | ***Disabled*** *displays normal POST messages.*<br><br>***Enabled*** *displays OEM logo instead of POST messages.* |
| S.M.A.R.T. | Advanced > Drive Configuration > SATA/PATA | • Auto<br>• Disable<br>• Enable | Self-monitoring analysis and reporting technology. |
| Supervisor Password | Security | No changeable options | Reports if there is a supervisor password set. |
| System Bus Speed | Main | No changeable options | Displays the system bus speed. |
| System Date | Main | Month, day, year | Specifies the current date. |
| System Memory Speed | Main | No changeable options | Displays the system memory speed. |
| System Time | Main | Hour, minute, and second | Specifies the current time. |
| System Zone 1 Temperature | Advanced > Hardware Monitoring | No changeable options | Displays system zone 1 temperature. |
| System Zone 2 Temperature | Advanced > Hardware Monitoring | No changeable options | Displays system zone 2 temperature. |

**T**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| Total Memory | Main<br><br>or<br><br>Advanced > Memory Configuration | No changeable options | Displays the total amount of RAM. |
| Trusted Platform Module<br><br>*This BIOS setting is present only on Intel® Desktop Boards that include support for Trusted Platform Module (TPM).* | Advanced > Peripheral Configuration | • Enabled<br>• Disabled | Disables or enables Trusted Platform Module (TPM) |
| Type | Advanced > Drive Configuration > SATA/PATA | • Auto<br>• User | Specifies the IDE configuration mode for IDE devices.<br><br>**Auto** fills-in capabilities from ATA/ATAPI device.<br><br>**User** allows capabilities to be changed. |

**U**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| USB 2.0 Legacy Support | Advanced > USB Configuration | • Full-Speed<br>• Hi-Speed | Configures the USB 2.0 legacy support to Full-Speed (12 Mbps) or Hi-Speed (480 Mbps). |
| USB Boot | Boot | • Enabled<br>• Disabled | Disables or enables booting from USB boot devices. |
| USB Function | Advanced > USB Configuration | • Enabled<br>• Disabled | Disables or enables USB functionality. |
| User access Level<br><br>*This BIOS setting is present only if both a user password and a supervisor password have been set.* | Security | • Limited<br>• No Access<br>• View Only<br>• Full | Sets BIOS Setup Utility access rights for user level. |
| User Password | Security | No changeable options | Reports if there is a user password set. |

**V**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| Vccp | Advanced > Hardware Monitoring | No changeable options | Displays voltage level of the VCCP in supply |
| Video Repost<br><br>*This BIOS setting is present only when ACPI Suspend State is set to S3.* | Power > ACPI | • Enabled<br>• Disabled | Allows the video BIOS to be initialized coming out of the S3 state. Some video controllers require this option to be enabled. |

**W**

| BIOS Setting | Appears on BIOS Screen… | Options | Description / Purpose |
|---|---|---|---|
| Wake on LAN* from S5<br><br>*This BIOS setting is present only on Intel® Desktop Boards that include onboard LAN.* | Power > ACPI | • Stay Off<br>• Power-On | In ACPI soft-off mode only, determines how the system responds to a LAN wake up event when the system is in the ACPI soft-off mode. |
| Wake on Modem Ring | Power | • Stay Off<br>• Power-On | Specifies how the computer responds to an incoming call on an installed modem when the power is off. |
| Wake on PCI PME | Power | • Stay Off<br>• Power-On | Determines how the system responds to a PCI PME wake up event. |
| Wake on PS/2 Mouse from S3 | Power | • Stay Off<br>• Power-On | Determines how the system responds to a PS/2 mouse wake up event. |
| Watchdog Timer | Advanced > Chipset Configuration | • Enabled<br>• Disabled | Enables or disables Watchdog timer. |