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You can read the recommendations in the user guide, the technical guide or the installation guide for GIGABYTE GA-H61M-DS2. You'll find the answers to all your questions on the GIGABYTE GA-H61M-DS2 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual GIGABYTE GA-H61M-DS2
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GA-H61M-DS2

User's Manual

Rev. 1002
12ME-H61MDS2-1002R

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Manual abstract:

Com Identifying Your Motherboard Revision The revision number on your motherboard looks like this: "REV: X. 0" means the revision of the motherboard is 1. 0. Check your motherboard revision before updating motherboard BIOS, drivers, or when looking for technical information. 38 -4- GA-H61M-DS2 Motherboard Layout KB_MS ATX_12V LGA1155 VGA CPU_FAN R_USB ATX USB_LAN Atheros GbE LAN BAT PCIEX16 PCIEX1_1 iTE IT8728 Intel H61 Â® AUDIO F_AUDIO GA-H61M-DS2 SATA2_3 SATA2_1 M_BIOS B_BIOS CODEC SYS_FAN LPT DDR3_1 DDR3_2 SATA2_0 SATA2_2 PCIEX1_2 COMA F_USB2 F_USB1 CLR_CMOS F_PANEL Box Contents GA-H61M-DS2 motherboard Motherboard driver disk User's Manual Two SATA cables I/O Shield The box contents above are for reference only and the actual items shall depend on the product package you obtain. Prior to installation, carefully read the user's manual and follow these procedures: âࢢ Prior to installation, do not remove or break motherboard S/N (Serial Number) sticker or warranty sticker provided by your dealer. These stickers are required for warranty validation. Âࢢ Always remove the AC power by unplugging the power cord from the power outlet before installing or removing the motherboard or other hardware components. Âࢢ When connecting hardware components to the internal connectors on the motherboard, make sure they are connected tightly and securely. Âࢢ When handling the motherboard, avoid touching any metal leads or connectors.

Âࢢ It is best to wear an electrostatic discharge (ESD) wrist strap when handling electronic components such as a motherboard, CPU or memory. If you do not have an ESD wrist strap, keep your hands dry and first touch a metal object to eliminate static electricity. Âࢢ Prior to installing the motherboard, please have it on top of an antistatic pad or within an electrostatic shielding container. Âࢢ Before unplugging the power supply cable from the motherboard, make sure the power supply has been turned off. Âࢢ Before turning on the power, make sure the power supply voltage has been set according to the local voltage standard.

Âࢢ Before using the product, please verify that all cables and power connectors of your hardware components are connected. Âࢢ To prevent damage to the motherboard, do not allow screws to come in contact with the motherboard circuit or its components. Âࢢ Make sure there are no leftover screws or metal components placed on the motherboard or within the computer casing. Âࢢ Do not place the computer system on an uneven surface. Âࢢ Do not place the computer system in a high-temperature environment.

Âࢢ Turning on the computer power during the installation process can lead to damage to system components as well as physical harm to the user. Âࢢ If you are uncertain about any installation steps or have a problem related to the use of the product, please consult a certified computer technician. -7- 1-2 Product Specifications CPU ÂÂ Support for Intel® Coreâ¢ i7 processors/Intel® Coreâ¢ i5 processors/ Intel® Coreâ¢ i3 processors/Intel® Pentium® processors/Intel® Celeron® processors in the LGA1155 package (Go to GIGABYTE's website for the latest CPU support list.) ÂÂ L3 cache varies with CPU ÂÂ Intel® H61 Express Chipset ÂÂ 2 x 1. 5V DDR3 DIMM sockets supporting up to 16 GB of system memory * ࢠto Windows 32-bit operating system limitation, when more than 4 GB of physical Due memory is installed, the actual memory size displayed will be less than 4 GB. Chipset Memory Onboard Graphics Audio ÂÂ Dual channel memory architecture ÂÂ Support for DDR3 1333/1066/800 MHz memory modules ÂÂ Support for non-ECC memory modules (ࢠGo to GIGABYTE's website for the latest supported memory speeds and memory modules. 1-channel audio, you have to use an HD front panel audio module and To enable the multi-channel audio feature through the audio driver. 1 ports (4 ports on the back panel, 4 ports available through Up the internal USB headers) Internal ÂÂ 1 x 24-pin ATX main power connector ÂÂ 1 x 4-pin ATX 12V power connector Connectors ÂÂ 4 x SATA 3Gb/s connectors ÂÂ 1 x CPU fan header ÂÂ 1 x system fan header ÂÂ 1 x front panel header ÂÂ 1 x front panel audio header ÂÂ 2 x USB 2. 1 ports 1 x RJ-45 port 3 x audio jacks (Line In/Line Out/Microphone) System voltage detection CPU/System temperature detection CPU/System fan speed detection CPU fan speed control I/O Controller Hardware Monitor ÂÂ iTE IT8728 chip * ࢠWhether the CPU fan speed control function is supported will depend on the CPU cooler you install. 0b Support for @BIOS Support for Q-Flash Support for Xpress BIOS Rescue Support for Download Center Support for Xpress Install Support for Xpress Recovery2 Support for EasyTune Support for Smart 6â¢ Support for Auto Green Support for ON/OFF Charge Support for Cloud OC Support for 3TB+ Unlock Support for Q-Share * Available functions in EasyTune may differ by motherboard model.

4cm * GIGABYTE reserves the right to make any changes to the product specifications and product-related information without prior notice. -9- 1-3 Installing the CPU Read the following guidelines before you begin to install the CPU: âࢢ Make sure that the motherboard supports the CPU. (Go to GIGABYTE's website for the latest CPU support list.) âࢢ Always turn off the computer and unplug the power cord from the power outlet before installing the CPU to prevent hardware damage. Âࢢ Locate the pin one of the CPU. The CPU cannot be inserted if oriented incorrectly. (Or you may locate the notches on both sides of the CPU and alignment keys on the CPU socket.) âࢢ Apply an even and thin layer of thermal grease on the surface of the CPU. Âࢢ Do not turn on the computer if the CPU cooler is not installed, otherwise overheating and damage of the CPU may occur. Âࢢ Set the CPU host frequency in accordance with the CPU specifications.

It is not recommended that the system bus frequency be set beyond hardware specifications since it does not meet the standard requirements for the peripherals.

If you wish to set the frequency beyond the standard specifications, please do so according to your hardware specifications including the CPU, graphics card, memory, hard drive, etc. installing the CPU A. Locate the alignment keys on the motherboard CPU socket and the notches on the CPU. LGA1155 CPU Socket Alignment Key Alignment Key Pin One Corner of the CPU Socket LGA1155 CPU Notch Notch Triangle Pin One Marking on the CPU - 10 - 1-4 Installing the Memory Read the following guidelines before you begin to install the memory: â□¢â□¢ Make sure that the motherboard supports the memory. It is recommended that memory of the same capacity, brand, speed, and chips be used. (Go to GIGABYTE's website for the latest supported memory speeds and memory modules.) â□¢â□¢ Always turn off the computer and unplug the power cord from the power outlet before installing the memory to prevent hardware damage. â□¢â□¢ Memory modules have a foolproof design. A memory module can be installed in only one direction.

If you are unable to insert the memory, switch the direction. Dual Channel Memory Configuration This motherboard provides two DDR3 memory sockets and supports Dual Channel Technology. After the memory is installed, the BIOS will automatically detect the specifications and capacity of the memory. Enabling Dual Channel memory mode will double the original memory bandwidth. The two DDR3 memory sockets are divided into two channels and each channel has one memory socket as following: Channel A: DDR3_1 Channel B: DDR3_2 Due to CPU limitations, read the following guidelines before installing the memory in Dual Channel mode. 111 Dual Channel mode cannot be enabled if only one DDR3 memory module is installed. 222 When enabling Dual Channel mode with two memory modules, it is recommended that memory of the same capacity, brand, speed, and chips be used for optimum performance. 1-5 Installing an Expansion Card Read the following guidelines before you begin to install an expansion card: â□¢â□¢ Make sure the motherboard supports the expansion card. Carefully read the manual that came with your expansion card. Â□¢â□¢ Always turn off the computer and unplug the power cord from the power outlet before installing an expansion card to prevent hardware damage.

- 11 - DDR3_1 DDR3_2 1-6 Back Panel Connectors PS/2 Keyboard and PS/2 Mouse Port D-Sub Port Use the upper port (green) to connect a PS/2 mouse and the lower port (purple) to connect a PS/2 keyboard. the D-Sub port supports a 15-pin D-Sub connector. Connect a monitor that supports D-Sub connection to this port. Use this port for USB devices such as a USB keyboard/mouse, USB printer, USB flash drive and etc. the Gigabit Ethernet LAN port provides Internet connection at up to 1 Gbps data rate. The following describes the states of the LAN port LEDs. connection/ Speed LED Activity LED Connection/Speed LED: State Orange Green Off Description 1 Gbps data rate 100 Mbps data rate 10 Mbps data rate Activity LED: State Description Blinking Data transmission or receiving is occurring Off No data transmission or receiving is occurring LAN Port Line In Jack (Blue) The default line in jack. Use this audio jack for line in devices such as an optical drive, walkman, etc. Line Out Jack (Green) Mic In Jack (Pink) The default line out jack. Use this audio jack for a headphone or 2-channel speaker.

This jack can be used to connect front speakers in a 4/5. Microphones must be connected to this jack. to configure 7. 1-channel audio, you have to use an HD front panel audio module and enable the multi-channel audio feature through the audio driver. Â□¢â□¢ When removing the cable connected to a back panel connector, first remove the cable from your device and then remove it from the motherboard.

Â□¢â□¢ When removing the cable, pull it straight out from the connector. Do not rock it side to side to prevent an electrical short inside the cable connector. - 12 - 1-7 Internal Connectors 1 3 2 12 7 5 4 10 9 8 6 11 1) 2) 3) 4) 5) 6) ATX_12V ATX CPU_FAN SYS_FAN SATA2_0/1/2/3 F_PANEL 7) 8) 9) 10) 11) 12) F_AUDIO F_USB1/2 COMA LPT CLR_CMOS BAT Read the following guidelines before connecting external devices: â□¢â□¢ First make sure your devices are compliant with the connectors you wish to connect. Â□¢â□¢ Before installing the devices, be sure to turn off the devices and your computer. Unplug the power cord from the power outlet to prevent damage to the devices.

Â□¢â□¢ After installing the device and before turning on the computer, make sure the device cable has been securely attached to the connector on the motherboard. - 13 - 1/2) ATX_12V/ATX (2x2 12V Power Connector and 2x12 Main Power Connector) With the use of the power connector, the power supply can supply enough stable power to all the components on the motherboard. Before connecting the power connector, first make sure the power supply is turned off and all devices are properly installed. the power connector possesses a foolproof design. Connect the power supply cable to the power connector in the correct orientation. The 12V power connector mainly supplies power to t may differ by chassis. A front panel module mainly consists of power switch, reset switch, power LED, hard drive activity LED, speaker and etc. When connecting your chassis front panel module to this header, make sure the wire assignments and the pin assignments are matched correctly. - 16 - DIP 1 1 1 2 3 DIP 7) F_AUDIO (Front Panel Audio Header) The front panel audio header supports Intel High Definition audio (HD) and AC'97 audio. You may connect your chassis front panel audio module to this header.

Make sure the wire assignments of the module connector match the pin assignments of the motherboard header. Incorrect connection between the module connector and the motherboard header will make the device unable to work or even damage it. Â□¢â□¢ Audio signals will be present on both of the front and back panel audio connections simultaneously. Â□¢â□¢ Some chassis provide a front panel audio module that has separated connectors on each wire instead of a single plug. For information about connecting the front panel audio module that has different wire assignments, please contact the chassis manufacturer. Each USB header can provide two USB ports via an optional USB bracket. For purchasing the optional USB bracket, please contact the local dealer. pin No. 1 2 3 4 5 6 7 8 9 10 Definition Power (5V) Power (5V) USB DXUSB DYUSB DX+ USB DY+ GND GND No Pin NC 9 10 1 2 â□¢â□¢ Do not plug the IEEE 1394 bracket (2x5-pin) cable into the USB header. Â□¢â□¢ Prior to installing the USB bracket, be sure to turn off your computer and unplug the power cord from the power outlet to prevent damage to the USB bracket.

- 17 - 9) COMA (Serial Port Header) The COM header can provide one serial port via an optional COM port cable. For purchasing the optional COM port cable, please contact the local dealer. For purchasing the optional LPT port cable, please contact the local dealer. 14 15 16 17 18 19 20 21 22 23 24 25 26 Definition GND PD6 GND PD7 GND ACKGND BUSY GND PE No Pin SLCT GND - 18 - 11) CLR_CMOS (Clearing CMOS Jumper) Use this jumper to clear the CMOS values (e. g.

Date information and BIOS configurations) and reset the CMOS values to factory defaults. To clear the CMOS values, place a jumper cap on the two pins to temporarily short the two pins or use a metal object like a screwdriver to touch the two pins for a few seconds. Open: Normal Short: Clear CMOS Values â□¢â□¢ Always turn off your computer and unplug the power cord from the power outlet before clearing the CMOS values. Â□¢â□¢ After clearing the CMOS values and before turning on your computer, be sure to remove the jumper cap from the jumper. Failure to do so may cause damage to the motherboard.

Â□¢â□¢ After system restart, go to BIOS Setup to load factory defaults (select Load Optimized Defaults) or manually configure the BIOS settings (refer to Chapter 2, "BIOS Setup," for BIOS configurations). 12) BAT (Battery) The battery provides power to keep the values (such as BIOS configurations, date, and time information) in the CMOS when the computer is turned off. Replace the battery when the battery voltage drops to a low level, or the CMOS values may not be accurate or may be lost. You may clear the CMOS values by removing the battery: 111 Turn off your computer and unplug the power cord. 222 Gently remove the battery from the battery holder and wait for one minute. (Or use a metal object like a screwdriver to touch the positive and negative terminals of the battery holder, making them short for 5 seconds.) 333 Replace the battery. 444 Plug in the power cord and restart your computer. Â□¢â□¢ Always turn off your computer and unplug the power cord before replacing the battery. Â□¢â□¢ Replace the battery with an equivalent one.

Danger of explosion if the battery is replaced with an incorrect model. Â□¢â□¢ Contact the place of purchase or local dealer if you are not able to replace the battery by yourself or uncertain about the battery model. Â□¢â□¢ When installing the battery, note the orientation of the positive side (+) and the negative side (-) of the battery (the positive side should face up). Â□¢â□¢ Used batteries must be handled in accordance with local environmental regulations. - 19 - Chapter 2 BIOS Setup To access the BIOS Setup program, press the <Delete> key during the POST when the power is turned on. To see more advanced BIOS Setup menu options, you can press <Ctrl> + <F1> in the main menu of the BIOS Setup program. To upgrade the BIOS, use either the GIGABYTE Q-Flash or @BIOS utility. Â□¢â□¢ Q-Flash allows the user to quickly and easily upgrade or back up BIOS without entering the operating system. Â□¢â□¢ @BIOS is a Windows-based utility that searches and downloads the latest version of BIOS from the Internet and updates the BIOS. Â□¢â□¢ Because BIOS flashing is potentially risky, if you do not encounter problems using the current version of BIOS, it is recommended that you not flash the BIOS. To flash the BIOS, do it with caution. inadequate BIOS flashing may result in system malfunction. Â□¢â□¢ It is recommended that you not alter the default settings (unless you need to) to prevent system instability or other unexpected results. Inadequately altering the settings may result in system's failure to boot. If this occurs, try to clear the CMOS values and reset the board to default values.

(Refer to the "Load Optimized Defaults" section in this chapter or introductions of the battery/ clearing CMOS jumper in Chapter 1 for how to clear the CMOS values.) 2-1 Startup Screen The following screens may appear when the computer boots. <DEL>: BIOS Setup <F9>: XpressRecovery2 <F12>: Boot Menu <End>: Qflash 07/14/2011-H61-7A89XG05C-00 Function Keys - 20 - 2-2 The Main Menu Once you enter the BIOS Setup program, the Main Menu (as shown below) appears on the screen. Use arrow keys to move among the items and press <Enter> to accept or enter a sub-menu.) Standard CMOS Features Advanced BIOS Features Integrated Peripherals Power Management Setup PC Health Status Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password Set User Password Save & Exit Setup Exit Without Saving F11: Save CMOS to BIOS F12: Load CMOS from BIOS ESC: Quit F8: Q-Flash ï□ï□©ï□§ï□: Select Item F10: Save & Exit Setup Change CPU's Clock & Voltage â□¢â□¢ If you do not find the settings you want in the Main Menu or a submenu, press <Ctrl>+<F1> to access more advanced options.

Â□¢â□¢ When the system is not stable as usual, select the Load Optimized Defaults item to set your system to its defaults. Â□¢â□¢ The BIOS Setup menus described in this chapter are for reference only and may differ by BIOS version. Â□Â□ The Functions of the <F11> and <F12> keys (For the Main Menu Only) ï□½ F11: Save CMOS to BIOS This function allows you to save the current BIOS settings to a profile. You can create up to 8 profiles (Profile 1-8) and name each profile. First enter the profile name (to erase the default profile name, use the SPACE key) and then press <Enter> to complete. Ï□½ F12: Load CMOS from BIOS If your system becomes unstable and you have loaded the BIOS default settings, you can use this function to load the BIOS settings from a profile created before, without the hassles of reconfiguring the BIOS settings. First select the profile you wish to load, then press <Enter> to complete. 584 V ESC: Exit F1: General Help F7: Optimized Defaults +/-/PU/PD: Value F10: Save F6: Fail-Safe Defaults Whether the system will work stably with the overclock/overvoltage settings you made is dependent on your overall system configurations. Incorrectly doing overclock/overvoltage may result in damage to CPU, chipset, or memory and reduce the useful life of these components. This page is for advanced users only and we recommend you not to alter the default settings to prevent system instability or other unexpected results.

(Inadequately altering the settings may result in system's failure to boot. If this occurs, clear the CMOS values and reset the board to default values. 584 V ESC: Exit F1: General Help F7: Optimized Defaults +/-/PU/PD: Value F10: Save F6: Fail-Safe Defaults This section provides information on the BIOS version, CPU base clock, CPU frequency, memory frequency, total memory size , CPU temperature, Vcore, and memory voltage.

[Auto] -Turbo Ratio(1-Core)(Note) 34 Auto -Turbo Ratio(2-Core)(Note) 33 Auto (Note) -Turbo Ratio(3-Core) 33 Auto (Note) -Turbo Ratio(4-Core) 32 Auto -Turbo Power Limit(Watts) 95 [Auto] -Core Current Limit(Amps) 97 [Auto] CPU Cores Enabled (Note) [All] CPU Multi-Threading (Note) [Enabled] CPU Enhanced Halt (C1E) (Note) [Auto] C3/C6 State Support (Note) [Auto] CPU Thermal Monitor (Note) [Auto] (Note) CPU EIST Function [Auto] Bi-Directional PROCHOT (Note) [Auto] Item Help Menu Level ïￎ½ïￎ½ Enter: Select ïￎ¯ïￎ©ïￎ§ïￎ¦: Move F5: Previous Values +/-/PU/PD: Value F10: Save F6: Fail-Safe Defaults ESC: Exit F1: General Help F7: Optimized Defaults CPU Clock Ratio CPU Frequency Allows you to alter the clock ratio for the installed CPU. The adjustable range is dependent on the CPU being installed. displays the current operating CPU frequency. (Note) ￭ This item is present only when you install a CPU that supports this feature. @@ - 23 - Intel(R) Turbo Boost Tech. (Note) Turbo Ratio (1-Core)/(2-Core)/(3-Core)/(4-Core) (Note) Turbo Power Limit (Watts) Allows you to determine whether to enable the Intel CPU Turbo Boost technology. Auto lets the BIOS automatically configure this setting.
(Default: Auto) Allows you to set the CPU Turbo ratios for different number of active cores. Auto sets the CPU Turbo ratios according to the CPU specifications. (Default: Auto) Allows you to set a power limit for CPU Turbo mode. @@Auto sets the power limit according to the CPU specifications. (Default: Auto) Allows you to set a current limit for CPU Turbo mode.
@@Auto sets the current limit according to the CPU specifications. @@@@@@@@@@Auto lets the BIOS automatically configure this setting. @@@@The C3/C6 state is a more enhanced power-saving state than C1. Auto lets the BIOS automatically configure this setting. @@@@Auto lets the BIOS automatically configure this setting.
@@@@Auto lets the BIOS automatically configure this setting. @@@@@@@@@@Auto sets memory multiplier according to memory SPD data. @@Allows you to set the onboard graphics clock. The adjustable range is from 400 MHz to 3000 MHz. @@Allows the system to operate at three different performance levels. Standard Lets the system operate at its basic performance level. Turbo Lets the system operate at its good performance level. @@(Note) ￭ This item is present only when you install a CPU that supports this feature. @@The value displayed here is dependent on the CPU being used. enables or disables memory channel interleaving.

Enabled allows the system to simultaneously access different channels of the memory to increase memory performance and stability. Auto lets the BIOS automatically configure this setting. (Default: Auto) Enables or disables memory rank interleaving. Enabled allows the system to simultaneously access different ranks of the memory to increase memory performance and stability. Auto lets the BIOS automatically configure this setting. CMOS Setup Utility-Copyright (C) 1984-2011 Award Software Miscellaneous Settings Isochronous Support Virtualization Technology (Note) [Enabled] [Enabled] Item Help Menu Level ïￎ½ïￎ½ ESC: Exit F1: General Help F7: Optimized Defaults ïￎ½ Miscellaneous Settings Enter: Select ïￎ¯ïￎ©ïￎ§ïￎ¦: Move F5: Previous Values +/-/PU/PD: Value F10: Save F6: Fail-Safe Defaults Isochronous Support Virtualization Technology (Note) Determines whether to enable specific streams within the CPU and Chipset. (Default: Enabled) Enables or disables Intel Virtualization Technology. Virtualization enhanced by Intel Virtualization Technology will allow a platform to run multiple operating systems and applications in independent partitions. With virtualization, one computer system can function as multiple virtual systems. (Default: Enabled) (Note) ￭ This item is present only when you install a CPU that supports this feature. @@IDE Channel 0, 1 Master IDE Channel 0, 1 Master Configure your SATA devices by using one of the three methods below: âￎ¢âￎ¢ None ￭ no SATA devices are used, set this item to None so the system will skip the If detection of the device during the POST for faster system startup. Âￎ¢âￎ¢ Auto Lets the BIOS automatically detect SATA devices during the POST. (Default) - 28 - IDE Channel 2, 3 Master âￎ¢âￎ¢ Manual ￭ Allows you to manually enter the specifications of the hard drive when the hard drive access mode is set to CHS. Halt On Extended IDE Drive Configure your SATA devices by using one of the two methods below: âￎ¢âￎ¢ Auto Lets the BIOS automatically detect SATA devices during the POST. (Default) âￎ¢âￎ¢ None ￭ no SATA devices are used, set this item to None so the system will skip the If detection of the device during the POST for faster system startup.
The following fields display your hard drive specifications. If you wish to enter the parameters manually, refer to the information on the hard drive. Allows you to determine whether the system will stop for an error during the POST. options are: "All Errors ," "No Errors ," "All , But Keyboard". (Default) These fields are read-only and are determined by the BIOS POST.
To 3 (Note) No-Execute Memory Protect (Note) Delay For HDD (Secs) Full Screen LOGO Show Init Display First Onboard VGA On-Chip Frame Buffer Size [Press Enter] [Disabled] [Auto] [Hard Disk] [CDROM] [USB-FDD] [Setup] [Disabled] [Disabled] [Enabled] [0] [Enabled] [PCIE x16] [Enable If No Ext PEG] [64MB+2MB for GTT] Item Help Menu Level ïￎ½ Enter: Select ïￎ¯ïￎ©ïￎ§ïￎ¦: Move F5: Previous Values +/-/PU/PD: Value F10: Save F6: Fail-Safe Defaults ESC: Exit F1: General Help F7: Optimized Defaults Hard Disk Boot Priority Specifies the sequence of loading the operating system from the installed hard drives. Use the up or down arrow key to select a hard drive, then press the plus key <+> (or <PageUp>) or the minus key <-> (or <PageDown>) to move it up or down on the list. Press <Esc> to exit this menu when finished. (Note) This item is present only when you install a CPU that supports this feature. @@- 29 - Quick Boot EFI CD/DVD Boot Option Enables or disables the quick boot function to speed up the system boot-up process to shorten the waiting time for entering the operating system and to deliver greater efficiency for daily use. The settings here synchronize with the settings of the SMART QuickBoot of Smart 6âￎ¢. (Default: Disabled) Set this item to EFI if you want to install the operating system to a hard drive larger than 2. 2 TB. Make sure the operating system to be installed supports booting from a GPT partition, such as Windows 7 64bit and Windows Server 2003 64-bit.

Auto lets the BIOS automatically configure this setting depending on the hard drive you install.

(Default: Auto) Specifies the boot order from the available devices. Use the up or down arrow key to select a device and press <Enter> to accept. options are: Hard Disk , CDROM , USB-FDD , USB-ZIP , USB-CDROM , USBHDD , Legacy LAN , Disabled. Specifies whether a password is required every time the system boots, or only when you enter BIOS Setup. After configuring this item, set the password(s) under the Set Supervisor/User Password item in the BIOS Main Menu. Setup A password is only required for entering the BIOS Setup program. (Default) System □ password is required for booting the system and for entering the BIOS Setup program. This feature allows your system to report read/write errors of the hard drive and to issue warnings when a third party hardware monitor utility is installed. (Default: Disabled) Allows you to determine whether to limit CPUID maximum value. Set this item to Disabled for Windows XP operating system; set this item to Enabled for legacy operating system such as Windows NT4.

This function may enhance protection for the computer, reducing exposure to viruses and malicious buffer overflow attacks when working with its supporting software and system. (Default: Enabled) Allows you to set a delay time for the BIOS to initialize the hard drive as the system boots up. The adjustable range is from 0 to 15 seconds. (Default: 0) Allows you to determine whether to display the GIGABYTE Logo at system startup. disabled displays normal POST message.

(Default: Enabled) Specifies the first initiation of the monitor display from the installed PCI Express graphics card or the onboard graphics. Onboard Sets the onboard graphics as the first display. PCIE x16 Sets the PCI Express graphics card on the PCIEX16 slot as the first display. To 3 (Note) No-Execute Memory Protect (Note) Delay For HDD (Secs) Full Screen LOGO Show Init Display First (Note) This item is present only when you install a CPU that supports this feature. @@ - 30 - Onboard VGA On-Chip Frame Buffer Size Enables or disables the onboard graphics function.

Enable If No Ext PEG Activates the onboard graphics only when no PCI Express graphics card is installed. (Default) Always Enable Always activates the onboard graphics, whether or not a PCI Express graphics card is installed. If you wish to set up a dual-display configuration, set this item to Always Enable. Frame buffer size is the total amount of system memory allocated solely for the onboard graphics controller. MS-DOS, for example, will use only this memory for display. Options are: 32MB+2MB for GTT ~ 480MB+2MB for GTT. (Default: 64MB+2MB for GTT) CMOS Setup Utility-Copyright (C) 1984-2011 Award Software Integrated Peripherals [IDE] [Enabled] [Enabled] [Enabled] [Enabled] [Auto] [Enabled] [Press Enter] [Disabled] [3F8/IRQ4] [378/IRQ7] [SPP] Item Help Menu Level ï□½ 2-6 Integrated Peripherals } SATA AHCI Mode SATA Port0-1 Native Mode USB Controllers USB Legacy Function USB Storage Function Azalia Codec Onboard H/W LAN SMART LAN Onboard LAN Boot ROM Onboard Serial Port 1 Onboard Parallel Port Parallel Port Mode Enter: Select ï□ï□©ï□§ï□: Move F5: Previous Values +/-/PU/PD: Value F10: Save F6: Fail-Safe Defaults ESC: Exit F1: General Help F7: Optimized Defaults SATA AHCI Mode (Intel H61 Chipset) Specifies the operating mode of the integrated SATA controllers. disabled □ Allows the SATA controllers to operate in Legacy IDE mode. □ Legacy mode the SATA controllers use dedicated IRQs that cannot be shared with In other device. Set this option to Disabled if you wish to install operating systems that do not support Native mode.

enabled □ Allows the SATA controllers to operate in Native IDE mode. Enable Native IDE mode if you wish to install operating systems that support Native mode. (Default) SATA Port0-1 Native Mode (Intel H61 Chipset) Allows you to decide whether to configure the SATA controller integrated in the Intel H61 Chipset to AHCI mode. Advanced Host Controller Interface (AHCI) is an interface specification that allows the storage driver to enable advanced Serial ATA features such as Native Command Queuing and hot plug. uSB Controllers USB Legacy Function Enables or disables the integrated USB controller. (Default: Enabled) Disabled will turn off all of the USB functionalities below. allows USB keyboard to be used in MS-DOS. (Default: Enabled) USB Storage Function Determines whether to detect USB storage devices, including USB flash drives and USB hard drives during the POST. (Default: Enabled) - 31 - Azalia Codec Onboard H/W LAN Enables or disables the onboard audio function. (Default: Auto) If you wish to install a 3rd party add-in audio card instead of using the onboard audio, set this item to Disabled.

enables or disables the onboard LAN function. (Default: Enabled) If you wish to install a 3rd party add-in network card instead of using the onboard LAN, set this item to Disabled. cMOS Setup Utility-Copyright (C) 1984-2011 Award Software SMART LAN SMART LAN (LAN Cable Diagnostic Function) Start detecting at Port. Part1-2 Status = Open Part3-6 Status = Open Part4-5 Status = Open Part7-8 Status = Open Item Help Menu Level ï□½ïï□½ / / / / Length Length Length Length = = = = 0m 0m 0m 0m Enter: Select ï□ï□©ï□§ï□: Move F5: Previous Values +/-/PU/PD: Value F10: Save F6: Fail-Safe Defaults ESC: Exit F1: General Help F7: Optimized Defaults This motherboard incorporates cable diagnostic feature designed to detect the status of the attached LAN cable. This feature will detect cabling issue and report the approximate distance to the fault or short.

Onboard LAN Boot ROM Onboard Serial Port 1 Onboard Parallel Port Parallel Port Mode Allows you to decide whether to activate the boot ROM integrated with the onboard LAN chip. (Default: Disabled) Enables or disables the first serial port and specifies its base I/O address and corresponding interrupt. options are: Auto , 3F8/IRQ4 (default) , 2F8/IRQ3 , 3E8/IRQ4 , 2E8/IRQ3 , Disabled. Enables or disables the onboard parallel port (LPT) and specifies its base I/O address and corresponding interrupt. - 32 - Soft-Off by PWR-BTTN PME Event Wake Up Configures the way to turn off the computer in MS-DOS mode using the power button.

Instant-Off Press the power button and then the system will be turned off instantly. (Default) Delay 4 Sec. □ Press and hold the power button for 4 seconds to turn off the system. If the power button is pressed for less than 4 seconds, the system will enter suspend mode. Power On by Ring Resume by Alarm Allows the system to be awakened from an ACPI sleep state by a wake-up signal from a PCI or PCIe device.

Note: To use this function, you need an ATX power supply providing at least 1A on the +5VSB lead. (Default: Enabled) Allows the system to be awakened from an ACPI sleep state by a wake-up signal from a modem that supports wake-up function. (Default: Enabled) Determines whether to power on the system at a desired time. (Default: Disabled) If enabled, set the date and time as following: Date (of Month) Alarm: Turn on the system at a specific time on each day or on a specific day in a month. Time (hh: mm: ss) Alarm: Set the time at which the system will be powered on automatically.

Note: When using this function, avoid inadequate shutdown from the operating system or removal of the AC power, or the settings may not be effective. enables or disables High Precision Event Timer (HPET) for Windows 7/Vista operating system. (Default: Enabled) HPET Support (Note) HPET Mode (Note) Power On By Mouse Allows you to select the HPET mode for your Windows 7/Vista operating system. Select 32-bit mode when you install 32-bit Windows 7/Vista; select 64-bit mode when you install 64-bit Windows 7/Vista. This item is configurable only when the HPET Support is set to Enabled. (Default: 32-bit mode) Allows the system to be turned on by a PS/2 mouse wake-up event. Note: To use this function, you need an ATX power supply providing at least 1A on the +5VSB lead. disabled Disables this function. (Default) Double Click Double click on left button on the PS/2 mouse to turn on the system. Allows the system to be turned on by a PS/2 keyboard wake-up event.

Note: you need an ATX power supply providing at least 1A on the +5VSB lead. disabled Disables this function. (Default) Password Set a password with 1~5 characters to turn on the system. Keyboard 98 Press POWER button on the Windows 98 keyboard to turn on the system. Power On By Keyboard KB Power ON Password Set the password when Power On by Keyboard is set to Password.

Press <Enter> on this item and set a password with up to 5 characters and then press <Enter> to accept. To turn on the system, enter the password and press <Enter>. Note: To cancel the password, press <Enter> on this item. When prompted for the password, press <Enter> again without entering the password to clear the password settings. (Note) Supported on Windows 7/Vista operating system only.

- 33 - AC Back Function ErP Support Determines the state of the system after the return of power from an AC power loss. Soft-Off The system stays off upon the return of the AC power. (Default) Full-On The system is turned on upon the return of the AC power. Memory The system returns to its last known awake state upon the return of the AC power. Determines whether to let the system consume less than 1W power in S5 (shutdown) state. (Default: Disabled) Note: When this item is set to Enabled, the following four functions will become unavailable: PME event wake up, power on by mouse, power on by keyboard, and wake on LAN. Enabled clears the record of previous chassis intrusion status and the Case Opened field will show "No" at next boot. (Default: Disabled) Displays the detection status of the chassis intrusion detection device attached to the motherboard CI header. If the system chassis cover is removed, this field will show "Yes", otherwise it will show "No". To clear the chassis intrusion status record, set Reset Case Open Status to Enabled, save the settings to the CMOS, and then restart your system.

CPU/SYSTEM FAN Fail Warning Slope PWM Sets the warning threshold for CPU temperature. When CPU temperature exceeds the threshold, BIOS will emit warning sound. options are: Disabled (default) , 60oC/140oF , 70oC/158oF , 80oC/176oF , 90oC/194oF. Allows the system to emit warning sound if the CPU/system fan is not connected or fails. Check the fan condition or fan connection when this occurs. (Default: Disabled) Allows you to control the CPU fan speed. This item is configurable only when CPU Smart FAN Control is enabled. Auto □ Lets the BIOS automatically detect the type of CPU fan installed and sets the optimal CPU fan control mode. Note: The Voltage mode can be set for a 3-pin CPU fan or a 4-pin CPU fan. However, for a 4-pin CPU fan that is not designed following Intel PWM fan specifications, selecting PWM mode may not effectively reduce the fan speed.

@@@@@@@@Always load the Optimized defaults after updating the BIOS or after clearing the CMOS values.) Standard CMOS Features Advanced BIOS Features Integrated Peripherals Power Management SetupEnter Password: PC Health Status Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password Set User Password Save & Exit Setup Exit Without Saving F11: Save CMOS to BIOS F12: Load CMOS from BIOS ESC: Quit F8: Q-Flash ï□ʹï□©ï□§ï□ʹ: Select Item F10: Save & Exit Setup Change/Set/Disable Password Press <Enter> on this item and type the password with up to 8 characters and then press <Enter>. You will be requested to confirm the password. Type the password again and press <Enter>. The BIOS Setup program allows you to specify two separate passwords: Supervisor Password When a system password is set and the Password Check item in Advanced BIOS Features is set to Setup, you must enter the supervisor password for entering BIOS Setup and making BIOS changes.

When the Password Check item is set to System, you must enter the supervisor password (or user password) at system startup and when entering BIOS Setup. User Password When the Password Check item is set to System, you must enter the supervisor password (or user password) at system startup to continue system boot. In BIOS Setup, you must enter the supervisor password if you wish to make changes to BIOS settings. The user password only allows you to view the BIOS settings but not to make changes. To clear the password, press <Enter> on the password item and when requested for the password, press <Enter> again.

The message "PASSWORD DISABLED" will appear, indicating the password has been cancelled. Y Advanced BIOS Features Set Supervisor Password Integrated Peripherals Set User Password Power Management Setup Save & Exit Setup PC Health Status Exit Without Saving ï□ʹï□©ï□§ï□ʹ: Select Item F10: Save & Exit Setup Save Data to CMOS F11: Save CMOS to BIOS F12: Load CMOS from BIOS ESC: Quit F8: Q-Flash Press <Enter> on this item and press the <Y> key. This saves the changes to the CMOS and exits the BIOS Setup program. Press <N> or <Esc> to return to the BIOS Setup Main Menu. N Set Supervisor Password Set User Password Save & Exit Setup Exit Without Saving ï□ʹï□©ï□§ï□ʹ: Select Item F10: Save & Exit Setup Abandon all Data F11: Save CMOS to BIOS F12: Load CMOS from BIOS ESC: Quit F8: Q-Flash Press <Enter> on this item and press the <Y> key.

This exits the BIOS Setup without saving the changes made in BIOS Setup to the CMOS. Press <N> or <Esc> to return to the BIOS Setup Main Menu. - 37 - Chapter 3 Drivers Installation â□¢â□¢ Before installing the drivers, first install the operating system. Â□¢â□¢ After installing the operating system, insert the motherboard driver disk into your optical drive. The driver Autorun screen is automatically displayed which looks like that shown in the screen shot below.

(If the driver Autorun screen does not appear automatically, go to My Computer, double-click the optical drive and execute the Run. exe program.) After inserting the driver disk, "Xpress Install" will automatically scan your system and then list all the drivers that are recommended to install. You can click the Install All button and "Xpress Install" will install all the recommended drivers. Or click Install Single Items to manually select the drivers you wish to install. Tw You may go to the GIGABYTE website, select your language in the language list on the top right corner of the website. Tw Then select your language to enter the system. .

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