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GA-J1800N-D2P

User's Manual
Rev. 1001
12ME-J180D2P-1001R

Manual abstract:

@@3, 2014 Jan. 3, 2014 Copyright © 2014 GIGA-BYTE TECHNOLOGY CO., LTD. All rights reserved. @@@@@@ □□ In order to assist in the use of this product, carefully read the User's Manual. □□ For product-related information, check on our website at: http://www.gigabyte.com Identifying Your Motherboard Revision The revision number on your motherboard looks like this: "REV: X.X." For example, "REV: 1.0" means the revision of the motherboard is 1.0. Check your motherboard revision before updating motherboard BIOS, drivers, or when looking for technical information. Example: Table of Contents GA-J1800N-D2P Motherboard Layout..

-3- GA-J1800N-D2P Motherboard Layout F_PANEL ATX ATX_12V DEBUG_PORT SODIMM_2 iTE® Super I/O LPT CI SODIMM_1 CLR_CMOS KB_MS COM HDMI VGA R_USB Intel® J1800 SoC SYS_FAN F_USB CPU_FAN Realtek® GbE LAN SATA2 0 1 SPDIF_O F_AUDIO B_BIOS PCIe to PCI Bridge M_BIOS PCI USB30 SINGLE_LAN AUDIO BAT CODEC Box Contents 55 GA-J1800N-D2P motherboard 55 Motherboard driver disk 55 User's Manual 55 Two SATA cables 55 I/O Shield The box contents above are for reference only and the actual items shall depend on the product package you obtain.

The box contents are subject to change without notice. -4- GA-J1800N-D2P GA-J1800N-D2P Motherboard Block Diagram DDR3L 1333 MHz HDMI D-Sub PCI Express Bus x1 PCIe CLK (100 MHz) Dual Channel Memory Dual BIOS 2 SATA 3Gb/s x1 Intel® J1800 SoC 2 USB 3.0/2.0 4 USB 2.0/1.1 Realtek® GbE LAN RJ45 LAN PCIe to PCI Bridge PCI Bus LPC Bus COM iTE® Super I/O LPT PS/2 KB/Mouse PCI CLK (33 MHz) CODEC 1 PCI MIC (Center/Subwoofer Speaker Out) Line Out (Front Speaker Out) Line In (Rear Speaker Out) -5 S/PDIF Out For detailed product information/limitation(s), refer to "1-2 Product Specifications." Chapter 1 Hardware Installation 1-1 Installation Precautions The motherboard contains numerous delicate electronic circuits and components which can become damaged as a result of electrostatic discharge (ESD). Prior to installation, carefully read the user's manual and follow these procedures: •• Prior to installation, make sure the chassis is suitable for the motherboard. •• 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.

•• Always remove the AC power by unplugging the power cord from the power outlet before installing or removing the motherboard or other hardware components. •• When connecting hardware components to the internal connectors on the motherboard, make sure they are connected tightly and securely. •• When handling the motherboard, avoid touching any metal leads or connectors. •• 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. •• Prior to installing the motherboard, please have it on top of an antistatic pad or within an electrostatic shielding container. •• Before unplugging the power supply cable from the motherboard, make sure the power supply has been turned off. •• Before turning on the power, make sure the power supply voltage has been set according to the local voltage standard. •• Before using the product, please verify that all cables and power connectors of your hardware components are connected. •• To prevent damage to the motherboard, do not allow screws to come in contact with the motherboard circuit or its components.

•• Make sure there are no leftover screws or metal components placed on the motherboard or within the computer casing. •• Do not place the computer system on an uneven surface. •• Do not place the computer system in a high-temperature environment. •• Turning on the computer power during the installation process can lead to damage to system components as well as physical harm to the user. •• 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.

-6- 1-2 Product Specifications CPU □□ Built in with an Intel® Dual-Core Celeron® J1800 SoC (2.41 GHz) * □Do not disassemble the onboard SoC and the heatsinks by yourself to avoid damage to these components. Memory □□ 1 MB Cache □□ 2 x 1.35V DDR3L DIMM sockets supporting up to 8 GB of system memory □□ □□ □□ □□ Dual channel memory architecture Support for DDR3L 1333 MHz memory modules Support for non-ECC memory modules Integrated in the SoC: - 1 x D-Sub port, supporting a maximum resolution of 2560x1600 - 1 x HDMI port, supporting a maximum resolution of 1920x1080 □□ Realtek® ALC887 codec □□ High Definition Audio □□ 2/4/5.1/7.

1-channel □□ Support for S/PDIF Out * □ only one DDR3L memory module is to be installed, be sure to install it in the If SODIMM_1 socket. Onboard Graphics Audio * □ configure 7.1-channel audio, you have to use an HD front panel audio module To and enable the multi-channel audio feature through the audio driver. LAN □□ Realtek® GbE LAN chip (10/100/1000 Mbit) Expansion Slots □□ 1 x PCI slot Storage Interface □□ Integrated in the SoC: - 2 x SATA 3Gb/s connectors USB □□ Integrated in the SoC: - 1 x USB 3.0/2.0 port on the back panel - x USB 2.0/1.1 ports (1 port on the back panel, 2 ports available through 3 the internal USB header) Internal □□ 1 x 24-pin ATX main power connector □□ 1 x 4-pin ATX 12V power connector Connectors □□ 2 x SATA 3Gb/s connectors □□ 1 x CPU fan header □□ 1 x system fan header □□ 1 x front panel header □□ 1 x front panel audio header □□ 1 x S/PDIF Out header □□ 1 x USB 2.0/1.1 header □□ 1 x serial port header □□ 1 x debug card header □□ 1 x chassis intrusion header □□ 1 x Clear CMOS jumper Back Panel □□ 1 x PS/2 keyboard port Connectors □□ 1 x PS/2 mouse port □□ 1 x D-Sub port □□ 1 x HDMI port □□ 1 x parallel port -7- Back Panel Connectors □□ □□ □□ □□ □□ □□ □□ 1 x USB 3.

0/2.0 port 1 x USB 2.0/1.1 port 1 x RJ-45 port 3 □ x audio jacks (Line In, Line Out, Mic In) System voltage detection CPU/System temperature detection CPU/System fan speed detection CPU/System fan speed control I/O Controller Hardware Monitor □□ iTE® I/O Controller Chip * □ Whether the fan speed control function is supported will depend on the cooler you install.

BIOS □□ □□ □□ □□ Unique Features □□ □□ □□ 2 x 64 Mbit flash Use of licensed AMI UEFI BIOS Support for DualBIOS™ PnP 1.0a, DMI 2.0, SM BIOS 2.6, ACPI 2.0a Support for Xpress Install Support for @BIOS Support for APP Center Bundled Software Operating System Form Factor □□ Support for ON/OFF Charge □□ Norton® Internet Security (OEM version) □□ Intel® Smart Connect Technology □□ Support for Windows 8.1/8 64-bit □□ Mini-ITX Form Factor; 17.

0cm x 17.0cm * □ Available applications in APP Center may differ by motherboard model. Supported functions of each application may also differ depending on motherboard specifications. * □ GIGABYTE reserves the right to make any changes to the product specifications and product-related information without prior notice. * □ Please visit the Support & Downloads\Utility page on GIGABYTE's website to check the supported operating system(s) for the software listed in the "Unique Features" and "Bundled Software" columns.

-8- 1-3 Installing the Memory Read the following guidelines before you begin to install the memory: •• 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.) •• Always turn off the computer and unplug the power cord from the power outlet before installing the memory to prevent hardware damage. •• 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 DDR3L memory sockets and supports Dual Channel Technology. After the memory is installed, the BIOS will automatically detect the specifications and capacity of the memory. The two DDR3L memory sockets are divided into two channels and each channel has one memory socket as following: □Channel A: SODIMM_1 □ □Channel B: SODIMM_2 □ Due to SoC limitations, read the following guidelines before installing the memory in Dual Channel mode. 1. □f only one DDR3L memory module is to be installed, be sure to install it in the SODIMM_1 socket, I and Dual Channel mode cannot be enabled if only one memory module is installed. 2. □ hen enabling Dual Channel mode with two memory modules, it is recommended that memory of W the same capacity, brand, speed, and chips be used for optimum performance. 1-4 Installing an Expansion Card Read the following guidelines before you begin to install an expansion card: •• Make sure the motherboard supports the expansion card.

Carefully read the manual that came with your expansion card. •• Always turn off the computer and unplug the power cord from the power outlet before installing an expansion card to prevent hardware damage. 1-5 Back Panel Connectors PS/2 Keyboard and PS/2 Mouse Port Parallel 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. Use the parallel port to connect devices such as a printer, scanner and etc. ThATX ATX: 12 24 ATX_12V: Pin No. 1 2 3 4 Definition GND GND +12V +12V Pin No. 1 2 3 4 5 6 7 8 9 10 11 12 Definition Pin No. 3.3V 13 3.3V 14 GND 15 +5V 16 GND 17 +5V 18 GND 19 Power Good 20 5VSB (stand by +5V) 21 +12V 22 +12V (Only for 2x12-pin 23 ATX) 3. 3V (Only for 2x12-pin 24 ATX) Definition 3.3V -12V GND PS_ON (soft On/Off) GND GND GND -5V +5V +5V +5V (Only for 2x12-pin ATX) GND (Only for 2x12-pin ATX) 3/4) CPU_FAN/SYS_FAN (Fan Headers) The motherboard has a 3-pin CPU fan header (CPU_FAN) and a 4-pin system fan header (SYS_on the chassis front panel. You may configure the way to turn off your system using the power switch (refer to Chapter 2, "BIOS Setup," "Chipset," for more information). •• HD (Hard Drive Activity LED, Blue): Connects to the hard drive activity LED on the chassis front panel. The LED is on when the hard drive is reading or writing data.

•• RES (Reset Switch, Green): Connects to the reset switch on the chassis front panel. Press the reset switch to restart the computer if the computer freezes and fails to perform a normal restart. •• NC (Purple): No connection. The front panel design may differ by chassis. A front panel module mainly consists of power switch, reset switch, power LED, hard drive activity LED and etc.

When connecting your chassis front panel module to this header, make sure the wire assignments and the pin assignments are matched correctly. 10) 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. 1 2 9 10 For HD Front Panel Audio: Pin No. Definition 1 MIC2_L 2 GND 3 MIC2_R 4 -ACZ_DET 5 LINE2_R 6 GND 7 FAUDIO_JD 8 No Pin 9 LINE2_L 10 GND For AC'97 Front Panel Audio: Pin No. Definition 1 MIC 2 GND 3 MIC Power 4 NC 5 Line Out (R) 6 NC 7 NC 8 No Pin 9 Line Out (L) 10 NC •• The front panel audio header supports HD audio by default. •• Audio signals will be present on both of the front and back panel audio connections simultaneously. •• 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. - 14 - 11) SPDIF_O (S/PDIF Out Header) This header supports digital S/PDIF Out and connects a S/PDIF digital audio cable (provided by expansion cards) for digital audio output from your motherboard to certain expansion cards like graphics cards and sound cards. For example, some graphics cards may require you to use a S/PDIF digital audio cable for digital audio output from your motherboard to your graphics card if you wish to connect an HDMI display to the graphics card and have digital audio output from the HDMI display at the same time. For information about connecting the S/PDIF digital audio cable, carefully read the manual for your expansion card. 1 Pin No. 1 2 Definition SPDIFO GND 12) F_USB (USB 2.0/1.1 Header) The header conforms to USB 2.0/1.1 specification.

Each USB header can provide two USB ports via an optional USB bracket. For purchasing the optional USB bracket, please contact the local dealer. 1 9 2 10 Pin No. 1 2 3 4 5 Definition Power (5V) Power (5V) USB DXUSB DYUSB DX+ Pin No. 6 7 8 9 10 Definition USB DY+ GND GND No Pin NC •• Do not plug the IEEE 1394 bracket (2x5-pin) cable into the USB header.

•• 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.

13) COM (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. 2 10 1 9 Pin No. 1 2 3 4 5 Definition NDCDNSIN NSOUT NDTRGND Pin No. 6 7 8 9 10 Definition NDSRNRTSNCTSNRINo Pin 14) DEBUG_PORT (Debug Card Header) This header can connect a debug card. 12 DEBUG PORT 2 1 11 Pin No. 1 2 3 4 5 6 Definition No Pin GND VCC3 LAD0 LAD1 LAD2 Pin No. 7 8 9 10 11 12 Definition LAD3 -LFRAME -PFMRST DB CLK DB_P_SENSOR NC - 15 - Chapter 2 BIOS Setup BIOS (Basic Input and Output System) records hardware parameters of the system in the CMOS on the motherboard. Its major functions include conducting the Power-On Self-Test (POST) during system startup, saving system parameters and loading operating system, etc. BIOS includes a BIOS Setup program that allows the user to modify basic system configuration settings or to activate certain system features. When the power is turned off, the battery on the motherboard supplies the necessary power to the CMOS to keep the configuration values in the CMOS. To access the BIOS Setup program, press the <Delete> key during the POST when the power is turned on. To upgrade the BIOS, use the GIGABYTE @BIOS utility, which is a Windows-based utility that searches and downloads the latest version of BIOS from the Internet and updates the BIOS. •• 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. •• 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 "Restore Defaults" section in this chapter or introductions of the battery/clear CMOS jumper in Chapter 1 for how to clear the CMOS values.) 2-1 Startup Screen The following startup Logo screen will appear when the computer boots. - 16 - 2-2 Main 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. Main Menu Help The on-screen description of a highlighted setup option is displayed on the bottom line of the Main Menu.

Submenu Help While in a submenu, press <F1> to display a help screen (General Help) of function keys available for the menu. Press <Esc> to exit the help screen. Help for each item is in the Item Help block on the right side of the submenu. (Sample BIOS Version: F1a) •• When the system is not stable as usual, select the Restore Defaults item to set your system to its defaults. •• The BIOS Setup menus described in this chapter are for reference only and may differ by BIOS version.

Aptio Setup Utility - Copyright (C) 2013 American Megatrends, Inc. Main Advanced Chipset Security Boot Save & Exit BIOS Information ID 8A05AG06 BIOS Nate J1800N-D2P Project Version F1a BIOS Build Date and Time 01/13/2014 21:35:37 Memory Information Total Memory 4096 MB (LPDDR3) Language [English] System System Date [Tue 01/14/2014] Time [11:43:46] System Level Administrator Access gf: Select Screen hi: Select Item Enter: Select +/-: Change Opt. @@Copyright (C) 2013 American Megatrends, Inc. This section provides information on your motherboard model and BIOS version. You can also select the default language used by the BIOS and manually set the system time.

• System Language System Date • Selects the default language used by the BIOS. • Sets the system date. The date format is week (read-only), month, date, and year. Use <Tab> to switch between the Month, Date, and Year fields and use the <+> or <-> key to set the desired value. System Time • Sets the system time. The time format is hour, minute, and second. For example, 1 p.m. is 13:0:0. Use <Tab> to switch between the Hour, Minute, and Second fields and use the <+> or <-> key to set the desired value.

Access Level Displays the current access level depending on the type of password protection used. (If no password is set, the default will display as Administrator.) The Administrator level allows you to make changes to all BIOS settings; the User level only allows you to make changes to certain BIOS settings but not all. @@@@@@@@@@@@This item is configurable only when Serial Port is set to Enabled. @@@@This item is configurable only when Parallel Port is set to Enabled. @@Selects an operating mode for the onboard parallel (LPT) port. @@@@@@@@@@@@@Displays current CPU/system fan speeds. @@Allows you to determine whether to enable all CPU cores. @@@@@@@@(Default: Enabled) Enables or disables L2 Cache Hardware Prefetcher. @@@@@@@@@@@@@@@@@@This item is configurable only when CPU C state Report is enabled. @@Options include: C7, C6, C1 (default). @@(Default: Disabled) && Passive Trip Point Allows you to set the CPU temperature threshold. If the CPU temperature reaches this value, the operating system will shut down the system. This item is configurable only when DTS is enabled. (Default: 100 C) Allows you to set the CPU temperature threshold.

If the CPU temperature reaches this value, the CPU frequency will be automatically reduced. This item is configurable only when DTS is enabled. (Default: 85 C) ``IDE Configuration && Serial-ATA (SATA) && SATA Mode Enables or disables the integrated SATA controllers. (Default: Enabled) && Serial-ATA Port 0/Serial-ATA Port 1 Allows you to decide whether to configure the SATA controller integrated in the Chipset to AHCI mode. This item is configurable only when Serial-ATA(SATA) is set to Enabled.

IDE Mode Disables RAID for the SATA controllers and configures the SATA controllers to IDE mode. AHCI Mode Configures the SATA controllers 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. (Default) Enables or disables each SATA port. This item is configurable only when Serial-ATA(SATA) is set to Enabled. The area below displays the current status of each SATA port. (Default: Enabled) ``Network Stack Configuration && Network stack && Ipv4 PXE Support Disables or enables booting from the network to install a GPT format OS, such as installing the OS from the Windows Deployment Services server. (Default: Disabled) Enables or disables IPv4 PXE Support. This item is configurable only when Network stack is enabled. Enables or disables IPv6 PXE Support.

This item is configurable only when Network stack is enabled.

&& Ipv6 PXE Support - 20 - ``CSM Configuration && CSM Support && Boot option filter Enables or disables UEFI CSM (Compatibility Support Module) to support a legacy PC boot process. □Enabled □ Enables UEFI CSM. □Disabled □ Disables UEFI CSM and supports UEFI BIOS boot process only. (Default) Allows you to select which type of operating system to boot. □UEFI and Legacy □ □ Allows booting from operating systems that support legacy option ROM or UEFI option ROM. (Default) □Legacy Only □ □ Allows booting from operating systems that only support legacy Option ROM. □UEFI Only □ □ Allows booting from operating systems that only support UEFI Option ROM. This item is configurable only when CSM Support is set to Enabled. Allows you to select whether to enable the UEFI or legacy option ROM for the LAN controller.

□Do not launch □ Disables option ROM. □UEFI only □ Enables UEFI option ROM only. (Default) □Legacy only □ Enables legacy option ROM only. □Legacy First □ Enables legacy option ROM first. □UEFI First □ Enables UEFI option ROM first.

This item is configurable only when CSM Support is set to Enabled. Allows you to select whether to enable the UEFI or legacy option ROM for the storage device controller. □Do not launch □ Disables option ROM. □UEFI only □ Enables UEFI option ROM only. (Default) □Legacy only □ Enables legacy option ROM only.

□Legacy First □ Enables legacy option ROM first. □UEFI First □ Enables UEFI option ROM first. This item is configurable only when CSM Support is set to Enabled. Allows you to select whether to enable the UEFI or legacy option ROM for the graphics controller. □Do not launch □ Disables option ROM. □UEFI only □ Enables UEFI option ROM only. □Legacy only □ Enables legacy option ROM only. □Legacy First □ Enables legacy option ROM first. (Default) □UEFI First □ Enables UEFI option ROM first. This item is configurable only when CSM Support is set to Enabled.

Allows you to select whether to enable the UEFI or Legacy option ROM for the PCI device controller other than the LAN, storage device, and graphics controllers. □UEFI First □ Enables UEFI option ROM first. (Default) □Legacy only □ Enables legacy option ROM only. This item is configurable only when CSM Support is set to Enabled. && Network && Storage && Video && Other PCI devices ``USB Configuration && Legacy USB Support && USB3.0 Support && XHCI Hand-off Allows USB keyboard/mouse to be used in MS-DOS. (Default: Enabled) Enables or disables the USB 3.0 controller. (Default: Enabled) Determines whether to enable XHCI Hand-off feature for an operating system without XHCI Hand-off support. @@@@@This item appears only when a USB storage device is installed.

@@@@@@@@@@This section provides onboard graphics-related configuration options. Allows you to configure the maximum TOLUD value. (Default: Dynamic) ``Intel IGD Configuration && MAX TOLUD ``South Bridge ``USB Configuration @@@- 22 - ``PCI Express Configuration && Audio Controller This section provides you with configuration options for the PCI Express bus, such as enabling/disabling a specific PCI Express channel and speed configuration. Enables or disables the onboard audio function. (Default: Enabled) 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 High Precision Event Timer (HPET) in the operating system. (Default: Enabled) && High Precision Timer && Restore AC Power Loss && Soft-Off by PWR-BTTN Determines the state of the system after the return of power from an AC power loss. □Power Off □ system stays off upon the return of the AC power. (Default) □ The □Power On □ The system is turned on upon the return of the AC power. □Last State □ The system returns to its last known awake state upon the return of the AC power.

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. Enables or disables BIOS read/write protection. (Default: Enabled) && BIOS Read/Write Protection 2-5 Security Aptio Setup Utility - Copyright (C) 2013 American Megatrends, Inc. Main Advanced Chipset Security Boot Save & Exit Password Description If ONLY the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup. If ONLY the User's password is set, then this is a power on password and must be entered to boot or enter Setup. In Setup the User will have Administrator rights.

The password length must be in the following range: Minimum length 3 Maximum length 20 Administrator Password User Password HDD Security Configuration: P1: Kingston SSD ``Secure Boot menu gf: Select Screen hi: Select Item Enter: Select +/-: Change Opt. @@Copyright (C) 2013 American Megatrends, Inc. && Administrator Password Allows you to configure an administrator password. Press <Enter> on this item, type the password, and then press <Enter>. You will be requested to confirm the password. Type the password again and press <Enter>. You must enter the administrator password (or user password) at system startup and when entering BIOS Setup. Differing from the user password, the administrator password allows you to make changes to all BIOS settings. - 23 - && User Password Allows you to configure a user password. Press <Enter> on this item, type the password, and then press <Enter>.

You will be requested to confirm the password. Type the password again and press <Enter>. You must enter the administrator password (or user password) at system startup and when entering BIOS Setup. However, the user password only allows you to make changes to certain BIOS settings but not all. To cancel the password, press <Enter> on the password item and when requested for the password, enter the correct one first.

When prompted for a new password, press <Enter> without entering any password. Press <Enter> again when prompted to confirm. Displays a list of connected hard drives and allows you to set a password for a specific hard drive. This item appears only when a hard drive is installed. && HDD Security Configuration ``Secure Boot menu && System Mode && Secure Boot && Secure Boot Displays the current system mode.

Displays the current secure boot state. && Secure Boot Mode Enables or disables the secure boot function. Secure Boot requires all the applications that are running during the booting process to be pre-signed with valid digital certificates.

This way, the system knows all the files being loaded before Windows 8 loads and gets to the login screen have not been tampered with. (Default: Disabled) Allows you to configure the secure boot mode. (Default: Custom) This section provides you with configuration options for secure boot key management. `` Key Management 2-6 Boot Aptio Setup Utility - Copyright (C) 2013 American Megatrends, Inc. Main Advanced Chipset Security Boot Save & Exit Boot Configuration Prompt Timeout 6 Setup NumLock State [On] Bootup Full Screen Logo Show [Enabled] Boot [Disabled] Fast Boot Option Priorities Boot Option #1 Boot Option #2 Hard Drive BBS Priorities [UEFI: USB 2.0 USB F ..

.] [UEFI: Built-in EFI ...] gf: Select Screen hi: Select Item Enter: Select +/-: Change Opt. @@Copyright (C) 2013 American Megatrends, Inc. - 24 - && Setup Prompt Timeout && Bootup NumLock State Allows you to configure the number of seconds to stay in BIOS setup prompt screen. (Default: 6) Enables or disables Numlock feature on the numeric keypad of the keyboard after the POST. (Default: On) && Full Screen LOGO Show && Fast Boot Allows you to determine whether to display the GIGABYTE Logo at system startup. Disabled skips the GIGABYTE Logo when the system starts up. (Default: Enabled) Enables or disables Fast Boot to shorten the OS boot process. (Default: Disabled) && VGA Support && USB Support Allows you to select which type of operating system to boot. □Auto □ Enables legacy option ROM only. □EFI Driver □ Enables EFI option ROM. (Default) This item is configurable only when Fast Boot is set to Enabled.
□Disabled □ All USB devices are disabled before the OS boot process completes. □Full Initial □ All USB devices are functional in the operating system and during the POST. □Partial Initial □Part of the USB devices are disabled before the OS boot process completes. (Default) □ This item is configurable only when Fast Boot is set to Enabled. □Disabled □ All PS/2 devices are disabled before the OS boot process completes.
□Enabled □All PS/2 devices are functional in the operating system and during the POST. (Default) □ This item is configurable only when Fast Boot is set to Enabled. □Disabled □ Disables booting from the network. (Default) □Enabled □ Enables booting from the network. This item is configurable only when Fast Boot is set to Enabled. Specifies the overall boot order from the available devices. For example, you can set hard drive as the first priority (Boot Option #1) and DVD ROM drive as the second priority (Boot Option #2). The list only displays the device with the highest priority for a specific type. For example, only hard drive defined as the first priority on the Hard Drive BBS Priorities submenu will be presented here. Removable storage devices that support GPT format will be prefixed with "UEFI:" string on the boot device list.

To boot from an operating system that supports GPT partitioning, select the device prefixed with "UEFI:" string. Or if you want to install an operating system that supports GPT partitioning such as Windows 7 64-bit, select the optical drive that contains the Windows 7 64-bit installation disk and is prefixed with "UEFI:" string. Specifies the boot order for a specific device type, such as hard drives, optical drives, floppy disk drives, and devices that support Boot from LAN function, etc. Press <Enter> on this item to enter the submenu that presents the devices of the same type that are connected. This item is present only if at least one device for this type is installed. && PS2 Devices Support && NetWork Stack Driver Support && Boot Option #1/2/3 && □ ard Drive/CD/DVD ROM Drive/Floppy Drive/Network Device BBS Priorities H - 25 - 2-7 Save & Exit Aptio Setup Utility - Copyright (C) 2013 American Megatrends, Inc. Main Advanced Chipset Security Boot Save & Exit Save Changes and Reset Discard Changes and Reset Restore Defaults Save as User Defaults Restore User Defaults Boot Override UEFI: USB 2.0 USB Flash Drive 0.00 UEFI: Built-in EFI Shell Launch EFI Shell from filesystem device gf: Select Screen hi: Select Item Enter: Select +/-: Change Opt. @@Copyright (C) 2013 American Megatrends, Inc.
&& Save Changes and Reset && Discard Changes and Reset Press <Enter> on this item and select Yes. This saves the changes to the CMOS and exits the BIOS Setup program. Select No or press <Esc> to return to the BIOS Setup Main Menu. Press <Enter> on this item and select Yes. This exits the BIOS Setup without saving the changes made in BIOS Setup to the CMOS.
Select No or press <Esc> to return to the BIOS Setup Main Menu. Press <Enter> on this item and select Yes to load the BIOS factory default settings. The BIOS defaults settings help the system to operate in optimum state. Always load the Optimized defaults after updating the BIOS or after clearing the CMOS values. Save to current BIOS settings as user-defined default settings.
Load the user-define default settings for all BIOS options. && Restore Defaults && Save as User Defaults && Restore User Defaults && Boot Override && Launch EFI Shell from filesystem device Allows you to select a device to boot immediately. Press <Enter> on the device you select and select Yes to confirm. Your system will restart automatically and boot from that device. Allows you to launch the EFI Shell application (shell.efi) from one of the available filesystem devices. Press <Enter> on this option and the system will restart to the EFI Shell screen automatically. - 26 - Chapter 3 Appendix Drivers Installation •• Before installing the drivers, first install the operating system. @@@@@@@Or click Install Single Items to manually select the drivers you wish to install. - 27 - Regulatory Statements Regulatory Notices This document must not be copied without our written permission, and the contents there of must not be imparted to a third party nor be used for any unauthorized purpose.

Contravention will be prosecuted. We believe that the information contained herein was accurate in all respects at the time of printing. GIGABYTE cannot, however, assume any responsibility for errors or omissions in this text. Also note that the information in this document is subject to change without notice and should not be construed as a commitment by GIGABYTE. Our Commitment to Preserving the Environment In addition to high-efficiency performance, all GIGABYTE motherboards fulfill European Union regulations for RoHS (Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment) and WEEE (Waste Electrical and Electronic Equipment) environmental directives, as well as most major worldwide safety requirements. @@@@@@@@Under the Directive, used equipment must be marked, collected separately, and disposed of properly.

WEEE Symbol Statement The symbol shown below is on the product or on its packaging, which indicates that this product must not be disposed of with other waste. Instead, the device should be taken to the waste collection centers for activation of the treatment, collection, recycling and disposal procedure. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local government office, your household waste disposal service or where you purchased the product for details of environmentally safe recycling. □□ When your electrical or electronic equipment is no longer useful to you, "take it back" to your local or regional waste collection administration for recycling. □□ If you need further assistance in recycling, reusing in your "end of life" product, you may contact us at the Customer Care number listed in your product's user's manual and we will be glad to help you with your effort. Finally, we suggest that you practice other environmentally friendly actions by understanding and using the energy-saving features of this product (where applicable), recycling the inner and outer packaging (including shipping containers) this product was delivered in, and by disposing of or recycling used batteries properly. With your help, we can reduce the amount of natural resources needed to produce electrical and electronic equipment, minimize the use of landfills for the disposal of "end of life" products, and generally improve our quality of life by ensuring that potentially hazardous substances are not released into the environment and are disposed of properly. - 28 - FCC Notice (U.S.A. Only) This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: □□ Reorient or relocate the receiving antenna. □□ Increase the separation between the equipment and receiver. □□ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. □□ Consult a dealer or experienced TV/radio technician for help. Canada, Industry Canada (IC) Notices / Canada, avis d'Industry Canada (IC) □□ This Class B digital apparatus complies with Canadian ICES-003 and RSS-210. □□ Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. □□ Cet appareil numérique de classe B est conforme aux normes canadiennes ICES-003 et RSS-210. □□ Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement. - 29 - - 30 - - 31 - Contact Us GIGA-BYTE TECHNOLOGY CO.

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com WEB address (Chinese): http://www.gigabyte.tw You may go to the GIGABYTE website, select your language in the language list on the top right corner of the website. •• GIGABYTE Global Service System To submit a technical or non-technical (Sales/Marketing) question, please link to: http://ggts.gigabyte.
com.tw Then select your language to enter the system. - 32 - .