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You can read the recommendations in the user guide, the technical guide or the installation guide for GIGABYTE GA-7ZX. You'll find the answers to all your questions on the GIGABYTE GA-7ZX 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-7ZX
User guide GIGABYTE GA-7ZX
Operating instructions GIGABYTE GA-7ZX
Instructions for use GIGABYTE GA-7ZX
Instruction manual GIGABYTE GA-7ZX

FCC Compliance Statement:



This equipment has been tested and found to comply with 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 residential installations. 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 interference to radio or television equipment 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
- Move the equipment away from the receiver
- Plug the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/television technician for additional suggestions

You are cautioned that any change or modifications to the equipment not expressly approve by the party responsible for compliance could void Your authority to operate such equipment.

This device complies with Part 15 of the FCC Rules. Operation is subjected to the following two conditions 1) this device may not cause harmful interference and 2) this device must accept any interference received, including interference that may cause undesired operation.



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Manual abstract:

1077(a) Responsible Party Name: G.B.T. INC. Address: 18305 Valley Blvd., Suite#A LA Puent, CA 91744 Phone/Fax No: (818) 854-9338/ (818) 854-9339 hereby declares that the product Product Name: Mother Board Model Number: GA-7ZX Conforms to the following specifications: FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109(a), Class B Digital Device Supplementary Information: This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful and (2) this device must accept any interference received, including that may cause undesired operation. ERIC LU Representative Person's Name: Signature: Date: Mar.

20, 2001 -Reorient or relocate the receiving antenna -Move the equipment away from the receiver -Plug the equipment into an outlet on a circuit different from that to which the receiver is connected -Consult the dealer or an experienced radio/television technician for additional suggestions You are cautioned that any change or modifications to the equipment not expressly approve by the party responsible for compliance could void Your authority to operate such equipment. This device complies with Part 15 of the FCC Rules. Operation is subjected to the following two conditions 1) this device may not cause harmful interference and 2) this device must accept any interference received, including interference that may cause undesired operation. Declaration of Conformity

We, Manufacturer/Importer (full address) G.B.

T. Technology Trading GmbH Ausschlag Weg 41, 1F, 20537 Hamburg, Germany declare that the product (description of the apparatus, system, installation to which it refers) Mother Board GA-7ZX is in conformity with (reference to the specification under which conformity is declared) in accordance with 89/336 EEC-EMC Directive EN 55011 Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM) high frequency equipment Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment Limits and methods of measurement of radio disturbance characteristics of household electrical appliances, portable tools and similar electrical apparatus Limits and methods of measurement of radio disturbance characteristics of fluorescent lamps and luminaries Immunity from radio interference of broadcast receivers and associated equipment Limits and methods of measurement of radio disturbance characteristics of information technology equipment Cabled distribution systems; Equipment for receiving and/or distribution from sound and television signals EN 61000-3-2* EN60555-2 Disturbances in supply systems caused by household appliances and similar electrical equipment "Harmonics" EN55013 EN61000-3-3* EN60555-3 Disturbances in supply systems caused by household appliances and similar electrical equipment "Voltage fluctuations" EN 55014 EN 50081-1 Generic emission standard Part 1: Residual, commercial and light industry Generic immunity standard Part 1: Residual, commercial and light industry Generic emission standard Part 2: Industrial environment EN 50082-1 EN 55015 EN 55081-2 EN 55020 EN 55082-2 Generic immunity standard Part 2: Industrial environment EN 55022 ENV 55104

Immunity requirements for household appliances tools and similar apparatus DIN VDE 0855 part 10 part 12 EN 50091- 2 EMC requirements for uninterruptible power systems (UPS) CE marking (EC conformity marking) The manufacturer also declares the conformity of above mentioned product with the actual required safety standards in accordance with LVD 73/23 EEC EN 60065 Safety requirements for mains operated electronic and related apparatus for household and similar general use Safety of household and similar electrical appliances EN 60950 Safety for information technology equipment including electrical business equipment EN 60335 EN 50091-1 General and Safety requirements for uninterruptible power systems (UPS) Manufacturer/Importer

Signature (Stamp) : Rex Lin Rex Lin Date : Mar. 20, 2001 Name : 7ZX Series AMD Athlon /Duron Socket A Processor Motherboard TM TM USER'S MANUAL AMD AthlonTM/DuronTM Socket A Processor Motherboard REV. 5.1 First Edition R-51-01-010309 How This Manual Is Organized This manual is divided into the following sections: 1) Revision History 2) Item Checklist 3) Features 4) Hardware Setup 5) Performance & Block Diagram 6) Suspend to RAM & Dual BIOS 7) Four Speaker & SPDIF 8) @BIOSTM & EasyTuneIIITM 9) BIOS Setup 10) Appendix Manual revision information Product item list Product information & specification Instructions on setting up the motherboard Product performance & block diagram Instructions STR installation & Dual BIOS Four Speaker & SPDIF introduction @BIOSTM & EasyTuneIIITM introduction Instructions on setting up the BIOS software General reference Table Of Content Revision History Item Checklist Summary of Features 7ZX Series Motherboard Layout Page Index for CPU Speed Setup / Connectors / Panel and Jumper Definition Performance List Block Diagram Suspend to RAM Installation Dual BIOS Introduction (Optional) Four Speaker & SPDIF Introduction (Optional) @BIOSTM Introduction EasyTuneIIITM Introduction Memory Installation Page Index for BIOS Setup Appendix P.

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43 P.44 P.46 P.47 P.78 7ZX Series Motherboard Revision History Revision 5.1 Revision Note Initial release of the 7ZX Series motherboard user's manual. Date Mar. 2001 The author assumes no responsibility for any errors or omissions that may appear in this document nor does the author make a commitment to update the information contained herein. Third-party brands and names are the property of their respective owners. Mar.

9, 2001 Taipei, Taiwan, R.O.C 1 Item Checklist Item Checklist The 7ZX Series motherboard Cable for IDE /floppy device CD (TUCD) for motherboard driver & utility 7ZX Series user's manual 2 7ZX Series Motherboard Summary Of Features Form Factor Motherboard CPU 30.5 cm x 22.8 cm ATX size form factor, 4 layers PCB.

7ZX series includes 7ZX, 7ZX-1 AMD AthlonTM/DuronTM (K7) Socket A Processor 256K/64K L2 cache on die Supports 600MHz ~ 1GHz and faster 7ZX support 100/133MHz FSB 7ZX-1 support 100MHz FSB Apollo KT133, consisting of: VT8363E/VT8363A Memory/AGP/PCI Controller (PAC) VT82C686B PCI Super-I/O Integrated Peripheral Controller (PSIPC) ICW W230H ICW W230H 100/102/104/106/108/110/112/133 MHz system bus speeds Chipset Clock Generator Memory I/O Control Slots On-Board IDE On-Board Peripherals Hardware Monitor 3 168-pin DIMM sockets Supports PC-100 / PC-133 SDRAM and VCM SDRAM Supports up to 1.5GB DRAM Supports only 3.3V SDRAM DIMM VT82C686B 1 AGP slot supports 4X mode & AGP 2.0 compliant 5 PCI slots supports 33MHz & PCI 2.



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2 compliant 1 AMR (Audio Modem Riser) slot 1 ISA slot (Optional) Supports PIO mode 3, 4, UDMA 33/ATA 66/ATA 100 & ATAPI CD-ROM 2 IDE bus master (UDMA 33 / ATA 66 / ATA 100) IDE ports for up to 4 ATAPI devices 1 floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88M bytes 1 parallel ports supports Normal/EPP/ECP mode 2 serial ports (COM A & COM B) 4 USB ports 1 IrDA connector for IR CPU/System fan revolution detect CPU/System temperature detect System voltage detect CPU overheat shutdown detect To be continued... 3 Summary of Features PS/2 Connector On-Board Sound BIOS Additional Features PS/2 Keyboard interface and PS/2 Mouse interface Creative CT5880 sound (Optional) AC'97 CODEC Line In/Line Out/Mic In/AUX In/CD In/TEL/Game Port /Four Speaker & SPDIF (Optional) Licensed AMI BIOS, 2M bit flash ROM Support Dual BIOS (Optional) Support Wake-On-LAN (WOL) Support Internal / External Modem Ring On Support USB KB/MS Wake up from S3-S5 Includes 3 fan power connectors Poly fuse for keyboard over-current protection Support STR (Suspend-To-RAM) function Support @BIOS™ and EasyTune™ 4 7ZX Series Motherboard 7ZX Series Motherboard Layout PS/2 USB1 JP4 J3 COM A Socket A CPU ATX POWER JP6 LPT JP8 LED1 JP21 J15 JP7 FLOPPY SW1 PC11 J13 JP3 J12 PC14 JP10 J2 PC15 MAIN BACK Up BIOS BIOS COM B GAME & AUDIO VT8363E (VT8363A) J18 IDE1 IDE2 DIMM2 7ZX AGP 1 Clock Generator DIMM1 DIMM3 AC97 PCI2 BAT1 VT82C 686B PCI3 J16 Creative CT5880 USB2 J4 ISA 1 BZ1 J11 5 JP11 JP9 JP18 JP16 AMR JP17 7ZX Series Motherboard Layout Page Index for CPU Speed Setup/Connectors/Panel and Jumper Definition CPU Speed Setup Connectors Game & Audio Port COM A / COM B / LPT Port USB 1 Connector USB 2 Connector PS/2 Keyboard & PS/2 Mouse Connector J3 (CPU Fan) JP6 (Power Fan) J2 (System Fan) ATX Power Floppy Port IDE 1(Primary) / IDE 2(Secondary) Port J16 (TEL) J15 (AUX_IN) J18 (CD Audio Line In) J13 (Ring Power On) J12 (Wake On LAN) JP8 / LED1 (STR LED Connector & DIMM LED) J4 (IR) Panel and Jumper Definition J11 (2x11 Pins Jumper) JP16/JP17/JP18 (AMR Select)[Optional] JP4 (Rear USB Device Wake Up Selection) JP7 (STR Function Enable) JP9 (Onboard Sound Function Selection)[Optional] JP11 (Front USB Device Wake Up Selection) JP10 (BIOS Write Protection)[Optional] JP3 (Clear CMOS Function)[Optional] BAT1 (Battery) Page P.7 P.8 P.8 P.8 P.

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19 P.19 P.20 P.20 P.21 P.21 6 7ZX Series Motherboard CPU Speed Setup The system bus speed is selectable at 100~133MHz. The user can select the system bus speed by DIP switch SW1 & JP21. Set System Bus Speed SW1: O: ON / X: OFF FSB 95 100 102 104 106 108 110 112 133 1 O 0 0 X 0 0 0 0 2 O X 0 X X 0 X 3 X X 0 X X 0 0 0 4 X X X 0 0 0 0 X JP21: CPU Clock Frequency (Optional) JP21 1 133MHz 1 100MHz (Default) SW1 Pin No. Definition 1-2 close 133MHz 2-3 close 100MHz (Default) The FSB Speed of the 7ZX(VIA KT133A) is 100/133MHz. The FSB Speed of the 7ZX-1(VIA KT133E) is 100MHz.

AMD CPU Heat Sink Installation: Beware: Please check that the heat sink is in good contact with the CPU before you turn on your system. The poor contact will cause over heat, and might cause damage to your processor. 7 Connectors Connectors Game & Audio Port Game Port Line Out 1 MIC In Line In / Line Out 2 Line Out 1: Line Out or SPDIF (The SPDIF output is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby digital decoder). In general, Line Out 1 is normally Line Out, when it output digital signal, it will be change to SPDIF Out automatically (see page 40 for more information). Line In: In general, Line In is normally Line In. When you select "Four Speaker" in Creative application (see page 37 for more information), Line In will be change to Line Out 2, then you can plug 2 pairs stereo speaker into Line Out 1 and Line In simultaneously. COM A / COM B / LPT Port LPT Port COM A COM B 8 7ZX Series Motherboard USB 1 Connector 1234 5 67 8 Pin No. 1 2 3 4 5 6 7 8 Definition USB V0 USB D0USB D0+ GND USB V1 USB D1USB D1+ GND USB 2 Connector Pin No. 1 2 3 4 5 6 7 8 9 10 Definition +5V GND USB D2NC USB D2+ USB D3+ NC USB D3GND +5V 2 1 10 9 9 Connectors PS/2 Keyboard & PS/2 Mouse Connector PS/2 Mouse/Keyboard Pin No. Definition 1 Data 5 6 2 NC 3 4 3 GND 4 VCC(+5V) 2 1 5 Clock PS/2 Keyboard 6 NC PS/2 Mouse J3: CPU Fan 1 Pin No.

Definition 1 Control 2 +12V 3 SENSE 10 7ZX Series Motherboard JP6: Power Fan 1 Pin No. Definition 1 Control 2 +12V 3 NC J2: System Fan 1 Pin No. Definition 1 Control 2 +12V 3 SENSE 11 Connectors ATX Power Pin No. 3,5,7,13, 15-17 1,2,11 4,6,19,20 10 12 18 8 9 14 Definition GND 3.3V VCC +12V ame or equivalent type recommended by the manufacturer.

Dispose of used batteries according to the manufacturer's instructions. 21 Performance List Performance List The following performance data list is the testing results of some popular benchmark testing programs. These data are just referred by users, and there is no responsibility for different testing data values gotten by users. (The different Hardware & Software configuration will result in different benchmark testing results.) · CPU · DRAM · CACHE SIZE · DISPLAY · STORAGE · O.

S. · DRIVER AMD Althon™ 1200MHz, AMD Duron™ 900MHz (128x1) MB SDRAM (Winbond W986408CH-75) 384 KB included in Althon™ 192 KB included in Duron™ GA-GF2000 Onboard IDE (Quantum AS30000AT 30GB) Windows 2000 + SP1 + DirectX8 Display Driver at 1024 x 768 x 64k colors 75Hz. TUCD ver.1.7 Processor Winbench99 Business Disk Winmark 99 Hi-End Disk Winmark 99 Business Graphics Winmark 99 Hi-End Graphics Winmark 99 Winstone 2001 Business Winstone 2001 Content Creative Winstone 2001 AMD Althon™ 1200MHz (100x12) AMD Duron™ 900MHz (100x9) 7500 15400 525 1170 42.3 43.7 7700 15200 370 881 31.7 35.2 If you wish to maximize the performance of your system, please refer to the detail on P.56 22 7ZX Series Motherboard Block Diagram Socket A AGP 2X/4X CPUCLK System Bus VT8363E 66MHz 3.

3V SDRAM 100 / 133MHz 100 / 133MHz 100 / 133MHz (VT8363A) 66MHz 33MHz 33MHz ICW W230H 5 PCI ATA66/ATA100 IDE Channels 33MHz 4 USB Ports 14.318MHz 48MHz VT82C 686B Creative CT5880 IR Floppy PS/2 AC97 CODEC AMR Game Port COM Ports LPT Ports ISA 23 Suspend to RAM Installation Suspend To RAM Installation A.1 Introduce STR function: Suspend-to-RAM (STR) is a Windows 98 ACPI sleep mode function. When recovering from STR (S3) sleep mode, the system is able, in just a few seconds, to retrieve the last "state" of the system before it went to sleep and recover to that state.



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The "state" is stored in memory (RAM) before the system goes to sleep. During STR sleep mode, your system uses only enough energy to maintain critical information and system functions, primarily the system state and the ability to recognize various "wake up" triggers or signals, respectively. A.2 STR function Installation Please use the following steps to complete the STR function installation. Step-By-Step Setup Step 1: To utilize the STR function, the system must be in Windows 98 ACPI mode. Putting Windows 98 into ACPI mode is fairly easy.

Setup with Windows 98 CD: A. B. C. Insert the Windows 98 CD into your CD-ROM drive, select Start, and then Run. Type (without quotes) "D:\setup" in the window provided.

Hit the enter key or click OK. After setup completes, remove the CD, and reboot your system (This manual assumes that your CD-ROM device drive letter is D:). 24 7ZX Series Motherboard Step 2: (If you want to use STR Function, please set jumper JP7 Closed.) 1 Pin No. Open Close Definition Normal (Default) STR Enabled Step 3: Power on the computer and as soon as memory counting starts, press .

You will enter BIOS Setup. Select the item "POWER MANAGEMENT SETUP", then select "ACPI Sleep Type : S3 / STR". Remember to save the settings by pressing "ESC" and choose the "SAVE & EXIT SETUP" option. Congratulations! You have completed the installation and now can use the STR function. 25 Suspend to RAM Installation A.3 How to put your system into STR mode? 1. There are two ways to accomplish this: Choose the "Stand by" item in the "Shut Down Windows" area. A. Press the "Start" button and then select "Shut Down" B. Choose the "Stand by" item and press "OK" 26 7ZX Series Motherboard 2.

Define the system "power on" button to initiate STR sleep mode: A. Double click "My Computer" and then "Control Panel" B. Double click the "Power Management" item. 27 Suspend to RAM Installation C. Select the "Advanced" tab and "Standby" mode in Power Buttons. D. Restart your computer to complete setup. Now when you want to enter STR sleep mode, just momentarily press the "Power on" button. A.4 How to recover from the STR sleep mode?

There are five ways to "wake up" the system: 1.

2. 3. 4. 5. Press the "Power On" button.

Use the "Resume by Alarm" function. Use the "Modem Ring On" function. Use the "Wake On LAN" function. Use the "USB Device Wake Up" function. 28 7ZX Series Motherboard A.

5 Notices: 1. In order for STR to function properly, several hardware and software requirements must be satisfied: A. Your ATX power supply must comply with the ATX 2.01 specification (provide more than 720 mA 5V Stand-By current). Your SDRAM must be PC-100/PC-133 compliant. B. 2. Jumper JP8 is provided to connect to the STR LED in your system chassis. [Your chassis may not provide this feature.] The STR LED will be illuminated when your system is in STR sleep mode.

STR LED Connector External. 1 + DIMM LED 29 Dual BIOS Introduction Dual BIOS Introduction (Optional) A. What is Dual BIOS Technology? Dual BIOS means that there are two system BIOS (ROM) on the motherboard, one is the Main BIOS and the other is Backup BIOS. Under the normal circumstances, the system works on the Main BIOS. If the Main BIOS is corrupted or damaged, the Backup BIOS can take over while the system is powered on. This means that your PC will still be able to run stably as if nothing has happened in your BIOS. B. How to use Dual BIOS? a. Boot Screen American Megatrends Release:06/12/2000 AMIBIOS (C) 1999 American Megatrends xxx xxx Check System Health OK, AMD-Athlon(tm)-650MHz (100x6.5) Check NVRAM.

.. Wait...

Press F1 to enter Dual BIOS Utility. Press ESC to quit Press F1 to enter (C) American Megatrends Inc.,Dual BIOS Utility 62-0612-001199-00101111-071595-KT133-7ZX001-F 30 7ZX Series Motherboard b. AMI Dual BIOS Flash ROM Programming Utility AMI Dual BIOS Flash ROM Programming Utility Boot From..

.....

.....

.....

.. Main BIOS Main ROM Type...

.....

..... SST 39SF020 Backup ROM Type..

.....

.....

..... SST 39SF020 Wide Range Protection Disable Boot From Main BIOS Auto Recovery Enable Halt On Error Disable Copy Main ROM Data to Backup Load Default Settings Save Settings to CMOS PgDn/PgUp:Modify :Move ESC:Reset F10:Power Off c. Dual BIOS Item explanation: BIOS will auto detect: Boot From : Main BIOS Main ROM Type : SST 39SF020 Backup ROM Type : SST 39SF020 Wide Range Protection: Disable(Default), Enable Status 1: If any failure (ex. Update ESCD failure, checksum error or reset..

.) occurs in the Main BIOS , just before the Operating System is loaded and after the power is on, and that the Wide Range Protection is set to "Enable", the PC will boot from Backup BIOS automatically. Status 2: If the ROM BIOS on peripherals cards(ex. SCSI Cards, LAN Cards,..) emits signals to request restart of the system after the user make any alteration on it, the boot up BIOS will not be changed to the Backup BIOS. 31 Dual BIOS Introduction Boot From : Main BIOS (Default), Backup BIOS Status 1: The user can set to boot from main BIOS or Backup BIOS. Auto Recovery : Enable(Default), Disable When one of the Main BIOS or Backup BIOS occurs checksum failure, the working BIOS will automatically recover the BIOS of checksum failure. (In the Power Management Setup of the BIOS Setting, if ACPI Suspend Type is set to Suspend to RAM, the Auto Recovery will be set to Enable automatically.) (If you want to enter the BIOS setting, please press "Del" key when the boot screen appears.

) Halt On Error : Disable(Default), Enable If the BIOS occurs a checksum error or the Main BIOS occurs a WIDE RANGE PROTECTION error and Halt On BIOS Defects set to Enable, the PC will show messages on the boot screen, and the system will pause and wait for the user's instruction. If Auto Recovery: Disable, it will show <or the other key to continue.> If Auto Recovery: Enable, it will show <or the other key to Auto Recovery.> Copy Main ROM Data to Backup Backup message: Are you sure to copy BIOS? [Enter] to continue or [Esc] to abort ..

. The means that the Main BIOS works normally and could automatically recover the Backup BIOS. Or the means that the Backup BIOS works normally and could automatically recover the Main BIOS. (This auto recovery utility is set by system automatically and can't be changed by user.) 32 7ZX Series Motherboard DualBIOS™ Technology FAQ GIGABYTE Technology is pleased to introduce DualBIOS technology, a hot spare for your system BIOS. This newness "Value-added" feature, in a long series of innovations from GIGABYTE, is available on GA-7ZX Series motherboard. Future GIGABYTE motherboards will also incorporate this innovation. What's DualBIOS™? On GIGABYTE motherboards with DualBIOS there are physically two BIOS

chips.



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For simplicity we'll call one your "Main BIOS" and the other we'll call your "Backup" BIOS (your "hot spare"). If your Main BIOS fails, the Backup BIOS almost automatically takes over on your next system boot. Almost automatically and with virtually zero down time! Whether the problem is a failure in flashing your BIOS or a virus or a catastrophic failure of the Main BIOS chip, the result is the same - the Backup BIOS backs you up, almost automatically.

33 Dual BIOS Introduction I. Q: What is DualBIOS technology? Answer: DualBIOS technology is a patented technology from Giga-Byte Technology. The concept of this technology is based on the redundancy and fault tolerance theory. DualBIOS technology simply means there are two system BIOSes (ROM) integrated onto the motherboard.

One is a main BIOS, and the other is a backup BIOS. The mainboard will operate normally with the main BIOS, however, if the main BIOS is corrupt or damaged for various reasons, the backup BIOS will be automatically used when the system powered-On. Your PC will operate as before the main BIOS was damaged, and is completely transparent to the user. II. Q: Why does anyone need a motherboard with DualBIOS technology? Answer: In today's systems there are more and more BIOS failures. The most common reasons are virus attacks, BIOS upgrade failures, and/or deterioration of the BIOS (ROM) chip itself. 1. New computer viruses are being found that attack and destroy the system BIOS. They may corrupt your BIOS code, causing your PC to be unstable or even not boot normally. 2.

BIOS data will be corrupted if a power loss/surge occurs, or if a user resets the system, or if the power button is pressed during the process of performing a system BIOS upgrade. 3. If a user mistakenly updates their mainboard with the incorrect BIOS file, then the system may not be able to boot correctly. This may cause the PC system hang in operation or during boot. 4.

A flash ROM's life cycle is limited according to electronic characteristics. The modern PC utilizes the Plug and Play BIOS, and is updated regularly. If a user changes peripherals often, there is a slight chance of damage to the flash ROM. With Giga-Byte Technology's patented DualBIOS technology you can reduce the possibility of hangs during system boot up, and/or loss BIOS data due to above reasons. This new technology will eliminate valuable system down time and costly repair bills cause by BIOS failures.

34 7ZX Series Motherboard III. Q: How does DualBIOS technology work? Answer: 1. DualBIOS technology provides a wide range of protection during the boot up procedure. It protects your BIOS during system POST, ESCD update, and even all the way to PNP detection/assignment. 2. DualBIOS provides automatic recovery for the BIOS. When the first BIOS used during boot up does not complete or if a BIOS checksum error occurs, boot-up is still possible. In the DualBIOS utility, the "Auto Recovery" option will guarantee that if either the main BIOS or backup BIOS is corrupted, the DualBIOS technology will use the good BIOS and correct the wrong BIOS automatically. 3. DualBIOS provides manual recovery for the BIOS.

DualBIOS technology contains a built-in flash utility, which can flash your system BIOS from backup to main and/or visa versa. There is no need for an OS-dependent flash utility program. 4. DualBIOS contains a one-way flash utility. The built-in one-way flash utility will ensure that the corrupt BIOS is not mistaken as the good BIOS during recovery and that the correct BIOS (main vs. backup) will be flashed. This will prevent the good BIOS from being flashed. IV. Q: Who Needs DualBIOS technology? Answer: 1. Every user should have DualBIOS technology due to the advancement of computer viruses.

Everyday, there are new BIOS-type viruses discovered that will destroy your system BIOS. Most commercial products on the market do not have solutions to guard against this type of virus intrusion. The DualBIOS technology will provide a state-of-the-art solution to protect your PC: Case I.) Vicious computer viruses may wipe out your entire system BIOS. With a conventional single system BIOS PC, the PC will not be functional until it is sent for repairs.

Case II.) If the "Auto Recovery" option is enable in the DualBIOS utility, and if a virus corrupts your system BIOS, the backup BIOS will automatically reboot the system and correct the main BIOS. Case III.) A user may override booting from the main system BIOS. The DualBIOS utility may be entered to manually change the boot sequence to boot from the backup BIOS.

35 Dual BIOS Introduction 2. During or after a BIOS upgrade, if DualBIOS detects that the main BIOS is corrupt, the backup BIOS will take over the boot-up process automatically. Moreover, it will verify the main and backup BIOS checksums when booting-up. DualBIOS technology examines the checksum of the main and backup BIOS while the system is powered on to guarantee your BIOS operates properly. 3. Power Users will have the advantage of having two BIOS versions on their mainboard. The benefit is being able to select either version BIOS to suit the performance system needs. 4. Flexibility for high-end desktop PCs and workstation/servers. In the DualBIOS utility, the option can be set, "Halt On When BIOS Defects," to be able to halt your system with a warning message that the main BIOS has been corrupted.

Most workstation/servers require constant operation to guarantee services have not been interrupted. In this situation, the "Halt On When BIOS Defects" message may be disable to avoid system pauses during normal booting. Another advantage you gain from Giga-Byte's DualBIOS technology is the ability to upgrade from dual 2 Mbit BIOS to dual 4 Mbit BIOS in the future if extra BIOS storage is need.

36 7ZX Series Motherboard Four Speaker & SPDIF Introduction (Optional) Four Speaker Introduction A. What is Four Speaker? The Creative CT5880 audio chip can support up to 4 speaker output. If you select "Four speaker out", Line In will be reconfigured as another line out to support a second pair of speakers. B. How to use Four Speaker? Microsoft Windows 98 Second Edition setup procedure: a. Click the audio icon along the task bar and select "Configure 3D Audio" b. Select two speaker (Default) 37 Four Speaker & SPDIF Introduction c.

Select "Four speaker" item. Microsoft Windows Me setup procedure: a. Go to "Control Panel" Double click "Sounds and Multimedia". 38 7ZX Series Motherboard b. Select "Audio" Page, and click "Advanced" button.

Click "Advanced". c. Select "Quadraphonic Speakers" and click ok. Click "Quadraphonic Speakers". C.

Four Speaker Application The four speaker function will only be supported in application softwares that use Microsoft DirectX and Creative EAX, for example, the game titles, software DVD player and MP3 player.



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39 Four Speaker & SPDIF Introduction SPDIF Introduction A. What is SPDIF? The SPDIF output is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby digital decoder. B. How to use SPDIF? a. Click your mouse right button in "My Computer" and select the "Properties" item. b. Click "Device Manager" item. 40 7ZX Series Motherboard c. Click "Sound, video and game controllers" item and select the "Creative Sound Blaster PCI128" item.

d. Click "Settings" item and select the "Output Mode" item. 41 Four Speaker & SPDIF Introduction e. Click "Digital" item, Line Out will be reconfigure to SPDIF Out. f. Recommend you to select "Autosense", it will auto detect the audio jack you plug in to Line Out is mono or stereo, and then change to SPDIF Out or Speaker out automatically. 42 7ZX Series Motherboard @BIOSM Introduction Gigabyte announces @BIOSM Windows BIOS live update utility Have you ever updated BIOS by yourself? Or like many other people, you just know what BIOS is, but always hesitate to update it? Because you think updating newest BIOS is unnecessary and actually you don't know how to update it. Maybe not like others, you are very experienced in BIOS updating and spend quite a lot of time to do it. But of course you don't like to do it too much. First, download different BIOS from website and then switch the operating system to DOS mode.

Secondly, use different flash utility to update BIOS. The above process is not a interesting job. Besides, always be carefully to store the BIOS source code correctly in your disks as if you update the wrong BIOS, it will be a nightmare. Certainly, you wonder why motherboard vendors could not just do something right to save your time and effort and save you from the lousy BIOS updating work? Here it comes! Now Gigabyte announces @BIOSM--the first Windows BIOS live update utility. This is a smart BIOS update software.

It could help you to download the BIOS from internet and update it. Not like the other BIOS update software, it's a Windows utility. With the help of "@BIOSM", BIOS updating is no more than a click. Besides, no matter which mainboard you are using, if it's a Gigabyte's product*, @BIOSM help you to maintain the BIOS. This utility could detect your correct mainboard model and help you to choose the BIOS accordingly.

It then downloads the BIOS from the nearest Gigabyte ftp site automatically. There are several different choices; you could use "Internet Update" to download and update your BIOS directly. Or you may want to keep a backup for your current BIOS, just choose "Save Current BIOS" to save it first. You make a wise choice to use Gigabyte, and @BIOSM update your BIOS smartly. You are now worry free from updating wrong BIOS, and capable to maintain and manage your BIOS easily. Again, Gigabyte's innovative product erects a milestone in mainboard industries. For such a wonderful software, how much it costs? Impossible! It's free! Now, if you buy a Gigabyte's motherboard, you could find this amazing software in the attached driver CD. But please remember, connected to internet at first, then you could have a internet BIOS update from your Gigabyte @BIOSM. 43 EasyTuneIIITM Introduction EasyTuneIIITM Introduction Gigabyte announces EasyTuneIIITM Windows overdrive utility "Overdrive" might be one of the most common issues in computer field. But have many users ever tried it? The answer is probably "no".

Because "overdrive" is thought to be very difficult and includes a lot of technical know-how, sometimes "overdrive" is even considered as special skills found only in some enthusiasts. But as to the experts in "overdrive", what's the truth? They may spend quite a lot of time and money to study, try and use many different hardware and software tools to do "overdrive". And even with these technologies, they still learn that it's quite a risk because the safety and stability of an "overdrive" system is unknown. Now everything is different because of a Windows overdrive utility EasyTuneIIITM--announced by Gigabyte. This utility has totally changed the gaming rule of "overdrive". This is the first overdrive utility suitable for both normal and power users. Users can choose either "Easy Mode" or "Advanced Mode" to run "overdrive" at their convenience. For users who choose "Easy Mode", they just need to click "Auto Optimize" to have auto and immediate CPU overclocking. This software will then overdrive CPU speed automatically with the result being shown in the control panel. If someone prefers to "overdrive" by oneself, there is also another choice.

Click "Advanced Mode" to enjoy "sport drive" class overclocking. In "Advanced Mode", one can change the system bus speed in small increments to get ultimate system performance. And no matter which mainboard is used, if it's a Gigabyte's product*, EasyTuneIIITM helps to perform the best of system. Besides, different from other traditional over-clocking methods, EasyTuneIIITM doesn't require users to change neither BIOS nor hardware switch/ jumper setting; on the other hand, they can do "overdrive" at only one click. Therefore, this is a safer way for "overdrive" as nothing is changed on software or hardware.

If user runs EasyTuneIIITM over system's limitation, the biggest lost is only to restart the computer again and the side effect is then well controlled. Moreover, if one well-performed system speed been tested in EasyTuneIIITM, user can "Save" this bus speed and "Load" it in next time. Obviously, Gigabyte EasyTuneIIITM has already turned the "overdrive" technology toward to a newer generation. 44 7ZX Series Motherboard This wonderful software is now free bundled in Gigabyte motherboard attached driver CD. @@@@@The BIOS will automatically detects memory type and size.

@@Memory size can vary between sockets. @@@@@@@Each category includes no, one or more than one setup items. @@@@Through Dec. @@The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. @@There are two types: auto type, and user definable type. @@@@The hard disk will not work properly if you enter improper information for this category. If you select User Type, related information will be asked to enter to the following items. Enter the information directly from the keyboard and press <Enter>.

Such information should be provided in the documentation form your hard disk vendor or the system manufacturer. CYLS. Number of cylinders HEADS number of heads PRECOMP write precomp LANDZONE Landing zone SECTORS number of sectors If a hard disk has not been installed select NONE and press <Enter>.



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· Floppy Drive A / Drive B The category identifies the types of floppy disk drive A or drive B that has been installed in the computer. None 360K, 5.25 in. 1.2M, 5.25 in. 720K, 3.5 in. 1.44M, 3.5 in. 2.88M, 3.5 in. No floppy drive installed 5.25 inch PC-type standard drive; 360K byte capacity. 5.25 inch AT-type high-density drive; 1.2M byte capacity (3.5 inch when 3 Mode is Enable). 3.5 inch double-sided drive; 720K byte capacity 3.5 inch double-sided drive; 1.44M byte capacity. 3.5 inch double-sided drive; 2.88M byte capacity.

52 7ZX Series Motherboard · Boot Sector Virus Protection If it is set to enable, the category will flash on the screen when there is any attempt to write to the boot sector or partition table of the hard disk drive. The system will halt and the following error message will appear in the mean time. You can run anti-virus program to locate the problem. Enabled Activate automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table No warning message to appear when anything attempts to access the boot sector or hard disk partition table. (Default Value) Disabled · Memory The category is display-only which is determined by POST (Power On Self Test) of the BIOS. Base Memory The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system. The value of the base memory is typically 512 K for systems with 512 K memory installed on the motherboard, or 640 K for systems with 640 K or more memory installed on the motherboard. Extended Memory The BIOS determines how much extended memory is present during the POST. This is the amount of memory located above 1 MB in the CPU's memory address map. Other Memory This refers to the memory located in the 640 K to 1024 K address space.

This is memory that can be used for different applications. DOS uses this area to load device drivers to keep as much base memory free for application programs. Most use for this area is Shadow RAM. 53 BIOS Setup BIOS Features Setup AMIBIOS SETUP BIOS FEATURES SETUP (C) 1999 American Megatrends, Inc. All Rights Reserved 1st Boot Device Floppy 2nd Boot Device IDE-0 3rd Boot Device CDROM S.M.A.R.T. for Hard Disks Disabled BootUp Num-Lock On Floppy Drive Seek Enabled Password Check Setup ESC : Quit : Select Item F1 : Help PU/PD+/-/: Modify F5 : Old Values (Shift)F2:Color F6 : Load BIOS Defaults F7 : Load SETUP Defaults Figure 3: BIOS Features Setup · 1st / 2nd / 3rd Boot Device Floppy ZIP A: / LS-120 CDROM SCSI NETWORK IDE-0~IDE-3 Disabled USB FDD ATAPI ZIP C: Boot Device by Floppy. Boot Device by ZIP A: / LS-120. Boot Device by CDROM. Boot Device by SCSI. Boot Device by NETWORK. Boot Device by IDE-0~IDE-3. Boot Device by Disabled. Boot Device by USB FDD. Boot Device by ATAPI ZIP C.: 54 7ZX Series Motherboard · S.M.

A.R.T. for Hard Disks Enabled Disabled Enable S.M.A.R.T. Hard for Disks. Disable S.M.A.R.T. Hard for Disks.

(Default Value) · Boot Up Num-Lock On Off Keypad is number keys. (Default Value) Keypad is arrow keys. · Floppy Drive Seek During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360 type is 40 tracks while 720 , 1.2 and 1.44 are all 80 tracks. Enabled BIOS searches for floppy disk drive to determine if it is 40 or 80 tracks. Note that BIOS can not tell from 720, 1.2 or 1.44 drive type as they are all 80 tracks. (Default Value) BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360. Disabled · Password Check Setup Always Set Password Check to Setup. (Default Value) Set Password Check to Always. 55 BIOS Setup Chipset Features Setup AMIBIOS SETUP CHIPSET FEATURES SETUP (C) 1999 American Megatrends, Inc.

All Rights Reserved *****DRAM Timing*** SDRAM Command Drive Top Performance Disabled Memory Address Drive DRAM Frequency 100MHz CAS# Drive SDRAM CAS# Latency 3 RAS# Drive AGP Fast Write AGP Mode AGP Comp. Driving Manual AGP Comp. Driving AGP Aperture Size PCI Delay Transaction USB Controller USB Legacy Support USB Port 64/60 Emulation BIOS Flash Protection DRAM Drive Strength MD Bus Strength CAS Bus Strength Delay DRAM Read Latch Memory Data Drive Disabled 4X Auto DB 64MB Enabled Enabled Disabled Disabled Disabled Auto High High 1.0ns 8 mA 24 mA 24 mA 12 mA 24 mA ESC : Quit : Select Item F1 : Help PU/PD+/-/: Modify F5 : Old Values (Shift)F2:Color F6 : Load BIOS Defaults F7 : Load SETUP Defaults Figure 4: Chipset Features Setup · Top Performance If you wish to maximize the performance of your system, set "Top Performance" as "Enabled". Disabled Enabled Top Performance Disable. (Default Value) Top Performance Enable. · DRAM Frequency Auto 100MHz 133MHz Set DRAM Frequency to Auto. Set DRAM Frequency to 100MHz. (Default Value) Set DRAM Frequency to 133MHz. · SDRAM CAS# Latency 2 3 Auto For Fastest SDRAM DIMM module.

For Slower SDRAM DIMM module. (Default Value) Detect SDRAM CAS# Latency by SPD. 56 7ZX Series Motherboard · AGP Fast Write Enabled Disabled Enable this function only if the AGP Card support Fast Write Function. (Enable this function can increase AGP performance). Disable this function. (Default Value) · AGP Mode 4X 1X 2X Set AGP Mode to 4X. (Default Value) Set AGP Mode to 1X. Set AGP Mode to 2X. · AGP Comp. Driving Auto Manual Set AGP Comp. Driving to Auto. (Default Value) Set AGP Comp. Driving to Manual. If AGP Comp. Driving is Manual. Manual AGP Comp. Driving: 00~FF · AGP Aperture Size 4MB 8MB 16MB 32MB 64MB 128MB 256MB Set AGP Aperture Size to 4MB. Set AGP Aperture Size to 8 MB. Set AGP Aperture Size to 16 MB. Set AGP Aperture Size to 32 MB.

Set AGP Aperture Size to 64 MB. (Default Value) Set AGP Aperture Size to 128 MB. Set AGP Aperture Size to 256 MB. · PCI Delay Transaction Enabled Disabled Enable Delay Transaction. (Default Value) Disable Delay Transaction. · USB Controller Enabled Disabled Enable USB Controller. (Default Value) Disable USB Controller. 57 BIOS Setup · USB Legacy Support Keyboard/FDD KB/Mouse/FDD Disabled Set USB Legacy Support Keyboard / Floppy. Set USB Legacy Support Keyboard / Mouse / Floppy. Disable USB Legacy Support Function. (Default Value) · USB Port 64/60 Emulation Enabled To use USB mouse under Win NT environment, set USB Legacy Support to KB/Mouse/FDD and USB Port 64/60 Emulation to enabled. Disable this Function. (Default Value) Disabled · BIOS Flash Protection Enabled Disabled BIOS Flash Write Protection. Normal. (Default Value) · DRAM Drive Strength Auto Manual Set DRAM Drive Strength Auto. (Default Value) Set DRAM Drive Strength Manual. If DRAM Drive Strength is Manual, then you can adjust item below. · MD Bus Strength High Low Set MD Bus Strength High.



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(Default Value) Set MD Bus Strength Low. · CAS Bus Strength High Low Set CAS Bus Strength High.

(Default Value) Set CAS Bus Strength Low. · Delay DRAM Read Latch 1.0ns 1.5ns 0.5ns No delay Set DRAM Read Latch Delay 1.0ns. (Default Value) Set DRAM Read Latch Delay 1.5ns. Set DRAM Read Latch Delay 0.5ns.

Set DRAM Read Latch No delay. · Memory Data Drive 6 mA 8 mA Set Memory Data Drive 6 mA. Set Memory Data Drive 8 mA. (Default Value) 58 7ZX Series Motherboard · SDRAM Command Drive 16 mA 24 mA Set SDRAM Command Drive 16 mA. Set SDRAM Command Drive 24 mA. (Default Value) · Memory Address Drive 16 mA 24 mA Set Memory Address Drive 16 mA. Set Memory Address Drive 24 mA. (Default Value) · CAS# Drive 8 mA 12 mA Set CAS# Drive 8 mA. Set CAS# Drive 12 mA. (Default Value) · RAS# Drive 16 mA 24 mA Set RAS# Drive 16 mA.

Set RAS# Drive 24 mA. (Default Value) 59 BIOS Setup Power Management Setup AMIBIOS SETUP POWER MANAGEMENT SETUP (C) 1999 American Megatrends, Inc. All Rights Reserved ACPI Sleep Type USB Dev Wakeup from S3-S5 Suspend Time Out(Minute) Display Activity IRQ3 IRQ4 IRQ5 IRQ7 IRQ9 IRQ10 IRQ11 IRQ13 IRQ14 IRQ15 Soft-Off by Power Button System after AC Back Modem Use IRQ Resume On Ring/LAN PME Event Wake Up Resume On RTC Alarm S1/POS Disabled Disabled Ignore Monitor Monitor Ignore Monitor Ignore Ignore Ignore Monitor RTC Alarm Date RTC Alarm Hour RTC Alarm Minute RTC Alarm Second Every Day 00 00 00 Ignore Instant-Off Soft-Off 4 Enabled Enabled Disabled ESC : Quit : Select Item F1 : Help PU/PD+/- : Modify F5 :Old Values (Shift)F2:Color F6 : Load BIOS Defaults F7 : Load SETUP Defaults Figure 5: Power Management Setup · ACPI Sleep Type S1/POS S3/STR Set ACPI sleep type to S1. (Default Value) Set ACPI sleep type to S3. · USB Dev Wakeup from S3-S5 Enabled Disabled Enable USB Dev Wakeup from S3-S5.

Disable USB Dev Wakeup from S3-S5. (Default Value) · Suspend Time Out (Minute.) Disabled 1 2 4 8 10 20 30 40 Disable Suspend Time Out Function.

(Default Value) Enable Suspend Time Out after 1min. Enable Suspend Time Out after 2min.

Enable Suspend Time Out after 4min. Enable Suspend Time Out after 8min. Enable Suspend Time Out after 10min. Enable Suspend Time Out after 20min.

Enable Suspend Time Out after 30min. Enable Suspend Time Out after 40min. 60 7ZX Series Motherboard 50 60 Enable Suspend Time Out after 50min.

Enable Suspend Time Out after 60min. · Display Activity Ignore Monitor Ignore Display Activity. (Default Value) Monitor Display Activity.

· IRQ 3~IRQ15 Ignore Monitor Ignore IRQ3 ~IRQ15. Monitor IRQ3~IRQ15. · Soft-off by Power Button Instant-off Delay 4 sec The user press the power button once, he can turn off the system. (Default Value) Press power button 4 sec to Power off. Enter suspend if button is pressed less than 4 sec. · System after AC Back Memory Soft-Off Full-On When AC-power back to the system, the system will return to the Last state before AC-power off. When AC-power back to the system, the system will be in "Off" state. (Default Value) When AC-power back to the system, the system will be in "On" state. · Modem USE IRQ 3, 4, (Default Value) 5, 7, N/A Resume On Ring / LAN Disabled Enabled Disable Resume On Ring / LAN. Enable Resume On Ring / LAN.

(Default Value) · PME Event Wake Up Disabled Enabled Disable PME Event Wake Up. Enable PME Event Wake Up. (Default Value) 61 BIOS Setup · Resume On RTC Alarm You can set "Resume On RTC Alarm" item to enabled and key in Data/time to power on system. Disabled Enabled Disable this function. (Default Value) Enable alarm function to POWER ON system.

Every Day, 1~31 0~23 0~59 0~59 If the "Resume On RTC Alarm" is Enabled. RTC Alarm Date: RTC Alarm Hour: RTC Alarm Minute: RTC Alarm Second: 62 7ZX Series Motherboard PNP/PCI Configurations AMIBIOS SETUP PNP / PCI CONFIGURATION (C) 1999 American Megatrends, Inc. All Rights Reserved PnP OS Installed No Reset Configuration Data No VGA Boot from AGP Disabled PCI AGP Palette Snoop Auto PCI Slot 1/5 IRQ Priority Auto PCI Slot 2 IRQ Priority Auto PCI Slot 3 IRQ Priority Auto PCI Slot 4 IRQ Priority IRQ 3 PCI/PnP IRQ 4 PCI/PnP IRQ 5 PCI/PnP IRQ 7 PCI/PnP IRQ 9 PCI/PnP IRQ 10 PCI/PnP ESC: Quit : Select Item IRQ 11 PCI/PnP F1 : Help PU/PD+/- : Modify IRQ 14 PCI/PnP F5 :Old Values (Shift)F2:Color IRQ 15 PCI/PnP F6 : Load BIOS Defaults F7 : Load SETUP Defaults Figure 6: PNP/PCI Configuration · PnP OS Installed Yes No Enable PnP OS Installed function. Disable PnP OS Installed function. (Default Value) · Reset Configuration Data No Yes Disable this function.

(Default Value) Clear PnP information in ESCD & update DMI data. · VGA Boot From AGP PCI Primary Graphics Adapter From AGP. (Default Value) Primary Graphics Adapter From PCI. · PCI/VGA Palette Snoop Enabled Disabled For having Video Card on ISA Bus and VGA Card on PCI Bus. For VGA Card only. (Default Value) 63 BIOS Setup · PCI Slot 1,5 IRQ Priority Auto 3 4 5 7 9 10 11 The system will reserved a free IRQ for PCI slot 1 & 5 device. (Default Value) The system will reserved IRQ3 for PCI slot 1 & 5 device if no legacy ISA device using IRQ3. The system will reserved IRQ4 for PCI slot 1 & 5 device if no legacy ISA device using IRQ4. The system will reserved IRQ5 for PCI slot 1 & 5 device if no legacy ISA device using IRQ5. The system will reserved IRQ7 for PCI slot 1 & 5 device if no legacy ISA device using IRQ7.

The system will reserved IRQ9 for PCI slot 1 & 5 device if no legacy ISA device using IRQ9. The system will reserved IRQ10 for PCI slot 1 & 5 device if no legacy ISA device using IRQ10. The system will reserved IRQ11 for PCI slot 1 & 5 device if no legacy ISA device using IRQ11. · PCI Slot 2 / 3 / 4 IRQ Priority Auto 3 4 5 7 9 10 11 The system will reserved a free IRQ for PCI slot 2 / 3 / 4 device. (Default Value) The system will reserved IRQ3 for PCI slot 2 / 3 / 4 device if no legacy ISA device using IRQ3. The system will reserved IRQ for PCI slot 2 / 3 / 4 device if no legacy ISA device using IRQ4. The system will reserved IRQ5 for PCI slot 2 / 3 / 4 device if no legacy ISA device using IRQ5. The system will reserved IRQ7 for PCI slot 2 / 3 / 4 device if no legacy ISA device using IRQ7. The system will reserved IRQ9 for PCI slot 2 / 3 / 4 device if no legacy ISA device using IRQ9. The system will reserved IRQ10 for PCI slot 2 / 3 / 4 device if no legacy ISA device using IRQ10.

The system will reserved IRQ11 for PCI slot 2 / 3 / 4 device if no legacy ISA device using IRQ11. 64 7ZX Series Motherboard · IRQ (3, 4, 5, 7, 9, 10, 11, 14, 15) ISA/ EISA PCI / PnP The resource is used by Legacy ISA device. The resource is used by PCI/ PnP device. 65 BIOS Setup Load BIOS Defaults AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.



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All Rights Reserved STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP PNP/PCI CONFIGURATION LOAD BIOS DEFAULTS LOAD SETUP DEFAULTS INTEGRATED PERIPHERALS HARDWARE MONITOR & MISC SETUP SUPERVISOR PASSWORD USER PASSWORD IDE HDD AUTO DETECTION Load BIOS Defaults (Y/N)? N SAVE & EXIT SETUP EXIT WITHOUT SAVING ESC : Quit (Shift) F2 : Change Color F5 : Old Values : Select Item F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit Load BIOS Default except Standard CMOS Setup Figure 7: Load BIOS Defaults · Load BIOS Defaults BIOS defaults contain the most appropriate values of the system parameters that allow minimum system performance. 66 7ZX Series Motherboard Load Setup Defaults AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24b

(C) 1999 American Megatrends, Inc. All Rights Reserved STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP INTEGRATED PERIPHERALS HARDWARE MONITOR & MISC SETUP SUPERVISOR PASSWORD USER PASSWORD Load PNP/PCI CONFIGURATION SETUP Defaults (Y/N)? NDETECTION IDE HDD AUTO LOAD BIOS DEFAULTS LOAD SETUP DEFAULTS SAVE & EXIT SETUP EXIT WITHOUT SAVING ESC : Quit (Shift) F2 : Change Color F5 : Old Values : Select Item F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit Load Setup Default except Standard CMOS Setup Figure 8: Load Setup Defaults · Load Setup Defaults Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects. 67 BIOS Setup Integrated Peripherals AMIBIOS SETUP INTEGRATED PERIPHERALS (C) 1999 American Megatrends, Inc.

All Rights Reserved OnBoard IDE Both OnBoard Serial Port A Auto Auto OnBoard Serial Port B Normal Serial PortB Mode N/A Duplex Mode Auto OnBoard Parallel Port Parallel Port Mode ECP Parallel Port DMA Auto Parallel Port IRQ Auto AC97 Audio Auto MC97 Modem Auto OnBoard Legacy Audio Sound Blaster SB I/O Base Address SB IRQ Select SB DMA Select MPU-401 MPU-401 I/O Address Game Port(200h-207h) Enabled Disabled 220h-22Fh 5 1 Disabled 330h-333h Enabled ESC: Quit : Select Item F1 : Help PU/PD+/-/: Modify F5 :Old Values (Shift)F2:Color F6 : Load BIOS Defaults F7 : Load SETUP Defaults Figure 9: Integrated Peripherals This items will be available when "Serial PortB Mode" is set to IrDA or ASK IR. These eight items will not be shown when there is sound chip onboard. · OnBoard IDE Disabled Both Primary Secondary Disable OnBoard IDE. Both Primary & Secondary IDE channel will be enabled. (Default Value) Only Primary IDE channel is enable. Only Secondary IDE channel is enable. · OnBoard Serial Port A Auto 3F8/COM1 2F8/COM2 3E8/COM3 2E8/COM4 Disabled BIOS will automatically setup the port A address. (Default Value) Enable OnBoard Serial port A and address to 3F8. Enable OnBoard Serial port A and address to 2F8. Enable OnBoard Serial port A and address to 3E8.

Enable OnBoard Serial port A and address to 2E8. Disable OnBoard Serial port A. 68 7ZX Series Motherboard · OnBoard Serial Port B Auto 3F8/COM1 2F8/COM2 3E8/COM3 2E8/COM4 Disabled BIOS will automatically setup the port B address. (Default Value) Enable OnBoard Serial port B and address to 3F8. Enable OnBoard Serial port B and address to 2F8. Enable OnBoard Serial port B and address to 3E8. Enable OnBoard Serial port B and address to 2E8. Disable OnBoard Serial port B. · Serial Port B Mode Normal IrDA ASK IR Normal operation. (Default Value) Onboard I/O chip supports IRDA Onboard I/O chip supports ASK IR.

· Duplex Mode Half Duplex N/A Full Duplex IR Function Duplex Half. Disable this function. (Default Value) IR Function Duplex Full. · OnBoard Parallel port 378 278 3BC Auto Disabled Enable OnBoard LPT port and address to 378. Enable OnBoard LPT port and address to 278. Enable OnBoard LPT port and address to 3BC. Set OnBoard LPT port to Auto. (Default Value) Disable OnBoard LPT port. · Parallel Port Mode EPP ECP Normal EPP+ECP Using Parallel port as Enhanced Parallel Port. Using Parallel port as Extended Capabilities Port. (Default Value) Normal Operation. Using Parallel port as Enhanced Parallel Port & Extended Capabilities Port. · Parallel Port DMA Auto 3 1 0 Set Auto to parallel port mode DMA Channel. (Default Value) Set Parallel Port DMA to 3. Set Parallel Port DMA to 1. Set Parallel Port DMA to 0. 69 BIOS Setup · Parallel Port IRQ 7 Auto 5 Set Parallel Port IRQ to 7. Set Auto to parallel Port IRQ DMA Channel. (Default Value) Set Parallel Port IRQ to 5. · AC97 Audio Auto Disabled BIOS will search AC97 Codec.

If found, AC97 function will be enabled. If no AC97 Codec found, AC97 function will be disabled. (Default Value) Disable On Board AC'97 Audio. · MC97 Modem Auto BIOS will search MC97 Codec (AMR Modem Card). If found, MC97 function will be enabled. If no MC97 Codec found, MC97 function will be disabled. (Default Value) Disable On Board MC'97 Modem. Disabled · OnBoard Legacy Audio Enabled Disabled Enable OnBoard Legacy Audio. (Default Value) Disable OnBoard Legacy Audio. · Sound Blaster Enabled Disabled Enable Sound Blaster.

Disable Sound Blaster. (Default Value) · SB I/O Base Address 220h-22Fh 280h-28Fh 260h-26Fh 240h-24Fh Set SB I/O Base Address to 220h-22Fh. (Default Value) Set SB I/O Base Address to 280h-28Fh. Set SB I/O Base Address to 260h-26Fh. Set SB I/O Base Address to 240h-24Fh. · SB IRQ Select IRQ 5 / 7 / 9 / 10. (Default Value: 5) · SB DMA Select DMA 0 / 1 / 2 / 3. (Default Value: 1) 70 7ZX Series Motherboard · MPU-401 Enabled Enable MPU-401. Disabled Disable MPU-401. (Default Value) Ps.

When Force Feedback joystick is used, MPU-401 needs to be Enable. · MPU-401 I/O Address 330h-333h 300h-303h 310h-313h 320h-323h Set MPU-401 I/O Address to 330h-333h. (Default Value) Set MPU-401 I/O Address to 300h-303h. Set MPU-401 I/O Address to 310h-313h. Set MPU-401 I/O Address to 320h-323h. · Game Port (200h-207h) Disabled Enabled Disable Game Port (200h-207h). Enable Game Port (200h-207h). (Default Value) 71 BIOS Setup Hardware Monitor AMIBIOS SETUP HARDWARE MONITOR & MISC SETUP (C) 1999 American Megatrends, Inc. All Rights Reserved ACPI Shut Down Temp. CPU Temperature System Temperature CPU Fan Speed System Fan Speed Vcore Vdd Vcc3 +5.

000V +12.000V Disabled 32°C/89°F 32°C/89°F 7123 RPM 0 RPM 1.76 V 3.33 V 3. 27 V 4.97 V 12.18 V ESC: Quit : Select Item F1 : Help PU/PD+/-/: Modify F5 :Old Values (Shift)F2:Color F6 : Load BIOS Defaults F7 : Load Setup Defaults Figure 10: Hardware Monitor & MISC Setup · ACPI Shutdown Temp. (°C / °F) ° (This function will be effective only for the operating systems that support ACPI Function.) Disabled 60°C / 140°F 70°C / 158°F 80°C / 176°F 90°C / 194°F Disable ACPI Shutdown function.



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(Default Value) Monitor CPU Temp.

at 60°C / 140°F, if Temp. > 60°C / 140°F system will automatically power off. Monitor CPU Temp. at 70°C / 158°F, if Temp. > 70°C / 158°F system will automatically power off.

Monitor CPU Temp. at 80°C / 176°F, if Temp. > 80°C / 176°F system will automatically power off. Monitor CPU Temp. at 90°C / 194°F, if Temp. > 90°C / 194°F system will automatically power off. · CPU Temperature (°C / °F) ° Detect CPU Temperature automatically. System Temperature (°C / °F) ° Detect System Temperature automatically. 72 7ZX Series Motherboard · CPU Fan Speed Detect CPU Fan speed status automatically. · System Fan Speed Detect System Fan speed status automatically. · Voltage (V) Vcore / Vdd / Vcc3 / +5V / +12V Detect system's voltage status automatically. 73 BIOS Setup Set Supervisor / User Password When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24b (C) 1999 American Megatrends, Inc. All Rights Reserved STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP INTEGRATED PERIPHERALS HARDWARE MONITOR & MISC SETUP SUPERVISOR PASSWORD USER PASSWORD PNP/PCI CONFIGURATION IDE HDD AUTO DETECTION Enter new supervisor password: LOAD BIOS DEFAULTS LOAD SETUP DEFAULTS SAVE & EXIT SETUP EXIT WITHOUT SAVING ESC : Quit (Shift) F2 : Change Color F5 : Old Values : Select Item F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit Chang /Set /Disabled Password Figure 11: Password Setting Type the password, up to six characters, and press <Enter>.

You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password. To disable password, just press <Enter> when you are prompted to enter password. A message "PASSWORD DISABLED" will appear to confirm the password being disable. Once the password is disable, the system will boot and you can enter Setup freely. The BIOS Setup program allows you to specify two separate passwords: a SUPERVISOR PASSWORD and a USER PASSWORD. When disable, anyone may access all BIOS Setup program function. When enable, the Supervisor password is required for entering the BIOS Setup program and having full configuration fields, the User password is required to access only basic items. If you select "Always" at "Password Check" in BIOS Features Setup Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter Setup Menu.

If you select "Setup" at "Password Check" in BIOS Features Setup Menu, you will be prompted only when you try to enter Setup. 74 7ZX Series Motherboard IDE HDD AUTO Detection AMIBIOS SETUP STANDARD CMOS SETUP (C) 1999 American Megatrends, Inc. All Rights Reserved Date (mm/dd/yyyy) : Fri Mar 9, 2001 Time (hh/mm/ss) : 10:36:24 TYPE SIZE CYLS Pri Master : Not Installed Pri Slave : Not Installed Sec Master : Not Installed Sec Slave : Not Installed Floppy Drive A: 1.44 MB 3 ½ Floppy Drive B: Not Installed Boot Sector Virus Protection: Disabled Month: Jan Dec Day: 01 31 Year : 1990 2099 Base Memory : 640 Kb Other Memory: 384 Kb Extended Memory: 127Mb Total Memory: 128Mb ESC : Exit : Select Item PU/PD/+/- : Modify (Shift)F2 : Color HEAD PRECOMP LANDZ SECTOR MODE Figure 12: IDE HDD Auto Detection Type "Y" will accept the H.D.

D. parameter reported by BIOS. Type "N" will keep the old H.D.D.

parameter setup. If the hard disk cylinder number is over 1024, then the user can select LBA mode or LARGER mode for DOS partition larger than 528 MB.

75 BIOS Setup Save & Exit Setup AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24b (C) 1999 American Megatrends, Inc. All Rights Reserved STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP PNP/PCI CONFIGURATION LOAD BIOS DEFAULTS LOAD SETUP DEFAULTS INTEGRATED PERIPHERALS HARDWARE MONITOR & MISC SETUP SUPERVISOR PASSWORD USER PASSWORD IDE HDD AUTO DETECTION SAVE & EXIT SETUP EXIT WITHOUT SAVING SAVE to CMOS and EXIT(Y/N)? Y ESC : Quit (Shift) F2 : Change Color F5 : Old Values : Select Item F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit Save Data to CMOS & Exit Setup Figure 13: Save & Exit Setup Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS. Type "N" will return to Setup Utility. 76 7ZX Series Motherboard Exit Without Saving AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24b (C) 1999 American Megatrends, Inc. All Rights Reserved STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP PNP/PCI CONFIGURATION LOAD BIOS DEFAULTS INTEGRATED PERIPHERALS HARDWARE MONITOR & MISC SETUP SUPERVISOR PASSWORD USER PASSWORD IDE HDD AUTO DETECTION SAVE & EXIT SETUP Quit without saving (Y/N) ? N LOAD SETUP DEFAULTS EXIT WITHOUT SAVING ESC : Quit (Shift) F2 : Change Color F5 : Old Values : Select Item F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit Abandon all Datas & Exit Setup Figure 14: Exit Without Saving Type "Y" will quit the Setup Utility without saving to RTC CMOS. Type "N" will return to Setup Utility.

77 Appendix Appendix Appendix A: VIA KT133/KM133 Chipsets Driver Installation Insert the support CD that came with your motherboard into your CD-ROM driver or double click the CD driver icon in My Computer to bring up the screen. 1.Click "VIA 4in 1 Service Pack Driver" item. 2.Click "Next". (1) (2) 3.Click "Yes". 4.Click "Next". (3) (4) 5.

Click "Next". 6.Click "Next". (5) (6) 78 7ZX Series Motherboard 7.Click "Next".

8.Click "Next". (7) (8) 9.Click "Finish" to restart computer. (9) (10) 79 Appendix Appendix B: Creative Sound Driver Installation (Optional) Insert the support CD that came with your motherboard into your CD-ROM driver or double click the CD driver icon in My Computer to bring up the screen. Press "Audio" icon. 1.Click "Creative 5880 Sound Driver". 2.Click "OK". If "LAVA! Player 2.5" item is selected, it will automatically be installed right after "Creative Sound Blaster PCI128 Software" installation. (1) (2) 4.Click "Next". 3.

Click "Yes". (4) (3) 80 7ZX Series Motherboard 6.Click here. 5.Click "Next". (5) (6) 7.Click "Next". (7) (8) 8.Click "Finish" to complete setup. (9) 81 Appendix LAVA! Player Installation: (1) 1.



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