

Asus K8N-E User Manual

K8n-e user's manual

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K8N-E

User Guide





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Motherboard Asus K8V Deluxe User Manual

K8v deluxe user manual (144 pages)

Summary of Contents for Asus K8N-E

Page 1 K8N-E User Guide...

<u>Page 2</u> Product warranty or service will not be extended if: (1) the product is repaired, modified or altered, unless such repair, modification of alteration is authorized in writing by ASUS; or (2) the serial number of the product is defaced or missing.

Page 3: Table Of Contents

Page 4 Using AFUDOS to update the BIOS 2-3 2.1.3 Using AFUDOS to copy BIOS from PC2-4 2.1.4 Using ASUS EZ Flash to update the BIOS 2-5 2.1.5 Recovering the BIOS with CrashFree BIOS 2 ..2-6 2.2 BIOS Setup program2-8 2.2.1...

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Page 6: Notices

1. ASUS Websites The ASUS website provides updated information on ASUS hardware and software products. The ASUS websites are listed in the ASUS Contact Information on the inside front cover. 2. Optional Documentation Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer.

Page 7: Safety Information

Safety information Electrical safety • To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system. • When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.

Page 8: About This Guide

About this guide Conventions used in this guide To make sure that you perform certain tasks properly, take note of the following symbols used throughout this manual. WARNING: Information to prevent injury to yourself when trying to complete a task. CAUTION: Information to prevent damage to the components when trying to complete a task.

Page 9: K8N-E Specifications Summary

Maximum of eight (8) USB 2.0 ports Special features ASUS MyLogo2[™] ASUS EZ Flash ASUS JumperFree ASUS C.P.R. (CPU Parameter Recall) Back Panel I/O 1 x Parallel port 1 x Serial port 1 x PS/2 keyboard port 1 x PS/2 mouse port 4 x USB 2.0 ports...

Page 10 GAME/MIDI connector Front Panel connector BIOS features 4Mb Flash EEPROM AMI BIOS, PnP, DMI2.0, WfM2.0, SM BIOS 2.3, ASUS EZ Flash, ASUS MyLogo2, ASUS CrashFree BIOS 2 PCI 2.2, USB 2.0 Industry standard WfM2.0, DMI 2.0, WOL by PME, WOR by PME,...

Page 11: Chapter 1: Product Introduction

Chapter 1 This chapter describes the features of the motherboard. It includes brief descriptions of the motherboard components, and illustrations of the layout, jumper settings, and connectors. Product introduction...

Page 12: Welcome

K8N-E motherboard! The motherboard delivers a host of new features and latest technologies making it another standout in the long line of ASUS quality motherboards! The motherboard combines the powers of the AMD Athlon™ 64 or AMD Sempron™ processor with the NVIDIA ®...

Page 13: Special Features

The motherboard supports 6-channel audio through the onboard ALC850 CODEC with 16-bit DAC, a stereo 16-bit ADC, and an AC97 2.3 compatible multi-channel audio designed for PC multimedia systems. It also features intelligent detection of plugged peripherals into the audio ports and identifies any incompatible devices. ASUS K8N-E...

Page 14: Unique Asus Features

1.3.2 Unique ASUS features CrashFree BIOS 2 This feature allows you to restore the original BIOS data from the ASUS support CD in case when the BIOS codes and data are corrupted. This

protection eliminates the need to buy a replacement ROM chip. See page 2-6.

Page 15: Before You Proceed

The illustration below shows the location of the onboard LED. SB_PWR ® Standby Powered K8N-E Power K8N-E Onboard LED ASUS K8N-E...

Page 16: Motherboard Overview

FP_AUDIO Accelerated Graphics Port (AGP) ALC850 nVIDIA PCI1 SPDIF_OUT nForce3 250Gb PCI2 4Mbit BIOS PCI3 CHA_FAN FLOPPY PCI4 USBPW56 Super USBPW78 K8N-E CR2032 3V SB_PWR Lithium Cell CMOS Power PCI5 CLRTC GAME USB56 USB78 CHASSIS PANEL Chapter 1: Product introduction...

Page 17: Placement Direction

Place nine (9) screws into the holes indicated by circles to secure the motherboard to the chassis. Do not overtighten the screws! Doing so may damage the motherboard. Place this side towards the rear of the chassis ® K8N-E ASUS K8N-E...

Page 18: Central Processing Unit (Cpu)

The 128-bit-wide data paths of these processors can run applications faster than processors with only 32-bit or 64-bit wide data paths. ® K8N-E Gold Arrow K8N-E CPU Socket 754 Incorrect installation of the CPU into the socket may bend the pins and severely damage the CPU! Chapter 1: Product introduction...

Page 19: Installing The Cpu

CPU! 5. When the CPU is in place, push down the socket lever to secure the CPU. The lever clicks on the side tab to indicate that it is locked. 6. Install specifically designed heatsink and fan assembly. ASUS K8N-E...

Page 20: System Memory

See Qualified Vendors List on page 1-11. Obtain DDR DIMMs only from ASUS qualified vendors for better system performance. Visit the ASUS website (www.asus.com) for the latest DDR 400 Qualified Vendor List for this motherboard.

Page 21: Ddr Qualified Vendors List

DDR Qualified Vendors List The following table lists the PC3200 (DDR400) memory modules that have been tested and qualified for use with this motherboard. Visit the ASUS website (www.asus.com) for the latest DDR 400 QVL for this motherboard. DIMM Vendor...

Page 22: Installing A Dimm

1.7.3 Installing a DIMM DDR DIMM Follow these steps to install a DIMM. 1. Unlock a DIMM socket by pressing the retaining clips outward. 2. Align a DIMM on the socket such that the notch on the DIMM matches the break on the socket.

Page 23: Irq Assignments For This Motherboard

PCI groups, making the system unstable and the card inoperable. 1.8.3 PCI slots The PCI slots support PCI cards such as a LAN card, SCSI card, USB card, and other cards that comply with PCI specifications. ASUS K8N-E 1-13...

Page 24: Agp Slot

Install only +1.5V AGP cards. ® Keyed for 1.5v K8N-E K8N-E Accelerated Graphics Port (AGP) If installing the ATi 9500 or 9700 Pro Series VGA cards, use only the card version PN xxx-xxxxx-30 or later, for optimum performance and overclocking stability.

Page 25: Jumpers

Normal Clear CMOS (Default) K8N-E Clear RTC RAM You do not need to clear the RTC when the system hangs due to overclocking. For system failure due to overclocking, use the C.P.R. (CPU Parameter Recall) feature. Shut down and reboot the system so BIOS can automatically reset parameter settings to its previous values.

Page 26 (Default) USBPW56 USBPW78 ® K8N-E +5VSB K8N-E USB device wake-up (Default) • The USB device wake-up feature requires a power supply that can provide 500mA on the +5VSB lead for each USB port. Otherwise, the system would not power up.

Page 27: Connectors

Audio 2, 4, or 6-channel configuration Port Headset/ 4-channel 6-channel 2-channel Light Blue Line In Rear Speaker Out Rear Speaker Out Lime Line Out Front Speaker Out Front Speaker Out Pink Mic In Mic In Bass/Center Speaker ASUS K8N-E 1-17...

Page 28: Internal Connectors

ullet The hole near the blue connector on the UltraATA cable is intentional. NOTE: Orient the red markings (usually zigzag) on the IDE ribbon cable to PIN 1. ullet K8N-E K8N-E IDE connectors PIN 1 1-18 Chapter 1: Product introduction...

Page 29 NOTE: Orient the red markings on the floppy ribbon cable to PIN 1. K8N-E K8N-E Floppy disk drive connector 3. Serial ATA connectors (7-pin SATA1, SATA2) These next generation connectors support the thin Serial ATA cables for primary internal storage devices. The current Serial ATA interface allows up to 150 MB/s data transfer rate, faster than the standard parallel ATA with 133MB/s (Ultra ATA/133). These connectors support two Serial ATA hard disk drives that...

<u>Page 30</u> +3.3VDC -12.0VDC K8N-E +3.3VDC +3.3VDC K8N-E ATX power connectors 5. Internal audio connectors (4-pin CD, AUX) These connectors allow you to receive stereo audio input from sound sources such as a CD-ROM, TV tuner, or MPEG card. CD (Black) AUX (White)

<u>Page 31</u> Rotation K8N-E +12V K8N-E Fan connectors 7. USB header (10-1 pin USB56, USB78) If the USB ports on the rear panel are inadequate, a USB header is available for additional USB ports. Connect the USB cable of the USB 2.0 module to this header.

<u>Page 32</u> FP_AUDIO ® K8N-E K8N-E Front panel audio connector 9. Chassis intrusion connector (4-1 pin CHASSIS) This lead is for a chassis designed with intrusion detection feature. This requires an external detection mechanism such as a chassis intrusion sensor or microswitch.

<u>Page 33</u> Connect the S/PDIF module cable to this connector, then install the module to a slot opening at the back of the system chassis. SPDIF_OUT SPDIFOUT ® K8N-E K8N-E Digital audio connector The S/PDIF module is purchased separately. ASUS K8N-E 1-23...

<u>Page 34</u> K8N-E IDE_LED Switch* Requires an ATX power supply. K8N-E System panel connector • System Power LED Lead (Green 3-pin PLED) This 3-pin connector connects to the system power LED. The LED lights up when you turn on the system power, and blinks when the system is in sleep mode.

Page 35: Chapter 2: Bios Information

Chapter 2 This chapter tells how to change system settings through the BIOS Setup menus. Detailed descriptions of the BIOS parameters are also provided. BIOS information ASUS K8N-E...

Page 36: Managing And Updating Your Bios

2. ASUS EZ Flash - Updates the BIOS using a floppy disk during POST. 3. ASUS CrashFree BIOS 2 - Updates the BIOS using a bootable floppy disk or the motherboard support CD. Refer to the corresponding sections for details on these utilities.

Page 37: Using Afudos To Update The Bios

2.1.2 Using AFUDOS to update the BIOS To update the BIOS using the AFUDOS.EXE utility: 1. Visit the ASUS website (www.asus.com) to download the latest BIOS file for your motherboard. Save the BIOS file to a bootable floppy disk. Write the BIOS file name on a piece of paper. You need to type the exact BIOS file name at the prompt.

Page 38: Using Afudos To Copy Bios From Pc

When the BIOS update process is complete, the utility returns to the DOS prompt. A:\>afudos /iK8NEB.ROM AMI Firmware Update Utility - Version 1.10 Copyright (C) 2002 American

Megatrends, Inc. All rights reserved. Reading file ..done Erasing flash ..done Writing flash ..

Page 39: Using Asus Ez Flash To Update The Bios

When the copy process is complete, the utility returns to the DOS prompt. 2.1.4 Using ASUS EZ Flash to update the BIOS The ASUS EZ Flash feature allows you to easily update the BIOS without having to go through the long process of booting from a diskette and using a DOS-based utility.

Page 40: Asus Crashfree Bios 2 Utility

Flashed successfully. Rebooting. 2.1.5 ASUS CrashFree BIOS 2 utility The ASUS CrashFree BIOS 2 is an auto recovery tool that allows you to restore the BIOS file when it fails or gets corrupted during the updating process. You can update a corrupted BIOS file using the motherboard support CD or the floppy disk that contains the updated BIOS file.

Page 41: Recovering The Bios From A Floppy Disk

4. Restart the system after the utility completes the updating process. The recovered BIOS may not be the latest BIOS version for this motherboard. Visit the ASUS website (www.asus.com) to download the latest BIOS file. ASUS K8N-E...

Page 42: Bios Setup Program

The BIOS setup screens shown in this chapter are for reference purposes only, and may not exactly match what you see on your screen. Visit the ASUS website (www.asus.com) to download the latest product and BIOS information. Chapter 2: BIOS Setup...

Page 43: Bios Menu Screen

[1.44M, 3.5 in] Use [+] or [-] to configure system Primary IDE Master: [ST320413A] time. Primary IDE Slave: [ASUS CD-S340] Secondary IDE Master: [Not Detected] Secondary IDE Slave: [Not Detected] System Information Sub-menu items Navigation keys 2.2.2 Menu bar...

Page 44: Menu Items

[English] Use [+] or [-] to Primary IDE Master :[ST320413A] configure system time. example, selecting Main shows the Main Primary IDE Slave :[ASUS CD-S340] Secondary IDE Master :[Not Detected] Secondary IDE Slave :[Not Detected] menu items. System Information Select Screen...

Page 45: Main Menu

Legacy Diskette A [1.44M, 3.5 in] Use [+] or [-] to Primary IDE Master : [ST320413A] configure system Primary IDE Slave : [ASUS CD-S340] time. Secondary IDE Master : [Not Detected] Secondary IDE Slave : [Not Detected] Third IDE Master...

Page 46: Primary And Secondary Ide Master/Slave

2.3.4 Primary and Secondary IDE Master/Slave While entering Setup, BIOS auto-detects the presence of IDE devices. There is a separate sub-menu for each IDE device. Select a device item then press <Enter> to display the IDE device information. Primary IDE Master Select the type Device: Hard Disk...

Page 47: System Information

Processor Type: AMD Athlon(tm) 64 Processor 3200+ Speed: 2000MHz Count System Memory Size: 512MB AMI BIOS Displays the auto-detected BIOS information. Processor Displays the auto-detected processor information. System Memory Displays the auto-detected system memory. ASUS K8N-E 2-13...

Page 48: Advanced Menu

Advanced menu The Advanced menu items allow you to change the settings for the CPU and other system devices. Take caution when changing the settings of the Advanced menu items. Incorrect field values may cause the system to malfunction. Configure CPU. JumperFree Configuration CPU Configuration Chipset...

<u>Page 49</u> DDR RAM Voltage [Auto] Allows you to automatically detect or select from a list the DDR operating voltage. Configuration options: [Auto] [2.5V] [2.6V] [2.7V] [2.8V] AGP Voltage

[1.5V] Adjusts the AGP voltage setting. Configuration options: [1.5V] [1.6V] [1.7V] ASUS K8N-E 2-15...

Page 50: Cpu Configuration

• This feature requires the AMD CPU heatsink and fan assembly with monitor chip. If you purchased a separate heatsink and fan package, use the ASUS Q-Fan Technology feature to automatically adjust the CPU fan speed according to your system loading.

Page 51: Chipset

Configuration options: [Auto] [2 CLK] [3 CLK] [4 CLK] [5 CLK] [6 CLK] DRAM RAS PRECHANGE Time [4 CLK] Sets the DRAM RAS PRECHANGE Time. Configuration options: [Auto] [2 CLK] [3 CLK] [4 CLK] [5 CLK] [6 CLK] ASUS K8N-E 2-17...

Page 52 DRAM ACTIVE TIME [Auto] Sets the DRAM ACTIVE TIME. Configuration options: [Auto] [5 CLK] [6 CLK] [7 CLK] [8 CLK] [9 CLK] [10 CLK] [11 CLK] [12 CLK] [13 CLK] [14 CLK] [15 CLK] 17/2T Timing [Auto] Sets the DRAM command timing. When set to Auto, the DRAM timing is set to 2T if the CPU installed can support 2T timing.

Page 53: Onboard Device

Enables or disables the use of the Primary IDE Slave as RAID. Configuration options: [Disabled] [Enabled] Secondary Master as RAID [Disabled] Enables or disables the use of the Secondary IDE Master as RAID. Configuration options: [Disabled] [Enabled] ASUS K8N-E 2-19...

Page 54: Usb Configuration

Secondary Slave as RAID [Disabled] Enables or disables the use of the Secondary IDE Slave as RAID. Configuration options: [Disabled] [Enabled] Third Master as RAID [Disabled] Enables or disables the use of the Third IDE Master as RAID. Configuration options: [Disabled] [Enabled] Fourth Master as RAID [Disabled] Enables or disables the use of the Fourth IDE Master as RAID.

Page 55: Onboard Devices Configuration

Parallel Port Mode is set to ECP. Configuration options: [DMA0] [DMA1] [DMA3] Parallel Port IRQ [IRQ7] Sets the Parallel port IRQ. Configuration options: [IRQ5] [IRQ7] Onboard Game Port [Enabled] Enables or disables the onboard Game port. Configuration options: [Disabled] [Enabled] ASUS K8N-E 2-21...

Page 56: Pci Pnp

Onboard MIDI Port [300] Disables or sets the onboard MIDI port. Configuration options: [Disabled] [300] [330] MIDI IRQ Select [IRQ5] Sets the MIDI port IRQs. Configuration options: [IRQ5] [IRQ7] [IRQ10] [IRQ11] 2.4.6 PCI PnP The PCI PnP menu items allow you to change the advanced settings for PCI/PnP devices.

Page 57 When set to [PCI Device], the specific IRQ is free for use of PCI/PnP devices. When set to [Reserved], the IRQ is reserved for legacy ISA devices. Configuration options: [PCI Device] [Reserved] Reserved Memory Size [Disabled] Disables or sets the reserve memory size. Configuration options: [Disabled] [16k] [32k] [64k] ASUS K8N-E 2-23...

Page 58: Power Menu

Power menu The Power menu items allow you to change the settings for the Advanced Power Management (APM) feature. Select an item then press <Enter> to display the configuration options. Select the ACPI state ACPI Suspend Mode [S1 (POS) & S3 (STR] used for System Repost Video on S3 Resume [No]...

Page 59: Apm Configuration

When set to [Enabled], this parameter allows you to use the PS/2 mouse to resume the system. This feature requires an ATX power supply that provides at least 1A on the +5VSB lead. Configuration options: [Disabled] [Enabled] ASUS K8N-E 2-25...

Page 60: Hardware Monitor

Restore on AC Power Loss [Power Off] When set to Power Off, the system goes into off state after an AC power loss. When set to Power On, the system goes on after an AC power loss. When set to Last State, the system goes into either off or on state whatever was the system

Page 61: Boot Menu

These items specify the boot device priority sequence from the available devices. The number of device items that appear on the screen depends on the the number of devices installed in the system. Configuration options: [xxxxx Drive] [Disabled] ASUS K8N-E 2-27...

Page 62: Hard Disk Drives

Allows you to enable or disable the full screen logo display feature. Configuration options: [Disabled] [Enabled] Make sure that the above item is set to [Enabled] if you wish to use the ASUS MyLogo2™ feature. Add On ROM Display Mode [Force BIOS] Sets the display mode for option ROM.

Page 63: Security

Change Supervisor Password Select this item to set or change the supervisor password. The Supervisor Password item on top of the screen shows the default Not Installed. After you have set a password, this item shows Installed. ASUS K8N-E 2-29...

Page 64 To set a Supervisor Password: 1. Select the Change Supervisor Password item and press <Enter>. 2. From the password box, type a password combination of at least six (6) letters and/or numbers, then press <Enter>. 3. Confirm the password when prompted. The message "Password Installed"...

Page 65: Change User Password

Password Check [Setup] When set to [Setup], BIOS checks for user password when accessing the Setup utility. When set to [Always], BIOS checks for user password both when accessing Setup and booting the system. Configuration options: [Setup] [Always] ASUS K8N-E 2-31...

Page 66: Exit Menu

Exit menu The Exit menu items allow you to load the optimal or failsafe default values for the BIOS items, and save or discard your changes to the BIOS items. Exit system setup Exit Options after saving the changes. Exit & Save Changes Exit &...

Page 67: Chapter 3: Software Support

Chapter 3 This chapter describes the contents of the support CD that comes with the motherboard package. Software support...

Page 68: Install An Operating System

The contents of the support CD are subject to change at any time without notice. Visit the ASUS website for updates. 3.2.1 Running the support CD To begin using the support CD, simply insert the CD into your CD-ROM drive. The CD automatically displays the Drivers menu if Autorun is enabled in your computer.

Page 69: Drivers Menu

Installs the Universal Serial Bus 2.0 (USB 2.0) driver. ® ® For Windows XP users, make sure to install Windows XP Service Pack 1 or later to support USB 2.0. AMD Cool 'n' Quiet Driver Installs the AMD Cool 'n' Quiet!™ Technology driver. ASUS K8N-E...

Page 70: Utilities Menu

Install ASUS Update This program allows you to download the latest version of the BIOS from the ASUS website. Before using the ASUS Update, make sure that you have an Internet connection so you can connect to the ASUS website. Installing ASUS Update also installs ASUS $Mylogo2^{TM}$.

Page 71: Manual Menu

Some user manuals listed in this menu may not be applicable for this motherboard model. 3.2.5 ASUS Contact Information Clicking the ASUS Contact Information tab displays as stated. You may also find this information on the inside front cover of this user guide. ASUS K8N-E...

Page 72: Cool 'N' Quiet!™ Technology

Cool 'n' Quiet!™ Technology The motherboard supports the AMD Cool 'n' Quiet!™ Technology that dynamically and automatically change the CPU speed, voltage and amount of power depending on the task the CPU performs. 3.3.1 Enabling Cool 'n' Quiet!™ Technology To enable Cool 'n' Quiet!™ technology: 1.

Page 73: Launching The Cool 'N' Quiet!™ Software

 \circledR 1. If you are using Windows 2000, click the Start button. Select Programs > ASUS > Cool & Quiet > Cool & Quiet. \circledR 2. If you are using Windows XP, click the Start button. Select All Programs >...

Page 74 Chapter 3: Software support...