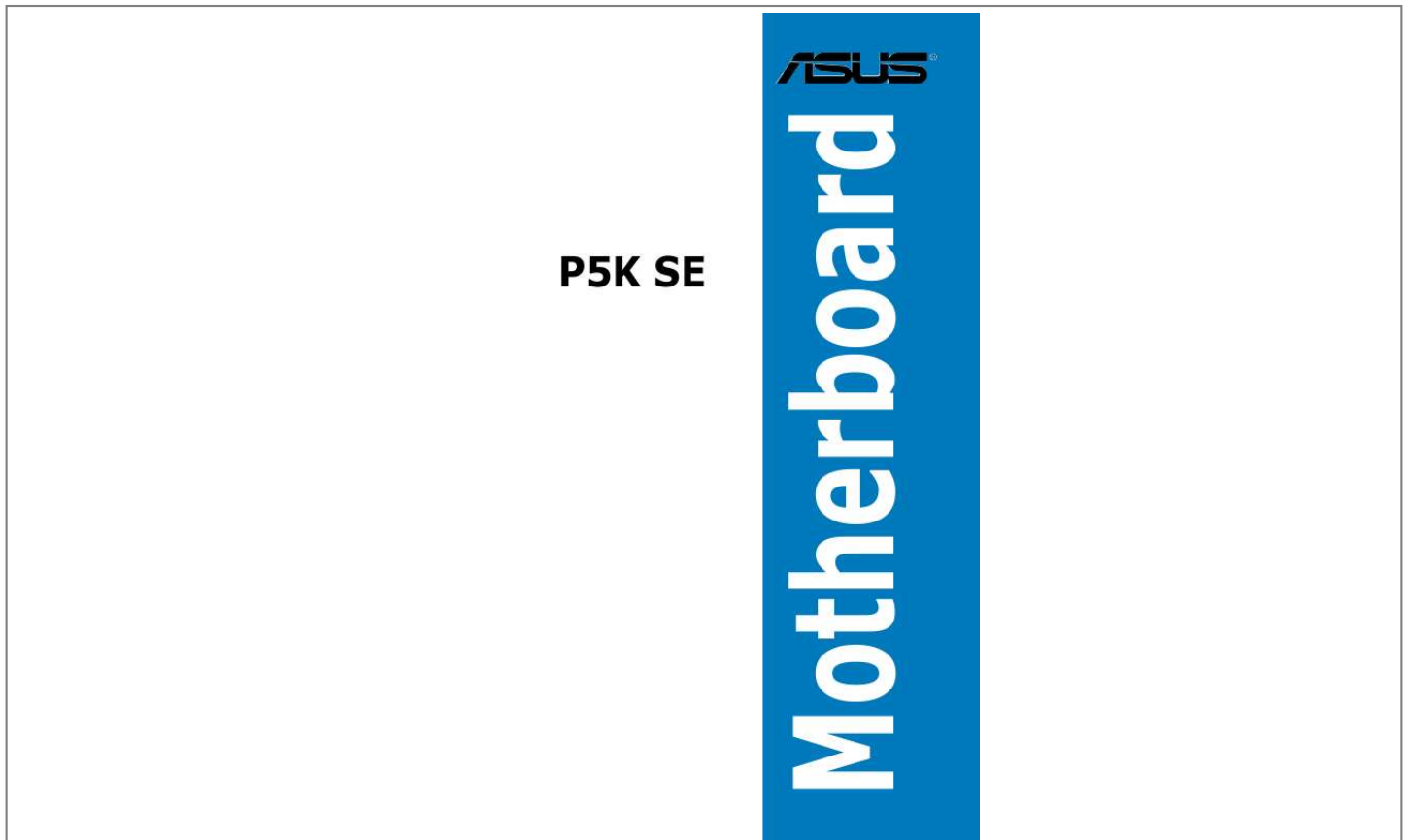




Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for ASUS P5K SE. You'll find the answers to all your questions on the ASUS P5K SE in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual ASUS P5K SE
User guide ASUS P5K SE
Operating instructions ASUS P5K SE
Instructions for use ASUS P5K SE
Instruction manual ASUS P5K SE



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Manual abstract:

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.....
.....
. vii Safety information

.....
.....
.....

.....
.....
.....

.....
.....

@@@xi Chapter1: 1.1 1.2 1.3 Welcome! @@@1-1 Special features..

.....

.....
.....
.....

.....
.....
.....

.... 1-2 1.3.1 1.3.2 1.3.
3 1.3.4 Product highlights ...

.....
.....

.....
.....
.....

. 1-2 ASUS AI Lifestyle features

.....
.....

.....
.....
.....

..... 1-4 ASUS Stylish features...

.....
.....
.....

.....
.....
.....

1-5 ASUS Intelligent Overclocking features

.....

.....
.. 1-6 Product introduction Chapter2: 2.1 2.2 Before you proceed ..

.....

.....

.....

.....

.....

.....

.....

.....

..... 2-1 Motherboard overview ...

.....

.....

.....

.....

.....

.....

.....

.....

.. 2-2 2.2.1 2.2.2 2.2.3 2.2.

4 2.3.1 2.3.2 2.

3.3 2.4.1 2.4.

2 2.4.3 2.4.4 2.5.1 2.5.2 2.5.

3 2.5.4 2.5.5 2.5.6 Placement direction

.....

.....

.....

.....

.....

.....

.....

.. 2-2 Screw holes

.....

.....

.....

.....

.....

.....

.....

.....

2-2 Motherboard layout

.....

.....

.....

.....

.....

.....

..... 2-3 Layout contents...

.....

.....

.....

.....

.....

.....

.....

.....
2-4 Installing the CPU

.....
.....

.....
.....
.....
.....

..... *2-7 Installing the CPU heatsink and fan .*

.....
.....
.....

..... *2-9 Uninstalling the CPU heatsink and fan*

.....
.....

.....*2-11 Overview ...*

.....
.....
.....

.....
.....
.....
.....

.....
.....

..... *2-13 Memory configurations..*

.....
.....
.....
.....
.....

..... *2-14 Installing a DIMM ..*

.....
.....
.....

.....
.....
.....
.....

..... *2-18 Removing a DIMM*

.....
.....
.....

.....
.....
.....
.....

..... *2-18 Installing an expansion card*

.....
.....
.....

.....
... 2-19 Configuring an expansion card ..

.....
.....

.....
.....
.....

2-19 Interrupt assignments

.....
.....
.....
.....

.....
. 2-20 PCI slots....

.....
.....

.....
.....
.....
.....

.....
.....
.....

... 2-21 PCI Express x1 slots

.....
.....
.....
.....

.....
.....

. 2-21 PCI Express x16 slots

.....
.....
.....
.....
.....

..... 2-21 iii Hardware information 2.3 Central Processing Unit (CPU) ..

.....
.....
.....

.....
.....
.....

..... 2-6 2.

4 System memory

.....
.....
.....

.....
.....
.....
.....

.....

... 2-13 2.5 Expansion slots.

.....
.....

.....
.....
.....
.....

.....
.....
.....

..... 2-19 Contents 2.6 2.

7 Jumper .. 2-22 Connectors

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

... 2-24 2.7.1 2.7.2 Rear panel connectors ...

.....
.....
.....
.....

.....
.....
.....

.. 2-24 Internal connectors ...

.....
.....
.....
.....
.....

.. 2-26 Chapter3: 3.1 3.2 Starting up for the first time .

.....
.....
.....

.....
.....
.....

@@3-2 3.2.1 3.2.2 Using the OS shut down function.

.....
.....
.....

.....
.....
.....

3-2 Using the dual function power switch.....

.....
.....
.....

3-2 Powering up Chapter4: 4.1 Managing and updating your BIOS

.....
.....
.....

.....
.....
.....
.....

4-10 Navigation keys.....

.....
.....
.....

.....
.....
.....
.....

. 4-10 Menu items

.....
.....
.....

.....
.....
.....
.....

.....4-11 Sub-menu items .

.....
.....
.....

.....
.....
.....
.....

4-11 Configuration fields

.....
.....
.....

.....
.....
.....
.....

.....4-11 Pop-up window

.....
.....
.....

.....
.....
.....
.....

.....4-11 Scroll bar ..

.....
.....
.....

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....
.....

..... 4-9 4.3 Main menu

.....
.....
.....

.....
.....
.....

.....
.....
.....

..... 4-12 iv Contents 4.4 Advanced menu .

.....
.....
.....
.....

.....
.....
.....
.....

.....

.. 4-16 4.4.1 4.

4.2 4.4.3 4.4.

4 4.4.5 4.5 4.4.6 4.5.1 4.5.2 4.

5.3 4.5.4 4.5.5 4.6 4.5.6 4.6.

1 4.6.2 4.7 4.6.

3 4.7.1 4.7.2 Jumperfree Configuration .

.....

.....

.....

.....

.....

.... 4-16 USB Configuration

.....

.....

.....

.....

.....

.....

.....

4-20 CPU Configuration

.....

.....

.....

.....

.....

..... 4-21 Chipset

.....
.....
.....
.....
.....
.....
.....

4-22 OnBoard Devices Configuration

.....
.....

4-23 PCI PnP

.....
.....
.....
.....
.....
.....
.....

..... 4-24 Suspend Mode [Auto] ...

.....
.....
.....
.....

... 4-25 Repost Video on S3 Resume [Disabled] ..

.....

. 4-25 ACPI Version [Disabled]....

.....
.....
.....

..... 4-25 ACPI APIC Support [Enabled].

.....
.....
.....

..... 4-25 APM Configuration ..

.....
.....
.....
.....
.....

.... 4-26 Hardware Monitor

.....
.....
.....
.....
.....
.....
.....

. 4-27 Boot Device Priority

.....
.....
.....
.....
.....
.....

..... 4-29 Boot Settings Configuration

.....
.....
.....
.....

..... 4-30 Security ...

.....
.....
.....
.....
.....
.....
.....

4-31 ASUS EZ Flash 2

.....
.....
.....
.....

... 4-33 ASUS O.C.
Profile.....

.....
.....
.....
.....

.. 4-34 Power menu ...

.....
.....
.....
.....
.....

.....
.....
.....

..... 4-25 Boot menu ...

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

..... 4-29 Tools menu .

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

4-33 4.8 5.1 Exit menu

.....
.....
.....
.....

.....
.....
.....
.....

.....
.....

. 4-35 Installing an operating system

.....
.....

.....
.....
.....

..... 5-1 5.2.1 5.

2.2 5.2.3 5.2.

4 5.2.5 5.2.6 5.

3.1 5.3.2 5.3.3 5.3.4 Running the support CD ...

.....
.....
.....
.....

.....
.....

. 5-1 Drivers menu....

.....

.....

.....

.....

.....

.....

.....

.....

... 5-2 Utilities menu

.....

.....

.....

.....

.....

.....

.....

..... 5-3 Manual menu .

.....

.....

.....

.....

.....

.....

.....

.....

..... 5-5 ASUS Contact information

.....

.....

.....

.....

.....

.....

. 5-5 Other information

.....

.....

.....

.....

.....

.....

.....

. 5-6 ASUS MyLogo2TM

.....

.....

.....

.....

.....

.....

.....

5-8 Audio configurations

.....

.....

.....

.....

.....
... 5-10 ASUS PC Probe II..
.....
.....

.....
5-14 ASUS AI Suite

.....
... 5-20 Chapter5: Software support 5.3 Software information .
.....
.....

.....
. 5-8 v Contents 5.3.5 5.3.6 5.3.7 5.3.8 A.

1 ASUS AI Gear2

. 5-22 ASUS AI Nap

..... 5-23 ASUS Q-Fan 2

..... 5-24 ASUS AI Booster...

.....
.....
.....
.....
.....

..... 5-25 Appendix: CPU features A.2 Intel® EM64T...

.....
.....
.....
.....
.....

.....A-1 A.

2.1 Enhanced Intel SpeedStep® Technology (EIST)

.....
.....

.....A-1 A.2.2 System requirements ...

.....
.....
.....

.....
.....
.....

.A-1 Using the EIST

.....
.....
.....

.....
.....
.....

.....A-2 A.3 Intel® Hyper-Threading Technology

.....
.....
.....

.....A-3 vi Notices Federal Communications Commission Statement This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions: · · This device may not cause harmful interference, and This device must accept any interference received including interference that may cause undesired operation. 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 manufacturer's 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 o Where to find more information Refer to the following sources for additional information and for product and software updates. 1. The ASUS website provides updated information on ASUS hardware and software products. Refer to the ASUS contact information. Optional documentation Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer.

These documents are not part of the standard package. ASUS websites 2. ix Conventions used in this guide To make sure that you perform certain tasks properly, take note of the following symbols used throughout this manual. DANGER/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. IMPORTANT: Instructions that you MUST

follow to complete a task. NOTE: Tips and additional information to help you complete a task. Typography Bold text Indicates a menu or an item to select. Used to emphasize a word or a phrase. Keys enclosed in the less-than and greater-than sign means that you must press the enclosed key.

Example: <Enter> means that you must press the Enter or Return key. <Key1>+<Key2>+<Key3> I.....

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.... 1-2 1 ASUS P5K SE 1.1 Welcome! Thank you for buying an ASUS® P5K SE motherboard! The motherboard delivers a host of new features and latest technologies, making it another standout in the long line of ASUS quality motherboards! Before you start installing the motherboard, and hardware devices on it, check the items in your package with the list below. 1.2 Package contents ASUS P5K SE 2 x Serial ATA signal cable 1 x Serial ATA power cable 1 x Ultra DMA 133/100/66 cable 1 x Floppy disk drive cable I/O shield 1 x ASUS Q-Connector Kit (USB, system panel; Retail version only) ASUS motherboard support CD ASUS Superb Software Library CD User guide Check your motherboard package for the following items.



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Motherboard Cables Accessories Application CD Documentation If any of the above items is damaged or missing, contact your retailer. ASUS P5K SE 1-1 I.

3 1.3.1 Special features Product highlights Green ASUS This motherboard and its packaging comply with the European Union's Restriction on the use of Hazardous Substances (RoHS). This is in line with the ASUS vision of creating environment-friendly and recyclable products/packaging to safeguard consumers' health while minimizing the impact on the environment. Supports This motherboard supports the latest Intel® Quad-core processors in the LGA775 package and Intel's next-generation 45nm multi-core processors. It is excellent for multi-tasking, multi-media and enthusiastic gamers with 1333/1066/800 MHz FSB. Intel® Quad-core processor is one of the most powerful CPU in the world. See page 2-6 for details. Intel® Quad-core Processor Ready This motherboard supports the latest Intel® Core™2 processor in the LGA775 package and Intel's next-generation 45nm multi-core processors. With the new Intel® Core™ microarchitecture technology and 1333/1066/800 MHz FSB, the Intel® Core™2 is one of the most powerful and energy efficient CPUs in the world.

See page 2-6 for details. Intel® Core™2 Duo/ Intel® Core™2 Extreme CPU support Intel P35 Chipset The Intel® P35 Express Chipset is the latest chipset designed to support the next generation 45nm CPU and up to 8GB of dual-channel DDR2 800/677 MHz memory architecture. It also supports 1333/1066/800 FSB (Front Side Bus), PCI Express x16 graphics and multi-core CPUs. Native DDR2 1066 memory support To attain top performance, ASUS engineers have successfully unleashed the true potential of DDR2 memory. While in FSB 1333 mode, ASUS's exclusive technology offers a choice of DDR2 1066, providing great performance for 3D graphics and other memory demanding applications.

See page 2-13 for details. 1-2 Chapter 1: Product Introduction ASUS Super Memspeed Technology To attain top performance, ASUS has managed to break through current FSB and DRAM ratio proportions by utilizing Super Memspeed Technology the latest technology that provides even more precise overclocking options to unleash the true potential of DDR2 memory. The DDR2 Mode maximizes system performance by eliminating the bottleneck when overclocking both the CPU and memory providing great performance for 3D graphics and other memory demanding applications. See page 2-13 for details. Serial ATA 3.

0 Gb/s technology and SATA-On-The-Go This motherboard supports the next-generation hard drives based on the Serial ATA (SATA) 3Gb/s storage specification, delivering enhanced scalability and doubling the bus bandwidth for high-speed data retrieval and saves. The external SATA port located at the back I/O provides smart setup and hot-plug functions. Easily backup photos, videos and other entertainment contents to external devices. See pages 2-25, and 2-28 for details. S/PDIF digital sound ready This motherboard provides convenient connectivity to external home theater audio systems via coaxial and optical S/PDIF-out (SONY-PHILIPS Digital Interface) jacks. It allows to transfer digital audio without converting to analog format and keeps the best signal quality. See pages 2-25 and 2-29 for details. High Definition Audio Enjoy high-end sound quality on your PC! The onboard 8-channel High Definition Audio CODEC enables high-quality 192KHz/24-bit audio output, jack-sensing feature, and multi-streaming technology that simultaneously sends different audio streams to different destinations. You can now talk to your partners on the headphone while playing multi-channel network games. See pages 2-24 and 2-25 for details.

ASUS P5K SE 1-3 1.3.2 ASUS AI Lifestyle features ASUS Quiet Thermal Solution ASUS Quiet Thermal solution makes system more stable and enhances the overclocking capability. AI Gear 2 AI Gear 2 allows you to choose profiles to adjust the CPU frequency and Vcore voltage to minimize system noise and power consumption. You can change the mode in real-time in the operating system to max power saving mode and save up to 50% power when using word processing applications. See page 5-22 for details. AI Nap With AI Nap, the system can continue running at minimum power and noise when you are temporarily away. To wake the system and return to the OS environment, simply click the mouse or press a key. See page 5-23 for details. Q-Fan 2 ASUS Q-Fan2 technology intelligently adjusts both CPU fan and chassis fan speeds according to system loading to ensure quiet, cool and efficient operation.

See page 4-27 and 5-25 for details. ASUS Crystal Sound This feature can enhance speech-centric applications like Skype, online game, video conference and recording. Noise Filter This feature detects repetitive and stationary noises (non-voice signals) like computer fans, air conditioners, and other background noises then eliminates it in the incoming audio stream while recording. 1-4 Chapter 1: Product Introduction ASUS EZ DIY ASUS EZ DIY feature collection provides you easy ways to install computer components, update the BIOS or back up your favorite settings. ASUS Q-Connector ASUS Q-Connector allows you to easily connect or disconnect the chassis front panel cables to the motherboard.

This unique module eliminates the trouble of connecting the system panel cables one at a time and avoiding wrong cable connections. See page 2-35 for details. ASUS O.C. Profile The motherboard features the ASUS O.

C. Profile that allows users to conveniently store or load multiple BIOS settings. The BIOS settings can be stored in the CMOS or a separate file, giving users freedom to share and distribute their favorite settings. See page 4-34 for details. ASUS CrashFree BIOS 3 The ASUS CrashFree BIOS 3 allows users to restore corrupted BIOS data from a USB flash disk containing the BIOS file. See page 4-8 for details. ASUS EZ Flash 2 EZ Flash 2 is a user-friendly BIOS update utility. Simply press the predefined hotkey to launch the utility and update the BIOS without entering the OS. Update your BIOS easily without preparing a bootable diskette or using an OS-based flash utility. See page 4-5 and 4-33 for details.

Smart Support CD It provides a checklist to allow the user to see which drivers are already installed, as well as those that aren't. When using ASUS PC Probe II, you can easily see the critical parts of the computer. 1.3.3 ASUS Stylish features ASUS MyLogo2™ This feature allows you to convert your favorite photo into a 256-color boot logo for a more colorful and vivid image on your screen. See pages 5-8 and 5-9 for details. ASUS P5K SE 1-5 1.3.4 ASUS Intelligent Overclocking features AI Booster The ASUS AI Booster allows you to overclock the CPU speed in Windows environment without the hassle of booting the BIOS. See page 5-26 for details.



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Precision Tweaker This feature allows you to fine tune the CPU/memory voltage and gradually increase the memory Front Side Bus (FSB) and PCI Express frequency at 1MHz increment to achieve maximum system performance. See page 4-17 to 4-19 for details. *C.P.R.* (CPU Parameter Recall) The C.P.R. feature of the motherboard BIOS allows automatic re-setting to the BIOS default settings in case the system hangs due to overclocking. When the system hangs due to overclocking, C.P.R. eliminates the need to open the system chassis and clear the RTC data. Simply shut down and reboot the system, and the BIOS automatically restores the CPU default setting for each parameter. 1-6 Chapter 1: Product Introduction This chapter lists the hardware setup procedures that you have to perform when installing system components. It includes description of the jumpers and connectors on the motherboard. Hardware information 2 Chapter summary 2 2.1 2.2 2.3 2.

4 2.5 2.6 Before you proceed

.....
.....
.....
.....
.....
.....
.....

. 2-1 Motherboard overview

.....
.....
.....
.....
.....
.....
.....

. 2-2 Central Processing Unit (CPU)

.....
.....
.....
.....

..... 2-6 System memory ...

.....
.....
.....
.....
.....
.....
.....
.....

2-13 Expansion slots.....

.....
.....
.....
.....
.....
.....
.....

.... 2-19 Connectors

.....
.....

.....
.....
.....
.....
.....
.....
.....
.....
.....

..... 2-24 Jumpers @ 2-22 2.7 ASUS P5K SE 2.1 Before you proceed Take note of the following precautions before you install motherboard components or change any motherboard settings. · · Unplug the power cord from the wall socket before touching any component. Use a grounded wrist strap or touch a safely grounded object or a metal object, such as the power supply case, before handling components to avoid damaging them due to static electricity.

Hold components by the edges to avoid touching the ICs on them. Whenever you uninstall any component, place it on a grounded antistatic pad or in the bag that came with the component. Before you install or remove any component, ensure that the ATX power supply is switched off or the power cord is detached from the power supply. Failure to do so may cause severe damage to the motherboard, peripherals, and/or components. · · · Onboard LED The motherboard comes with a standby power LED that lights up to indicate that the system is ON, in sleep mode, or in soft-off mode. This is a reminder that you should shut down the system and unplug the power cable before removing or plugging in any motherboard component. The illustration below shows the location of the onboard LED. P5K SE ® SB_PWR P5K SE Onboard LED ON Standby Power OFF Powered Off ASUS P5K SE 2-1 2.2 Motherboard overview Before you install the motherboard, study the configuration of your chassis to ensure that the motherboard fits into it. Make sure to unplug the power cord before installing or removing the motherboard.

Failure to do so can cause you physical injury and damage motherboard components. 2.2.1 Placement direction When installing the motherboard, make sure that you place it into the chassis in the correct orientation. The edge with external ports goes to the rear part of the chassis as indicated in the image below.

2.2.2 Screw holes Place six (6) screws into the holes indicated by circles to secure the motherboard to the chassis. Do not overtighten the screws! Doing so can damage the motherboard. ® 2-2 Chapter 2: Hardware information P5K SE Place this side towards the rear of the chassis 2.

2.3 Motherboard layout 19.3cm (7.6in) KB_USB56 PS2_USBPW CPU_FAN SPDIF_O1 ESATA LAN1_USB12 AUDIO ATX12V EATXPWR FLOPPY USB78
® AttansIc LI PCIEX16_1 PCIEX1_3 Marvell 88SE6111 PCI1 PCI2 Intel® ICH9 SATA4 SATA2 CLRTC USBPW9-12 PWR_FAN BIOS USB910 CHA_FAN
PANEL SATA3 SATA1 CD ALC883 PCIEX1_1 SPDIF_OUT CHASSIS Super I/O SB_PWR CR2032 3V Lithium Cell CMOS Power PCIEX1_2 AAFP
PRI_EIDE COM1 USB1112 Refer to 2.7 Connectors for more information about rear panel connectors and internal connectors. ASUS P5K SE 30.5cm
(12.0in) Intel® P35 USBPW1-4 USBPW78 P5K SE DDR2 DIMM_A1 (64 bit,240-pin module) DDR2 DIMM_A2 (64 bit,240-pin module) USB34 DDR2
DIMM_B1 (64 bit,240-pin module) DDR2 DIMM_B2 (64 bit,240-pin module) LGA775 2-3 2.2.4 Slots 1.

2. 3 4. Layout contents DDR2 DIMM slots PCI slots PCI Express x1 slot PCI Express x16 slots Page 2-13 2-21 2-21 2-21 Jumper 1. 2. 3. Clear RTC RAM (3-pin CLRTC) Keyboard power (3-pin PS2_USBPW) USB device wake-up (3-pin USBPW1-4, USBPW5-8, USB9-12) Page 2-22 2-23 2-23 Rear panel connectors 1. PS/2 keyboard port (purple) 2. LAN (RJ-45) port 3. Center/Subwoofer port (orange) 4. Rear Speaker Out port (black) 5.

Line In port (light blue) 6. Line Out port (lime) 7. Microphone port (pink) 8. Side Speaker Out port (gray) 9. USB 2.0 ports 1 and 2 10. External SATA port 11. USB 2.0 ports 3 and 4 12. Coaxial S/PDIF Out port 13.

USB 2.0 ports 5 and 6 Page 2-24 2-24 2-24 2-24 2-24 2-24 2-24 2-24 2-25 2-25 2-25 2-25 2-4 Chapter 2: Hardware information Internal connectors 1. Floppy disk drive connector (34-1 pin FLOPPY) 2. IDE connector (40-1 pin PRI_EIDE) 3. ICH9 Serial ATA connectors (7-pin SATA1-4) 4. Digital audio connector (4-1 pin SPDIF_OUT) 5. USB connectors (10-1 pin USB78, USB910, USB1112) 6. Optical drive audio connector (4-pin CD) 7. CPU, chassis, and power fan connectors (4-pin CPU_FAN, 3-pin CHA_FAN, 3-pin PWR_FAN) 8. Serial port connector (10-1 pin COM1) 9.

10. 11. 12. Chassis intrusion connector (4-1 pin CHASSIS) Front panel connector (10-1 pin AAFP) ATX power connectors (24-pin EATXPWR, 4-pin EATX12V) System panel connector (20-8-pin PANEL) · · · · System power LED (2-pin PLED) Hard disk drive activity LED (2-pin IDE_LED) System warning speaker (4-pin SPEAKER) ATX power button/soft-off button (2-pin PWRSW) Reset button (2-pin RESET) Page 2-26 2-27 2-28 2-29 2-30 2-30 2-31 2-31 2-32 2-32 2-33 2-34 ASUS Q-connector (system panel) 2-35 ASUS P5K SE 2-5 2.3 Central Processing Unit (CPU) The motherboard comes with a surface mount LGA775 socket designed for the Intel® Core™2 Quad / Intel® Core™2 Extreme / Core™2 Duo / Pentium® Extreme / Pentium® D / Pentium® 4 / Celeron® D processors. · · Make sure that all power cables are unplugged before installing the CPU. Connect the chassis fan cable to the CHA_FAN1 connector to ensure system stability. Upon purchase of the motherboard, make sure that the PnP cap is on the socket and the socket contacts are not bent. Contact your retailer immediately if the PnP cap is missing, or if you see any damage to the PnP cap/socket contacts/motherboard components.

ASUS will shoulder the cost of repair only if the damage is shipment/transit-related.

Keep the cap after installing the motherboard. ASUS will process Return Merchandise Authorization (RMA) requests only if the motherboard comes with the cap on the LGA775 socket. The product warranty does not cover damage to the socket contacts resulting from incorrect CPU installation/removal, or misplacement/loss/incorrect removal of the PnP cap.



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1. Installing the CPU To install a CPU: Locate the CPU socket on the motherboard. ® P5K SE CPU Socket 775 Before installing the CPU, make sure that the socket box is facing towards you and the load lever is on your left. 2. Press the load lever with your thumb (A), then move it to the left (B) until it is released from the retention tab.

A Retention tab Load lever P5K SE PnP cap B This side of the socket box should face you. To prevent damage to the socket pins, do not remove the PnP cap unless you are installing a CPU. 3. Lift the load lever in the direction of the arrow to a 135° angle. ASUS P5K SE 2-7 4. Lift the load plate with your thumb and forefinger to a 100° angle (A), then push the PnP cap from the load plate window to remove (B). B A Load plate Alignment key 5. Position the CPU over the socket, making sure that the gold triangle is on the bottom-left corner of the socket then fit the socket alignment key into the CPU notch. CPU notch Gold triangle mark The CPU fits in only one correct orientation. DO NOT force the CPU into the socket to prevent bending the connectors on the socket and damaging the CPU! 6.

7. Close the load plate (A), then push the load lever (B) until it snaps into the retention tab. A If installing a dual-core CPU, connect the chassis fan cable to the CHA_FAN1 connector to ensure system stability. B 2-8 Chapter 2: Hardware information 2.3.2 ® Installing the CPU heatsink and fan The Intel LGA775 processor requires a specially designed heatsink and fan assembly to ensure optimum thermal condition and performance. · When you buy a boxed Intel® processor, the package includes the CPU fan and heatsink assembly. If you buy a CPU separately, make sure that you use only Intel®-certified multi-directional heatsink and fan. Your Intel® LGA775 heatsink and fan assembly comes in a push-pin design and requires no tool to install. If you purchased a separate CPU heatsink and fan assembly, make sure that you have properly applied Thermal Interface Material to the CPU heatsink or CPU before you install the heatsink and fan assembly.

· Make sure that you have installed the motherboard to the chassis before you install the CPU fan and heatsink assembly. To install the CPU heatsink and fan: 1. Place the heatsink on top of the installed CPU, making sure that the four fasteners match the holes on the motherboard. Orient the heatsink and fan assembly such that the CPU fan cable is closest to the CPU fan connector. Motherboard hole Narrow end of the groove Fastener Make sure to orient each fastener with the narrow end of the groove pointing outward.

(The photo shows the groove shaded for emphasis.) ASUS P5K SE 2-9 2. Push down two fasteners at a time in a diagonal sequence to secure the heatsink and fan assembly in place. A A B B A B B A 3. Connect the CPU fan cable to the connector on the motherboard labeled CPU_FAN.

CPU_FAN GND CPU_FAN PWR CPU_FAN IN CPU_FAN PWM ® P5K SE CPU fan connector Do not forget to connect the CPU fan connector! Hardware monitoring errors can occur if you fail to plug this connector. 2-10 P5K SE Chapter 2: Hardware information 2.3.3 Uninstalling the CPU heatsink and fan To uninstall the CPU heatsink and fan: 1. 2. Disconnect the CPU fan cable from the connector on the motherboard. Rotate each fastener counterclockwise. 3. Pull up two fasteners at a time in a diagonal sequence to disengage the heatsink and fan assembly from the motherboard. B A B A A B B A 4.

Carefully remove the heatsink and fan assembly from the motherboard. ASUS P5K SE 2-11 5. Rotate each fastener clockwise to ensure correct orientation when reinstalling. Narrow end of the groove The narrow end of the groove should point outward after resetting. (The photo shows the groove shaded for emphasis.) Refer to the documentation in the boxed or stand-alone CPU fan package for detailed information on CPU fan installation. 2-12 Chapter 2: Hardware information 2.4 2.4.1 System memory Overview The motherboard comes with four Double Data Rate 2 (DDR2) Dual Inline Memory Modules (DIMM) sockets.

The figure illustrates the location of the DDR2 DIMM sockets: ® P5K SE DIMM_A1 DIMM_A2 P5K SE 240-pin DDR2 DIMM sockets Channel Channel A Channel B Sockets DIMM_A1 and DIMM_B1 DIMM_A2 and DIMM_B2 · This chipset officially supports DDR2-800 MHz. With the ASUS Super Memspeed Technology, this motherboard natively supports up to DDR2-1066 MHz. See the table below. FSB 1333 1333 1066 1066 1066* 800 667 1066* 800 667 · *If you install a DDR2-1066 memory module whose SPD is DDR2-800, make sure that you set the DRAM Frequency item in BIOS to [DDR2-1066MHz]. See section 4.

4.1 Jumperfree Configuration for details. ASUS P5K SE DIMM_B1 DIMM_B2 2-13 2.4.2 Memory configurations You may install 256 MB, 512 MB, 1 GB, and 2 GB unbuffered non-ECC DDR2 DIMMs into the DIMM sockets.

Recommended Memory Configurations Mode Single-Channel Dual-channel (1) Dual-channel (2) · Sockets DIMM_A1 Populated Populated Populated DIMM_A2 Populated DIMM_B1 Populated Populated Populated DIMM_B2 Populated You may install varying memory sizes in Channel A and Channel B. The system maps the total size of the lower-sized channel for the dual-channel configuration. Any excess memory from the higher-sized channel is then mapped for single-channel operation. Always install DIMMs with the same CAS latency. For optimum compatibility, it is recommended that you obtain memory modules from the same vendor. If you install four 1 GB memory modules, the system may only recognize less than 3GB because the address space is reserved for other critical functions. This limitation appears on Windows® XP/Vista 32-bit operation system which does not support Physical Address Extension (PAE). If you install Windows® XP/Vista 32-bit operation system, a total memory of less than 3GB is recommended. This motherboard does not support memory modules made up of 128 Mb chips. · · · · Notes on memory limitations · Due to chipset limitation, this motherboard can only support up to 8 GB on the operating systems listed below.

You may install a maximum of 2 GB DIMMs on each slot. 64-bit Windows® XP Professional x64 Edition Windows® Vista x64 Edition · Some old-version DDR2-800 DIMMs may not match Intel®'s On-Die-Termination (ODT) requirement and will automatically downgrade to run at DDR2-667. If this happens, contact your memory vendor to check the ODT value. Due to chipset limitation, DDR2-800 with CL=4 will be downgraded to run at DDR2-667 by default setting. If you want to operate with lower latency, adjust the memory timing manually.



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Chapter 2: Hardware information · 2-14 P5K SE Motherboard Qualified Vendors Lists (QVL) DDR2-1066 MHz capability Size 512 512 512 1024 1024 1024 1024 Vendor OCZ Crucial Kingston Kingston CORSAIR CORSAIR OCZ Kingston CORSAIR SS/ DS DS SS SS DS DS DS DS DS DS Part No. OCZ2P10002GK / PC2 8000 / 1G EL Dual CH / Platinum XTC BL646AA1005.8FD / CL111R5W6-65183 KHX8500D2 / 512 / 9905315 - 028.AOOLF / 2297056 2.2V KHX8000D2 / 1G / 9905316 - 028.

AOOLF / 2310576 2.2V CM2X1024-8500C5D 1024MB / XMS8505v1.2 / 0648081-1 CM21024-8500-C5 / XMS8505v1.1 / 0616126-12 OCZ2TA1000VX22GK / PC2 8000 / 1GB Dual CH / Titanium Alpha VX2 KHX8500D2K2 / 2GN / 9905316 - 071.AOOLF K2 / 2733866 2.

2V CM2X1024 - 9136C5D / XMS9105V1.1 DIMM support A* B* · C* If you install a DDR2-1066 memory module whose SPD is DDR2-800, make sure that you set the DRAM Frequency item in BIOS to [DDR2-1066MHz]. See section 4.4.1 Jumperfree Configuration for details.

· · · A*: Supports one module inserted in any slot as Single-channel memory configuration. B*: Supports one pair of modules inserted into either the yellow slots or the black slots as one pair of Dual-channel memory configuration. C*: Supports 4 modules inserted into both the yellow and black slots as two pairs of Dual-channel memory configuration. Visit the ASUS website for the latest DDR2-1066/800/667MHz QVL. ASUS P5K SE 2-15 P5K SE Motherboard

Qualified Vendors Lists (QVL) DDR2-800 MHz capability Size 512MB 1024MB 1024MB 1024MB 256MB 512MB 1024MB 512MB 256MB 512MB 512MB 1024MB 1024MB 512MB 1024MB 1024MB 1024MB 512MB 1024MB 512MB 1024MB 512MB 1024MB 512MB 1024MB 512MB 1024MB 512MB 1024MB Vendor KINGSTON KINGSTON KINGSTON KINGSTON Qimonda Qimonda Qimonda SAMSUNG SAMSUNG SAMSUNG Hynix MICRON MICRON CORSAIR Crucial Crucial Crucial Crucial Apacer Apacer A-DATA A-DATA KINGMAX KINGMAX Transcend Transcend Super Talent NANYA NANYA PSC PSC Chip No. K4T51083QC Heat-Sink Package Heat-Sink Package V59C1512804QBF25 HYB18T512160BF-25F HYB18T512800BF25F HYB18T512800BF25F EDD339XX K4T51163QC-ZCE7 ZCE7K4T51083QC HY5PS12821CFP-S5 D9GKX D9GKX Heat-Sink Package Heat-Sink Package Heat-Sink Package Heat-Sink Package Heat-Sink Package Heat-Sink Package AD29608A8A-25EG AD29608A8A-25EG KKA8FEIBF-HJK-25A KKA8FEIBF-HJK-25A HY5PS12821CFP-S5 HY5PS12821CFP-S5 Heat-Sink Package NT5TU64M8BE-25C NT5TU64M8BE-25C A3R12E3HEF641B9A05 A3R12E3HEF641B9A05 CL 5 4-4-4-12 4-4-4-12 N/A 5-5-5 5-5-5 5-5-5 5-5-5 5-5-5 5-5-5 5-5-5 5-5-5 5-5-5 5-5-5 N/A N/A N/A 4 4 4 4 4 5 5 N/A N/A N/A N/A N/A N/A 5 5 5 5 Chip Brand SEC N/A N/A N/A INFINEON N/A N/A N/A SAMSUNG SEC Hynix N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A KINGMAX KINGMAX Hynix Hynix N/A NANYA NANYA PSC PSC SS/ DS SS DS SS DS SS DS SS SS SS SS SS DS DS SS DS DS DS DS SS DS SS DS SS DS SS DS SS DS SS DS Part No. KVR800D2N5/512 KHX6400D2LL/1G KHX6400D2LLK2/1GN KVR800D2N5/1G HYS64T32000HU-25F-B HYS64T64000HU-25F-B HYS64T128020HU-25F-B M378T6553CZ3-CE7 M378T3354CZ3-CE7 M378T6553CZ3-CE7 HYMP564U64CP8-S5 MT8HTF6464AY-80ED4 MT16HTF12864AY-80ED4 CM2X1024-6400C4 BL6464AA804.8FD BL12864AA804.16FD BL12864AL804.16FD3 BL12864AA804.

16FD3 AHU512E800C5K1C AHU01GE800C5K1C M2OAD6G3H3160G1E53 M2OAD6G3I4170I1E58 KLDC28F-A8K15 KLDD48F-ABK15 TS64MLQ64V8J TS128MLQ64V8J T800UA12C4 NT512T64U880BY-25C NT1GT64U8HB0BY-25C AL6E8E63B8E1K AL7E8E63B-8E1K

DIMM support A* B* C* · 2-16 Chapter 2: Hardware information P5K SE Motherboard Qualified Vendors Lists (QVL) DDR2-667MHz capability Size 512MB 512MB 1024MB 256MB 512MB 1024MB 256MB 1024MB 256MB 2048MB 512MB 512MB 1024MB Vendor SAMSUNG SAMSUNG SAMSUNG SAMSUNG SAMSUNG SAMSUNG SAMSUNG Hynix Hynix CORSAIR NANYA NANYA

PSC PSC Chip No. ZCE6K4T51083QC K4T51083QC ZCE6K4T51083QC K4T51163QE-ZCE6 K4T51083QE K4T51083QE HY5PS121621CFP-Y5 HY5PS12821CFP-Y5 MIII00605 NT5TU128M8BJ-3C NT5TU64M8BE-3C A3R12E3GEF637BLC5N A3R12E3GEF637BLC5N CL 5 5 5 5 5 5 5 N/A 5 5 5 5 5 Chip Brand SEC SEC SEC SAMSUNG SAMSUNG SAMSUNG Hynix Hynix N/A NANYA NANYA PSC PSC SS/ DS SS DS SS DS SS DS SS DS SS DS SS DS SS DS SS DS SS DS Part No. M378T6553CZ0-CE6 M378T6553CZ3-CE6 M378T2953CZ3-CE6 M378T3354EZ3-CE6 M378T6553EZS-CE6 M378T2953EZ3-CE6

HYMP532U64CP6-Y5 HYMP512U64CP8-Y5 VS256MB667D2 NT2GT64U8HB0JY-3C NT512T64U88B0BY-3C AL6E8E63B-6E1K AL7E8E63B-6E1K DIMM support A* B* C* ASUS P5K SE 2-17 2.4.3 Installing a DIMM Unplug the power supply before adding or removing DIMMs or other system components. Failure to do so can cause severe damage to both the motherboard and the components. To install a DIMM: 1. 2. 3. Unlock a DIMM socket by pressing the retaining clips outward.

3 2 DDR2 DIMM notch Align a DIMM on the socket such that the notch on the DIMM matches the break on the socket. 1 1 Firmly insert the DIMM into the socket until the retaining clips snap back in place and the DIMM is properly seated. Unlocked retaining clip · · A DDR2 DIMM is keyed with a notch so that it fits in only one direction. Do not force a DIMM into a socket to avoid damaging the DIMM. The DDR2 DIMM sockets do not support DDR DIMMs. Do not install DDR DIMMs to the DDR2 DIMM sockets. 2.4.4 1. Removing a DIMM 2 To remove a DIMM: Simultaneously press the retaining clips outward to unlock the DIMM.

Support the DIMM lightly with your fingers when pressing the retaining clips. The DIMM might get damaged when it flips out with extra force. 1 1 DDR2 DIMM notch 2. Remove the DIMM from the socket. 2-18 Chapter 2: Hardware information 2.5 Expansion slots In the future, you may need to install expansion cards. The following sub-sections describe the slots and the expansion cards that they support. Make sure to unplug the power cord before adding or removing expansion cards. Failure to do so may cause you physical injury and damage motherboard components. 2.

5.1 1. 2. 3. 4. 5. 6. Installing an expansion card To install an expansion card: Before installing the expansion card, read the documentation that came with it and make the necessary hardware settings for the card.



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Remove the system unit cover (if your motherboard is already installed in a chassis). Remove the bracket opposite the slot that you intend to use. Keep the screw for later use. Align the card connector with the slot and press firmly until the card is completely seated on the slot. Secure the card to the chassis with the screw you removed earlier. Replace the system cover. 2.

5.2 1. 2. 3. Configuring an expansion card After installing the expansion card, configure it by adjusting the software settings.

Turn on the system and change the necessary BIOS settings, if any. See Chapter 4 for information on BIOS setup. Assign an IRQ to the card. Refer to the tables on the next page. Install the software drivers for the expansion card. When using PCI cards on shared slots, ensure that the drivers support "Share IRQ" or that the cards do not need IRQ assignments. Otherwise, conflicts will arise between the two PCI groups, making the system unstable and the card inoperable. Refer to the table on the next page for details. ASUS P5K SE 2-19 2.5.

3 IRQ 0 1 2 3 4 5 6 8 9 10 11 13 14 Interrupt assignments Standard function System timer Keyboard controller Re-direct to IRQ#9 IRQ holder for PCI steering* Communications port (COM1)* IRQ holder for PCI steering* Floppy disk controller System CMOS/Real Time Clock Microsoft ACPI-Compliant System IRQ holder for PCI steering* IRQ holder for PCI steering* Numeric data processor Intel(R) ICH9 Family SMBus Controller *These IRQs are usually available for PCI devices. IRQ assignments for this motherboard PCI slot 1 PCI slot 2 LAN (L1) SATA (Marvell) PCIE x16 PCIE x1_1 PCIE x1_2 PCIE x1_3 USB controller 1 USB controller 2 USB controller 3 USB controller 4 USB controller 5 USB controller 6 USB 2.0 controller 1 USB 2.0 controller 2 SATA controller 1 SATA controller 2 Azalia 883 A B C D shared shared shared shared shared shared shared shared shared shared shared shared shared shared shared shared E F G H shared shared shared shared 2-20 Chapter 2: Hardware information 2.5.4 PCI slots The PCI slots support cards such as a LAN card, SCSI card, USB card, and other cards that comply with PCI specifications. The figure shows a LAN card installed on a PCI slot. 2.5.5 PCI Express x1 slots This motherboard supports PCI Express x1 network cards, SCSI cards and other cards that comply with the PCI Express specifications.

The following figure shows a network card installed on the PCI Express x1 slot. 2.5.6 PCI Express x16 slot This motherboard supports one PCI Express x16 graphics card that complies with the PCI Express specifications. The figure shows a graphics card installed on the PCI Express x16 slot.

ASUS P5K SE 2-21 2.6 1. Jumpers This jumper allows you to clear the Real Time Clock (RTC) RAM in CMOS. You can clear the CMOS memory of date, time, and system setup parameters by erasing the CMOS RTC RAM data. The onboard button cell battery powers the RAM data in CMOS, which include system setup information such as system passwords.

To erase the RTC RAM: 1. Turn OFF the computer and unplug the power cord. 2. Remove the onboard battery. 3. Move the jumper cap from pins 1-2 (default) to pins 2-3. Keep the cap on pins 2-3 for about 5~10 seconds, then move the cap back to pins 1-2. 4. Reinstall the battery. 5.

Plug the power cord and turn ON the computer. 6. Hold down the key during the boot process and enter BIOS setup to re-enter data. Except when clearing the RTC RAM, never remove the cap on CLRTC jumper default position. Removing the cap will cause system boot failure! Clear RTC RAM (3-pin CLRTC) ® P5K SE CLRTC 12 23 Clear RTC Normal (Default) P5K SE 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 the BIOS can automatically reset parameter settings to default values.

Due to the chipset limitation, AC power off is required prior using C.P.R. function. You must turn off and on the power supply or unplug and plug the power cord before reboot the system.

· 2-22 Chapter 2: Hardware information 2. This jumper allows you to enable or disable the keyboard and USB port 5-6 wake-up feature. When you set this jumper to pins 2-3 (+5VSB), you can wake up the computer by pressing a key on the keyboard (the default is the Space Bar) or using a USB device. This feature requires an ATX power supply that can supply at least 1A on the +5VSB lead, and a corresponding setting in the BIOS. The USBPWR5-6 jumper is for the internal USB connectors that you can connect to additional USB ports.

12 Keyboard power (3-pin PS2_USB PW) PS2_USB PW 23 +5V (Default) P5K SE +5VSB ® 3. P5K SE Keyboard power USB device wake-up (3-pin USBPW1-4, USBPW5-8, USB9-12) Set these jumpers to +5V to wake up the computer from S1 sleep mode (CPU stopped, DRAM refreshed, system running in low power mode) using the connected USB devices. Set to +5VSB to wake up from S3 and S4 sleep modes (no power to CPU, DRAM in slow refresh, power supply in reduced power mode). The USBPWR1-4 and USBPWR78 jumpers are for the rear USB ports. The USBPWR9-12 jumper is for the internal USB connectors that you can connect to additional USB ports. USBPW1-4 USBPW78 2 1 2 1 +5VSB ® P5K SE +5V (Default) 12 USBPW9-12 23 P5K SE USB device wake up · · ASUS P5K SE +5V (Default) +5VSB 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. The total current consumed must NOT exceed the power supply capability (+5VSB) whether under normal condition or in sleep mode. 2-23 2.7 2.7.

1 1 Connectors Rear panel connectors 2 3 4 5 6 13 12 11 10 9 8 7 2. 3. 1. LAN (RJ-45) port. Supported by Gigabit LAN controller, this port allows Gigabit connection to a Local Area Network (LAN) through a network hub. Refer to the table below for the LAN port LED indications. Center/Subwoofer port (orange). This port connects the center/subwoofer speakers.



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PS/2 keyboard port (purple). This port is for a PS/2 keyboard.

LAN port LED indications Activity/Link Speed LED Status Description OFF No link ORANGE Linked BLINKING Data activity Status OFF ORANGE GREEN Description 10 Mbps connection 100 Mbps connection 1 Gbps connection ACT/LINK LED SPEED LED LAN port 4. 5. 6. 7. Rear Speaker Out port (black).

This port connects the rear speakers in a 4-channel, 6-channel, or 8-channel audio configuration. Line In port (light blue). This port connects the tape, CD, DVD player, or other audio sources. Line Out port (lime). This port connects a headphone or a speaker.

In 4-channel, 6-channel, and 8-channel configuration, the function of this port becomes Front Speaker Out. Microphone port (pink). This port connects a microphone. Side Speaker Out port (gray). This port connects the side speakers in an 8-channel audio configuration. USB 2.0 ports 1 and 2. These two 4-pin Universal Serial Bus (USB) ports are available for connecting USB 2.0 devices. 8.

9. Refer to the audio configuration table on the next page for the function of the audio ports in 2, 4, 6, or 8-channel configuration. 2-24 Chapter 2: Hardware information Audio 2, 4, 6, or 8-channel configuration Port Light Blue Lime Pink Orange Black Gray Headset 2-channel Line In Line Out Mic In 4-channel Line In Front Speaker Out Mic In Rear Speaker Out 6-channel Line In Front Speaker Out Mic In Center/Subwoofer Rear Speaker Out 8-channel Line In Front Speaker Out Mic In Center/Subwoofer Rear Speaker Out Side Speaker Out 10 External SATA port. This port connects an external Serial ATA hard disk drive. The external SATA port supports external Serial ATA 3.0 Gb/s devices. Longer cables support higher power requirements to deliver signal up to two meters away, and enables improved hotswap function. DO NOT insert a different connector to this port. 11. 12.

Coaxial S/PDIF Out port. This port connects an external audio output device via a coaxial S/PDIF cable. 13. USB 2.0 ports 5 and 6. These two 4-pin Universal Serial Bus (USB) ports are available for connecting USB 2.0 devices. USB 2.0 ports 3 and 4. These two 4-pin Universal Serial Bus (USB) ports are available for connecting USB 2.

0 devices. ASUS P5K SE 2-25 2.7.2 1. Internal connectors This connector is for the provided floppy disk drive (FDD) signal cable. Insert one end of the cable to this connector, then connect the other end to the signal connector at the back of the floppy disk drive. Pin 5 on the connector is removed to prevent incorrect cable connection when using a FDD cable with a covered Pin 5. Floppy disk drive connector (34-1 pin FLOPPY) P5K SE FLOPPY NOTE: Orient the red markings on the floppy ribbon cable to PIN 1. ® P5K SE Floppy disk drive connector 2-26 Chapter 2: Hardware information 2. The onboard IDE connector is for the Ultra DMA 133/100/66 signal cable.

There are three connectors on each Ultra DMA 133/100/66 signal cable: blue, black, and gray. Connect the blue connector to the motherboard's IDE connector, then select one of the following modes to configure your device. Drive jumper setting Single device Two devices Cable-Select or Master Cable-Select Master Slave · Mode of device(s) Master Slave Master Slave Cable connector Black Black Gray Black or gray IDE connector (40-1 pin PRI_EIDE) Pin 20 on the IDE connector is removed to match the covered hole on the Ultra DMA cable connector. This prevents incorrect insertion when you connect the IDE cable. Use the 80-conductor IDE cable for Ultra DMA 133/100/66 IDE devices. · If any device jumper is set as "Cable-Select," make sure all other device jumpers have the same setting. ® P5K SE PRI_EIDE NOTE: Orient the red markings (usually zigzag) on the IDE ribbon cable to PIN 1. PIN 1 P5K SE IDE connector ASUS P5K SE 2-27 3. ICH9 Serial ATA connectors (7-pin SATA1-4) These connectors are for the Serial ATA signal cables for Serial ATA hard disk drives. SATA1 GND RSATA_RXN1 RSATA_RXP1 GND RSATA_TXN1 RSATA_TXP1 GND R P5K SE SATA3 ® GND RSATA_RXN3 RSATA_RXP3 GND RSATA_TXN3 RSATA_TXP3 GND P5B SATA Connectors P5K SE SATA connectors SATA2 SATA1 When using the connectors in Standard IDE mode, connect the primary (boot) hard disk drive to the SATA1/2 connector.

Refer to the table below for the recommended SATA hard disk drive connections. Connect the right-angle side of SATA signal cable to SATA device. Or you may connect the right-angle side of SATA cable to the onboard SATA port to avoid mechanical conflict with huge graphics cards. right angle side 2-28 Chapter 2: Hardware information GND RSATA_RXN4 RSATA_RXP4 GND RSATA_TXN4 RSATA_TXP4 GND GND RSATA_RXN2 RSATA_RXP2 GND RSATA_TXN2 RSATA_TXP2 GND SATA4 P5B SATA3 SATA2 GND RSATA_RXN4 RSATA_RXP4 GND RSATA_TXN4 RSATA_TXP4 GND GND RSATA_TXP2 RSATA_TXN2 GND RSATA_RXP2 RSATA_RXN2 GND GND RSATA_RXN3 RSATA_RXP3 GND RSATA_TXN3 RSATA_TXP3 GND SATA4 GND RSATA_TXP1 RSATA_TXN1 GND RSATA_RXP1 RSATA_RXN1 GND 4. This connector is for an additional Sony/Philips Digital Interface (S/PDIF) port(s).

Connect the S/PDIF Out module cable to this connector, then install the module to a slot opening at the back of the system chassis. Digital audio connector (4-1 pin SPDIF_OUT) P5K SE ® SPDIF_OUT P5K SE Digital audio connector The S/PDIF module is purchased separately. ASUS P5K SE SPDIFOUT GND +5V 2-29 5. These connectors are for USB 2.0 ports.

Connect the USB module cable to any of these connectors, then install the module to a slot opening at the back of the system chassis. These USB connectors comply with USB 2.0 specification that supports up to 480 Mbps connection speed. USB connectors (10-1 pin USB78, USB 910, USB1112) ® P5K SE USB78 USB+5V USB_P7USB_P7+ GND USB+5V USB_P8USB_P8+ GND NC USB+5V USB_P12USB_P12+ GND NC USB1112 USB+5V USB_P11USB_P11+ GND USB910 USB+5V USB_P5USB_P5+ GND P5K SE USB 2.0 connectors Never connect a 1394 cable to the USB connectors. Doing so will damage the motherboard! You can connect the front panel USB cable to the ASUS Q-Connector (USB, blue) first, and then install the Q-Connector (USB) to the USB connector onboard if your chassis supports front panel USB ports. The USB module cable is purchased separately. 6. These connectors allow you to receive stereo audio input from sound sources such as a CD-ROM, TV tuner, or MPEG card. Optical drive audio connector (4-pin CD) CD P5K SE ® P5K SE Internal audio connector 2-30 Chapter 2: Hardware information USB+5V USB_P6USB_P6+ GND NC Right Audio Channel Ground Ground Left Audio Channel 7.

CPU, chassis, and power fan connectors (4-pin CPU_FAN, 3-pin CHA_FAN, 3-pin PWR_FAN) The fan connectors support cooling fans of 350 mA~2000 mA (24 W max.) or a total of 1 A~7 A (84 W max).



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) at +12V. Connect the fan cables to the fan connectors on the motherboard, making sure that the black wire of each cable matches the ground pin of the connector. Do not forget to connect the fan cables to the fan connectors. Insufficient air flow inside the system may damage the motherboard components. These are not jumpers! Do not place jumper caps on the fan connectors! CPU_FAN GND CPU_FAN PWR CPU_FAN IN CPU_FAN PWM P5K SE PWR_FAN GND +12V Rotation CHA_FAN GND +12V Rotation P5K SE Fan connectors Only the CPU_FAN and CHA_FAN connector support the ASUS Q-FAN 2 feature. 8. This connector is for a serial (COM) port. Connect the serial port module cable to this connector, then install the module to a slot opening at the back of the system chassis.

Serial port connector (10-1 pin COM1) COM1 P5K SE COM port connector The serial port module is purchased separately. ASUS P5K SE P5K SE PIN 1 2-31 9. This connector is for a chassis-mounted intrusion detection sensor or switch. Connect one end of the chassis intrusion sensor or switch cable to this connector. The chassis intrusion sensor or switch sends a high-level signal to this connector when a chassis component is removed or replaced.

The signal is then generated as a chassis intrusion event. By default, the pin labeled "Chassis Signal" and "Ground" are shorted with a jumper cap. Remove the jumper caps only when you intend to use the chassis intrusion detection feature. Chassis intrusion connector (4-1 pin CHASSIS) GND Chassis Signal P5K SE +5VSB_MB CHASSIS P5K SE Chassis intrusion connector (Default) 10. Front panel audio connector (10-1 pin AAFP) This connector is for a chassis-mounted front panel audio I/O module that supports either HD Audio or legacy AC '97 audio standard.

Connect one end of the front panel audio I/O module cable to this connector. HD Audio-compliant pin definition SENSE1_RETUR PRESENCE# GND SENSE2_RETUR AAFP Legacy AC '97 audio pin definition P5K SE NC NC AGND NC Line out_L NC Line out_R MICPWR MIC2 P5K SE Analog front panel connector We recommend that you connect a high-definition front panel audio module to this connector to avail of the motherboard's high-definition audio capability. If you want to connect a high-definition front panel audio module to this connector, set the Front Panel Type item in the BIOS setup to [HD Audio]; if you want to connect an AC'97 front panel audio module to this connector, set the item to [AC'97]. By default, this connector is set to [HD Audio]. See section 4.4.5 Onboard Devices Configuration for details. Chapter 2: Hardware information PORT2 L SENSE_SEND PORT2 R PORT1 R PORT1 L 2-32 11. These connectors are for ATX power supply plugs. The power supply plugs are designed to fit these connectors in only one orientation.

Find the proper orientation and push down firmly until the connectors completely fit. +12V DC GND ATX power connectors (24-pin EATXPWR, 4-pin EATX12V) EATXPWR +3 Volts +12 Volts +12 Volts +5V Standby Power OK Ground +5 Volts Ground +5 Volts Ground +3 Volts +3 Volts Ground +5 Volts +5 Volts +5 Volts -5 Volts Ground Ground Ground PSON# Ground -12 Volts +3 Volts ATX12V P5K SE +12V DC GND P5K SE ATX power connectors For a fully configured system, we recommend that you use a power supply unit (PSU) that complies with ATX 12 V Specification 2.0 (or later version) and provides a minimum power of 400 W. Do not forget to connect the 4-pin EATX12V power plug; otherwise, the system will not boot. Use of a PSU with a higher power output is recommended when configuring a system with more power-consuming devices. The system may become unstable or may not boot up if the power is inadequate. The ATX 12 V Specification 2.0-compliant (400W) PSU has been tested to support the motherboard power requirements with the following configuration: CPU: Intel Pentium Extreme 3.73GHz Memory: 512 MB DDR2 (x4) Graphics card: ASUS EAX1900XT Parallel ATA device: IDE hard disk drive Serial ATA device: SATA hard disk drive (x2) Optical drive: DVD-RW ASUS P5K SE 2-33 12. System panel connector (20-8 pin PANEL) This connector supports several chassis-mounted functions.

PLED PLED+ PLED- SPEAKER +5V Ground Ground Speaker P5K SE PANEL IDE_LED+ IDE_LEDReset Ground PWR Ground IDE_LED RESET PWRSW P5K SE System panel connector * Requires an ATX power supply. System power LED (2-pin PLED) This 2-pin connector is for the system power LED. Connect the chassis power LED cable to this connector. The system power LED lights up when you turn on the system power, and blinks when the system is in sleep mode. Hard disk drive activity LED (2-pin IDE_LED) This 2-pin connector is for the HDD Activity LED. Connect the HDD Activity LED cable to this connector. The IDE LED lights up or flashes when data is read from or written to the HDD. System warning speaker (4-pin SPEAKER) This 4-pin connector is for the chassis-mounted system warning speaker. The speaker allows you to hear system beeps and warnings. ATX power button/soft-off button (2-pin PWRSW) This connector is for the system power button.

Pressing the power button turns the system on or puts the system in sleep or soft-off mode depending on the BIOS settings. Pressing the power switch for more than four seconds while the system is ON turns the system OFF. Reset button (2-pin RESET) This 2-pin connector is for the chassis-mounted reset button for system reboot without turning off the system power. 2-34 Chapter 2: Hardware information Q-Connector (system panel) You can use ASUS Q-Connector to connect / disconnect chassis front panel cables by only a few steps. Directions below shows how to install ASUS Q-Connector. Step1. Connect correct front panel to ASUS Q-Connector first. You can refer to the marking on Q-Connector itself to know the detail pin definition. Step2. Properly install the ASUS Q-Connector to the System panel connector.

Step3. Front panel functions are enabled. ASUS P5K SE 2-35 2-36 Chapter 2: Hardware information This chapter describes the power up sequence, the vocal POST messages, and ways of shutting down the system. Powering up 3 Chapter summary 3.1 3.2 Starting up for the first time

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. @ @ 3-2 3 ASUS P5K SE 3.1 1. 2. 3. 4. @ @ @ @ @ Turn on the devices in the following order: a. c. b. @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ Click the Turn Off button to shut down the computer. Click the Start button then select Turn Off Computer. 3. The power supply should turn off after Windows® shuts down. If you are using Windows® Vista: 1. 2. Click the Start button then select ShutDown. The power supply should turn off after Windows® shuts down. 3.2.2 Using the dual function power switch While the system is ON, pressing the power switch for less than four seconds puts the system to sleep mode or to soft-off mode, depending on the BIOS setting.



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Pressing the power switch for more than four seconds lets the system enter the soft-off mode regardless of the BIOS setting. Refer to section "4.5 Power Menu" for details. 3- Chapter 3: Powering up This chapter tells how to change the system settings through the BIOS Setup menus. Detailed descriptions of the BIOS parameters are also provided. BIOS setup 4 Chapter summary 4.1 4.2 4.3 4.4 Managing and updating your BIOS .

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... 4-1 BIOS setup program ..

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. @@@@1. 2. 3. @@@@3. 2. Place the support CD in the optical drive. The Drivers menu appears. The ASUS Update utility is copied to your system. @@@@Click Next.

4-2 Chapter 4: BIOS setup 4. @@Click Next. @@@@2. @@The ASUS Update main window appears. @@4. Locate the BIOS file from the Open window, then click Open. @@Insert a 1.44MB floppy disk into the drive. b. At the DOS prompt, type format A:/S then press <Enter>.

Windows® XP environment a. Insert a 1.44 MB floppy disk to the floppy disk drive. b. Click Start from the Windows® desktop, then select My Computer. c. Select the 3 1/2 Floppy Drive icon. d. Click File from the menu, then select Format. A Format 3 1/2 Floppy Disk window appears.

e. @@@@The EZ Flash 2 utility is built-in the BIOS chip so it is accessible by pressing <Alt> + <F2> during the Power-On Self Tests (POST). To update the BIOS using EZ Flash 2: 1. 2. 3. Visit the ASUS website (www.asus.com) to download the latest BIOS file for the motherboard. Save the BIOS file to a floppy disk or a USB flash disk, then restart the system. You can launch the EZ Flash 2 by two methods.

(1) Insert the floppy disk / USB flash disk that contains the BIOS file to the floppy disk drive or the USB port. Press <Alt> + <F2> during POST to display the following. ASUSTek EZ Flash 2 BIOS ROM Utility V3.05 FLASH TYPE: WINBOND W25X80 Current ROM BOARD: P5K SE VER: 0110 DATE: 05/07/07 PATH: C:\A: C: Update ROM BOARD: Unknown VER: Unknown DATE: Unknown Note [Enter] Select or Load [Tab] Switch [B] Backup [ESC] Exit [Up/Down/Home/End] Move (2) Enter BIOS setup program. Go to the Tools menu to select EZ Flash2 and press <Enter> to enable it. You can switch between drives by pressing <Tab> before the correct file is found. Then press <Enter>. 4. When the correct BIOS file is found, EZ Flash 2 performs the BIOS update process and automatically reboots the system when done. . . This function can support devices such as USB flash disk, or floppy disk with FAT 32/16 format and single partition only.

Do not shut down or reset the system while updating the BIOS to prevent system boot failure! ASUS P5K SE 4-5 4.1.4 AFUDOS utility The AFUDOS utility allows you to update the BIOS file in DOS environment using a bootable floppy disk with the updated BIOS file. This utility also allows you to copy the current BIOS file that you can use as backup when the BIOS fails or gets corrupted during the updating process. Copying the current BIOS To copy the current BIOS file using the AFUDOS utility: . . Make sure that the floppy disk is not write-protected and has at least 1024KB free space to save the file. The succeeding BIOS screens are for reference only. The actual BIOS screen displays may not be same as shown. 1. 2. Copy the AFUDOS utility (afudos.exe) from the motherboard support CD to the bootable floppy disk you created earlier. Boot the system in DOS mode, then at the prompt type: afudos /o[filename] where the [filename] is any user-assigned filename not more than eight alphanumeric characters for the main filename and three alphanumeric characters for the extension name. A:\>afudos /oOLDBIOS1.rom Main filename Extension name 3. Press <Enter>. The utility copies the current BIOS file to the floppy disk. A:\>afudos /oOLDBIOS1.rom AMI Firmware Update Utility - Version 1.19(ASUS V2.07(03.

11.24BB)) Copyright (C) 2002 American Megatrends, Inc. All rights reserved. Reading flash done Write to file..

.... ok A:\> The utility returns to the DOS prompt after copying the current BIOS file.

Updating the BIOS file To update the BIOS file using the AFUDOS utility: 1. Visit the ASUS website (www.asus.com) and download the latest BIOS file for the motherboard. Save the BIOS file to a bootable floppy disk.

4-6 Chapter 4: BIOS setup Write the BIOS filename on a piece of paper. You need to type the exact BIOS filename at the DOS prompt. 2. 3. Copy the AFUDOS utility (afudos.exe) from the motherboard support CD to the bootable floppy disk you created earlier. @@All rights reserved. WARNING!! Do not turn off power during flash BIOS Reading file ...

.... done Reading flash
done Advance Check
. Erasing flash

.. done Writing flash @@@@All rights reserved. WARNING!! Do not turn off power during flash BIOS Reading file ...

..... done Reading flash
.. done Advance Check ...
... Erasing flash ..
.... done Writing flash

done Verifying flash @@2. 3. @@Starting BIOS recovery... @@Starting BIOS recovery.

.. Checking for floppy...

Floppy found! Reading file "P5KSE.ROM". Completed. @@2. @@The utility will automatically checks the devices for the BIOS file When found, the utility reads the BIOS file and starts flashing the corrupted BIOS file.

Restart the system after the utility completes the updating process. · Only the USB flash disk with FAT 32/16 format and single partition can support ASUS CrashFree BIOS 3. The device size should be smaller than 8GB. DO NOT shut down or reset the system while updating the BIOS! Doing so can cause system boot failure! Chapter 4: BIOS setup Turn on the system. 4. · 4-8 4.2 BIOS setup program This motherboard supports a programmable Serial Peripheral Interface (SPI) chip that you can update using the provided utility described in section "4.1 Managing and updating your BIOS." Use the BIOS Setup program when you are installing a motherboard, reconfiguring your system, or prompted to "Run Setup." This section explains how to configure your system using this utility.

Even if you are not prompted to use the Setup program, you can change the configuration of your computer in the future. For example, you can enable the security password feature or change the power management settings. This requires you to reconfigure your system using the BIOS Setup program so that the computer can recognize these changes and record them in the CMOS RAM of the SPI chip. The SPI chip on the motherboard stores the Setup utility. When you start up the computer, the system provides you with the opportunity to run this program. Press during the Power-On Self-Test (POST) to enter the Setup utility; otherwise, POST continues with its test routines. If you wish to enter Setup after POST, restart the system by pressing <Ctrl+Alt+Delete>, or by pressing the reset button on the system chassis. You can also restart by turning the system off and then back on. Do this last option only if the first two failed. The Setup program is designed to make it as easy to use as possible.



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