

A8V-E

Deluxe

ASUS®
Motherboard

E1781

**First Edition
December 2004**

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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 or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

FCC RF Radiation Exposure Statement

This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

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.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Make sure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

Operation safety

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter technical problems with the product, contact a qualified service technician or your retailer.

About this guide

This user guide contains the information you need when installing and configuring the motherboard.

How this guide is organized

This manual contains the following parts:

- **Chapter 1: Product introduction**
This chapter describes the features of the motherboard and the new technology it supports.
- **Chapter 2: Hardware information**
This chapter lists the hardware setup procedures that you have to perform when installing system components. It includes description of the switches, jumpers, and connectors on the motherboard.
- **Chapter 3: Powering up**
This chapter describes the power up sequence, the vocal POST messages, and ways of shutting down the system.
- **Chapter 4: BIOS setup**
This chapter tells how to change system settings through the BIOS Setup menus. Detailed descriptions of the BIOS parameters are also provided.
- **Chapter 5: Software support**
This chapter describes the contents of the support CD that comes with the motherboard package.

Where to find more information

Refer to the following sources for additional information and for product and software updates.

1. ASUS websites

The ASUS website provides updated information on ASUS hardware and software products. Refer to the ASUS contact information.

2. 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.

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

Italics

Used to emphasize a word or a phrase

<Key>

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>

If you must press two or more keys simultaneously, the key names are linked with a plus sign (+)

Example: <Ctrl+Alt+D>

Command

Means that you must type the command exactly as shown, then supply the required item or value enclosed in brackets

Example: At the DOS prompt, type the command line:

afudos /i[filename]

afudos /iA8V-E.ROM

A8V-E Deluxe specifications summary

CPU	Socket 939 for AMD Athlon™ 64FX/AMD Athlon™ 64 processor Supports AMD 64 architecture that enables simultaneous 32-bit and 64-bit architecture Supports AMD Cool 'n' Quiet! Technology
Chipset	Northbridge: VIA® K8T890 Southbridge: VIA® VT8237R
System Bus	2000 MT/s
Memory	Dual-channel memory architecture 4 x 184-pin DIMM sockets support ECC/non-ECC unbuffered 400/333/266 MHz DDR memory modules Supports up to 4 GB system memory
Expansion slots	1 x PCI Express x16 slot for discrete graphics card 2 x PCI Express x1 slots 3 x PCI slots
Storage	VIA® VT8237R Southbridge supports: - 2 x Ultra DMA 133/100/66/33 - 2 x Serial ATA with RAID 0 and RAID 1
AI Audio	Realtek® ALC850 8-channel CODEC 1 x Coaxial S/PDIF out port 1 x Optical S/PDIF out port Supports Audio Sensing and Enumeration Technology
Wireless LAN	WiFi-g™ wireless solution provides: - support for IEEE 802.11g/b standard - up to 54Mbps wireless data transmission - Software Access Point (Soft AP) feature on Windows® XP and 2003 Server
LAN	Marvell® 88E8053 PCI Express™ Gigabit LAN controller Supports Marvell® Virtual Cable Tester technology Supports POST Network-diagnostic program
IEEE 1394	T1 TSB43AB22A 1394a controller supports: - 1 x IEEE 1394 internal connector - 1 x IEEE 1394 port
USB	Supports up to 8 USB 2.0 ports

(continued on the next page)

A8V-E Deluxe specifications summary

AI Overclocking	ASUS AI Overclocking (Intelligent CPU frequency tuner) ASUS C.P.R. (CPU Parameter Recall) ASUS JumperFree CPU, Memory, and chipset voltage adjustable Stepless Frequency Selection(SFS) from 200 MHz up to 400 MHz at 1 MHz increment
Special features	ASUS Wi-Fi@HOME ASUS Post Reporter™ ASUS Q-Fan2 ASUS CrashFree BIOS 2 ASUS Multi-language BIOS ASUS MyLogo2 ASUS Instant Music
BIOS features	4 MB Flash ROM, Phoenix-Award BIOS, PnP, DMI2.0, WfM2.0, SM BIOS 2.3
Rear panel	1 x Parallel port 1 x IEEE 1394 port 1 x LAN (RJ-45) port 1 x Wi-Fi-g™ antenna port 1 x Wireless LAN LED 4 x USB 2.0 ports 1 x Optical S/PDIF out port 1 x Coaxial S/PDIF out port 1 x PS/2 keyboard port 1 x PS/2 mouse port 8-channel audio port
Internal connectors	1 x Floppy disk drive connector 2 x IDE connectors 2 x Serial ATA connectors 1 x CPU fan connector 1 x Power fan connector 2 x Chassis fan connector 1 x Serial port connector (COM port) 1 x 24-pin ATX power connector 1 x 4-pin ATX 12 V power connector 2 x USB 2.0 connectors for 4 additional USB 2.0 ports 1 x Internal audio connectors 1 x IEEE 1394 connector 1 x GAME/MIDI connector 1 x Chassis intrusion connector 1 x Front panel audio connector System panel connector

(continued on the next page)

A8V-E Deluxe specifications summary

Power Requirement	ATX power supply (with 24-pin and 4-pin 12 V plugs) ATX 12 V 2.0 compliant
Form Factor	ATX form factor: 12 in x 9.6 in (30.5 cm x 24.4 cm)
Support CD contents	Device drivers ASUS PC Probe ASUS Live Update Utility Antivirus software (OEM version) WiFi-g™ One-touch wizard

**Specifications are subject to change without notice.*

This chapter describes the motherboard features and the new technologies it supports.

1 **Product introduction**

Chapter summary

1.1	Welcome!	1-1
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1.1 Welcome!

Thank you for buying an ASUS® A8V-E Deluxe 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

Check your motherboard package for the following items.

Motherboard	ASUS A8V-E Deluxe motherboard
I/O modules	IEEE1394 (1 port) module Serial port module (COM port) USB 2.0 (2 ports) and GAME (1 port) module
Cables	2 x Serial ATA signal cables 1 x Serial ATA power cables (dual plugs) 2 x Ultra DMA/133 cables 40-conductor IDE cable Floppy disk drive cable
Accessories	Dipolar wireless LAN antenna I/O shield
Application CDs	ASUS motherboard support CD InterVideo® WinDVD Suite®
Documentation	User guide



If any of the above items is damaged or missing, contact your retailer.

1.3 Special features

1.3.1 Product highlights

Latest processor technology



The AMD Athlon™ 64FX and Athlon™ 64 desktop processors are based on AMD's 64-bit and 32-bit architecture, which represents the landmark introduction of the industry's first x86-64 technology. These processors provide a dramatic leap forward in compatibility, performance, investment protection, and reduced total cost of ownership and development. See page 2-6.

HyperTransport™ Technology



HyperTransport™ Technology is a high-speed, low latency, point-to-point link designed to increase the communication speed between integrated circuits in computers, networking and telecommunications equipment up to 48 times faster than other existing technologies.

AMD Cool 'n' Quiet!™ Technology



The motherboard supports the AMD Cool 'n' Quiet!™ Technology that dynamically and automatically changes the CPU speed, voltage and amount of power depending on the task the CPU performs. See pages 4-18 and 5-27 for details.

Dual Channel DDR memory support



Employing the Double Data Rate (DDR) memory technology, the motherboard supports up to 4GB of system memory using DDR400/333/266 DIMMs. The ultra-fast 400MHz memory bus delivers the required bandwidth for the latest 3D graphics, multimedia, and Internet applications. See page 2-10.

Serial ATA technology with RAID 0/1 support



The motherboard supports the Serial ATA technology through the Serial ATA interfaces. The SATA specification allows for thinner, more flexible cables with lower pin count, reduced voltage requirement, and up to 150 MB/s data transfer rate. With the VIA VT8237R RAID controller onboard, the motherboard supports RAID 0 and RAID 1 configuration using Serial ATA hard disk drives. See pages 2-25 and 5-18 for details.

PCI Express™ interface

The motherboard fully supports PCI Express, the latest I/O interconnect technology that speeds up the PCI bus. PCI Express features point-to-point serial interconnections between devices and allows higher clockspeeds by carrying data in packets. This high speed interface is software compatible with existing PCI specifications. See page 2-18 for details.

AI Audio technology

The motherboard supports 8-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 provides Jack-Sensing function, S/PDIF out support, interrupt capability and includes the Realtek® proprietary UAJ® (Universal Audio Jack) technology. See pages 2-22, 2-23 and 5-12 for details.

S/PDIF digital sound ready

The motherboard supports the S/PDIF In/Out function through the S/PDIF interfaces on the rear panel and at midboard. The S/PDIF technology turns your computer into a high-end entertainment system with digital connectivity to powerful audio and speaker systems. See page 2-23 for details.

IEEE 1394a support

The IEEE 1394a interface provides high-speed and flexible PC connectivity to a wide range of peripherals and devices compliant to the IEEE 1394a standard. The IEEE 1394a interface allows up to 400 Mbps transfer rates through simple, low-cost, high-bandwidth asynchronous (real-time) data interfacing between computers, peripherals, and consumer electronic devices such as camcorders, VCRs, printers, TVs, and digital cameras. See pages 2-22 and 2-30 for details.

USB 2.0 technology

The motherboard implements the Universal Serial Bus (USB) 2.0 specification, dramatically increasing the connection speed from the 12 Mbps bandwidth on USB 1.1 to a fast 480 Mbps on USB 2.0. USB 2.0 is backward compatible with USB 1.1. See pages 2-23, 2-27 and 4-25 for details.

Temperature, fan, and voltage monitoring

The CPU temperature is monitored by the ASIC (integrated in the Winbond Super I/O) to prevent overheating and damage. The system fan rotations per minute (RPM) is monitored for timely failure detection. The ASIC monitors the voltage levels to ensure stable supply of current for critical components. See section “4.5.4 Hardware Monitor” on page 4-36.

1.3.2 ASUS Proactive features



ASUS WiFi-g™



ASUS WiFi-g™ is an IEEE 802.11g-compliant wireless LAN adapter that allows data transmission of up to 54 Mbps using the 2.4 GHz frequency band. ASUS provides full software application support and a user-friendly wizard to help you set up your wireless local area network effortlessly. The ASUS WiFi-g™ is backward compatible with IEEE 802.11b devices. See page 2-23.

AI NOS™ (Non-Delay Overclocking System)



ASUS Non-delay Overclocking System™ (NOS) is a technology that auto-detects the CPU loading and dynamically overclocks the CPU speed only when needed. See page 4-26 for details.

AI NET 2



AI NET 2 is a BIOS-based diagnostic tool that detects and reports Ethernet cable faults and shorts. With this utility, you can easily monitor the condition of the Ethernet cable(s) connected to the LAN (RJ-45) port(s). During the bootup process, AI NET 2 immediately diagnoses the LAN cable(s) and reports shorts and faults up to 100 meters at 1 meter accuracy. See pages 4-30 and 5-11 for details.

1.3.3 Innovative ASUS features

Precision Tweaker



Designed for overclocking aficionados, this feature allows you to gradually increase the CPU and memory voltage to achieve maximum system performance.

PEG Link mode



This feature allows you to adjust the PCI Express graphics frequency according to your system configuration for optimized graphics performance.

CrashFree BIOS 2



This feature allows you to restore the original BIOS data from the support CD in case when the BIOS codes and data are corrupted. This protection eliminates the need to buy a replacement ROM chip. See details on page 4-5.

ASUS Q-Fan 2 technology



The ASUS Q-Fan 2 technology smartly adjusts the fan speeds according to the system loading to ensure quiet, cool, and efficient operation. See page 4-36 for details.

ASUS POST Reporter™



The motherboard offers a new exciting feature called the ASUS POST Reporter™ to provide friendly voice messages and alerts during the Power-On Self-Tests (POST) informing you of the system boot status and causes of boot errors, if any. The bundled Winbond Voice Editor software lets you to customize the voice messages in different languages. See page 3-3 for details.

ASUS Multi-language BIOS



The multi-language BIOS allows you to select the language of your choice from the available options. The localized BIOS menus allow you to configure easier and faster. See page 4-15 for details.

ASUS MyLogo2™

This new feature present in the motherboard allows you to personalize and add style to your system with customizable boot logos. See page 5-9 for details.

ASUS Instant Music

This unique feature allows you to playback audio files even without booting the system to Windows™. Just press the ASUS Instant Music special function keys and enjoy the music! See page 4-32 for details.

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



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2.1 Before you proceed

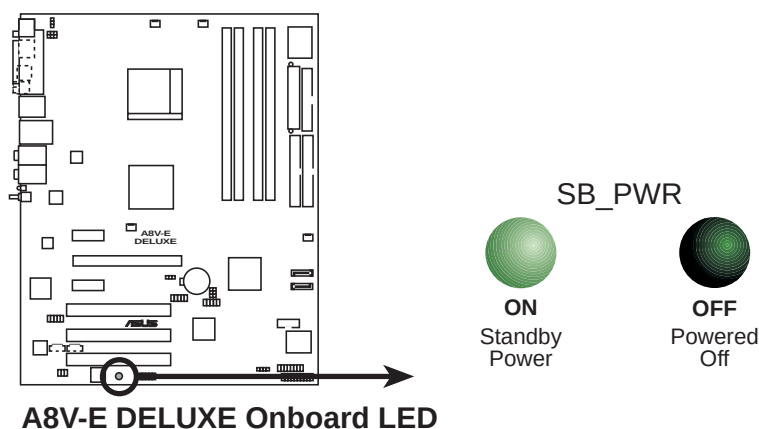
Take note of the following precautions before you install motherboard components or change any motherboard settings.



- Unplug the power cord from the wall socket before touching any component.
- Use a grounded wrist strap or touch a safely grounded object or to 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.



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.

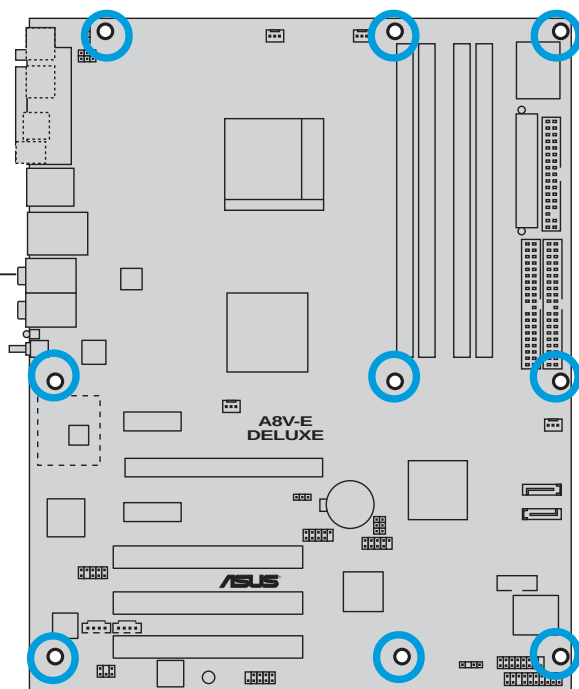
2.2.2 Screw holes

Place nine (9) screws into the holes indicated by circles to secure the motherboard to the chassis.

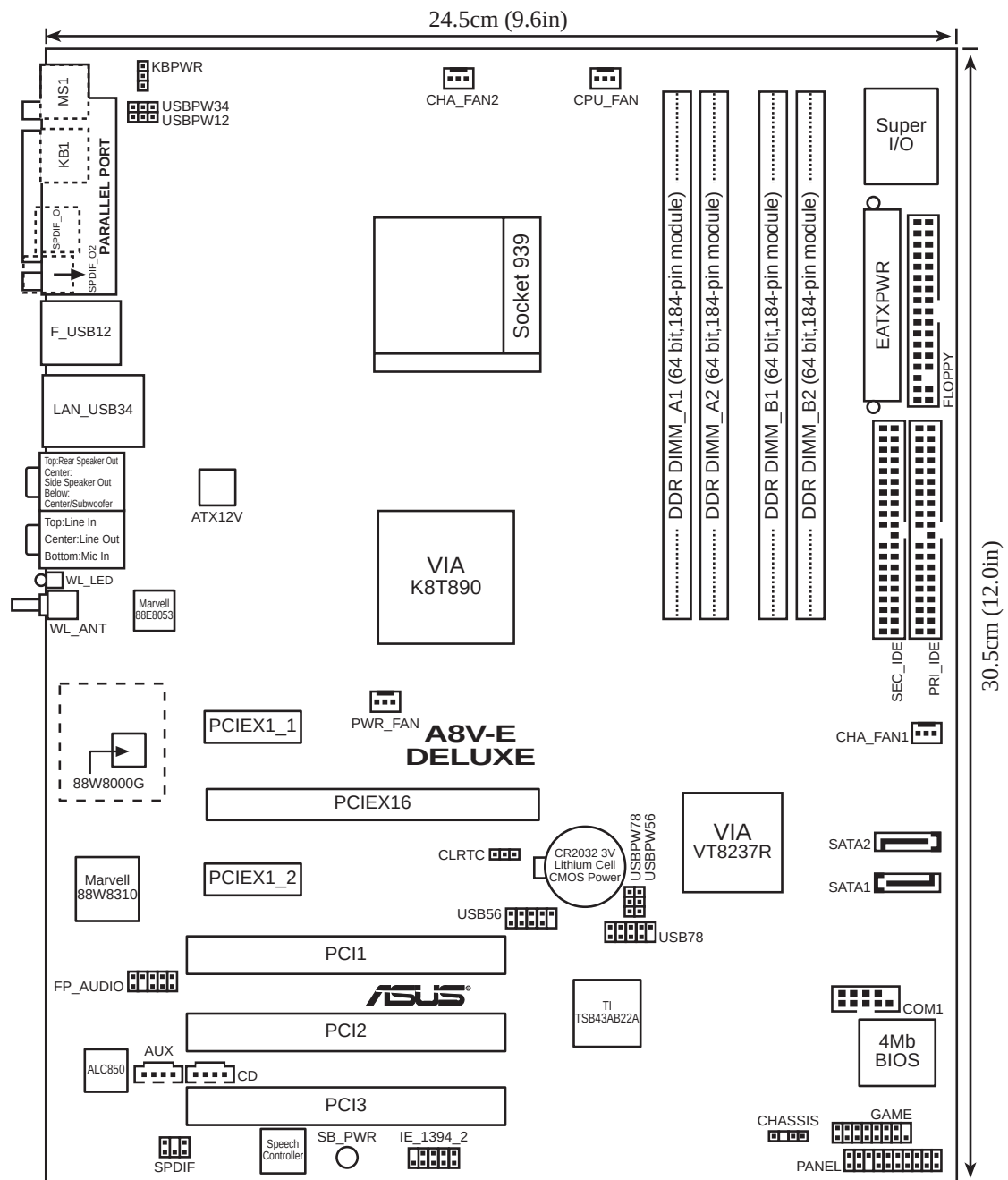


Do not overtighten the screws! Doing so can damage the motherboard.

Place this side towards
the rear of the chassis



2.2.3 Motherboard layout



2.2.4 Layout Contents

Slots	Page
1. DDR DIMM slots	2-11
2. PCI slots	2-18
3. PCI Express x16 slot	2-18
4. PCI Express x1 slot	2-18

Jumpers	Page
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2. USB Device wake-up (3-pin USBPW12, USBPW34, USBPW56, USBPW78)	2-19
3. Keyboard power (3-pin KBPWR)	2-19

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3. RJ-45 port	2-22
4. Rear Speaker Out port (gray)	2-22
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8. WiFi-g™ antenna port	2-23
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10. Microphone port (pink)	2-23
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5. CPU fan connector (4-pin CPU_FAN)	2-26
6. Power fan connector (3-pin CHIP_FAN)	2-26
7. Chassis fan connector (3-pin CHA_FAN1)	2-26
8. Chassis fan 2 connector (3-pin CHA_FAN2)	2-26
9. Serial port connector (10-1 pin COM1)	2-27
10. USB headers (10-1 USB56, USB78)	2-27
11. ATX power connector (24-pin EATXPWR)	2-28
12. ATX 12V power connector (4-pin ATX12V)	2-28
13. Internal audio connector (4-pin CD, AUX)	2-29
14. GAME/MIDI connector (16-1 pin GAME)	2-29
15. Chassis intrusion connector (4-1 pin CHASSIS)	2-30
16. IEEE 1394 connector (10-1 pin IE1394_2)	2-30
17. Front panel audio connector (10-1 pin F_PANEL)	2-31
18. Digital audio connector (4-pin SPDIF)	2-31
19. System panel connectors (20-1 pin PANEL)	2-32
- System Power LED (Green 3-pin PLED)	
- Hard Disk activity (Red 2-pin IDE_LED)	
- System warning speaker (Orange 4-pin SPEAKER)	
- Power/Soft-off button (Yellow 2-pin PWR)	
- Reset switch (Blue 2-pin RESET)	

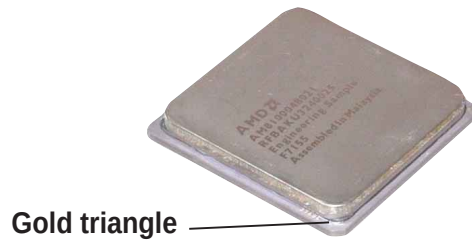
2.3 Central Processing Unit (CPU)

2.3.1 Overview

The motherboard comes with a surface mount 939-pin Zero Insertion Force (ZIF) socket designed for the AMD Athlon™ 64FX or AMD Athlon 64™ processor.

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.

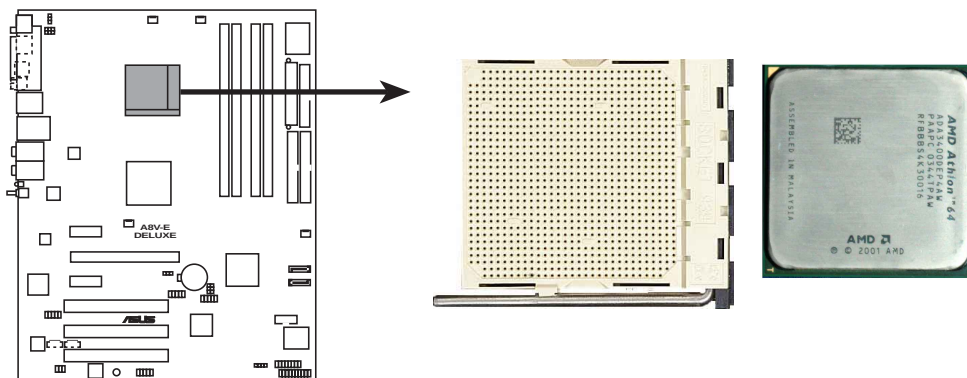
Take note of the marked corner (with gold triangle) on the CPU. This mark should match a specific corner on the socket to ensure correct installation.



2.3.2 Installing the CPU

To install a CPU:

1. Locate the CPU socket on the motherboard.



A8V-E DELUXE CPU Socket 939



Before installing the CPU, make sure that the socket box is facing towards you and the load lever is on your left.

2. Unlock the socket by pressing the lever sideways, then lift it up to a 90°-100° angle.

Socket Lever



Make sure that the socket lever is lifted up to 90°-100° angle, otherwise the CPU does not fit in completely.

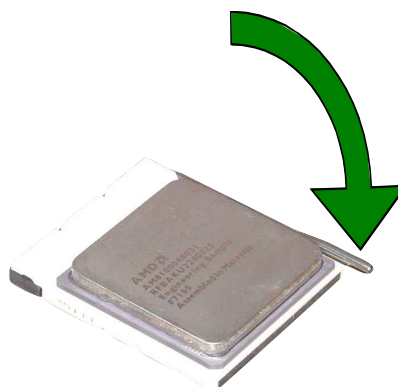
3. Position the CPU above the socket such that the CPU corner with the gold triangle matches the socket corner with a small triangle.
4. Carefully insert the CPU into the socket until it fits in place.

Gold triangle
Small triangle



The CPU fits only in one correct orientation. DO NOT force the CPU into the socket to prevent bending the pins and damaging the 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.



2.3.3 Installing the heatsink and fan

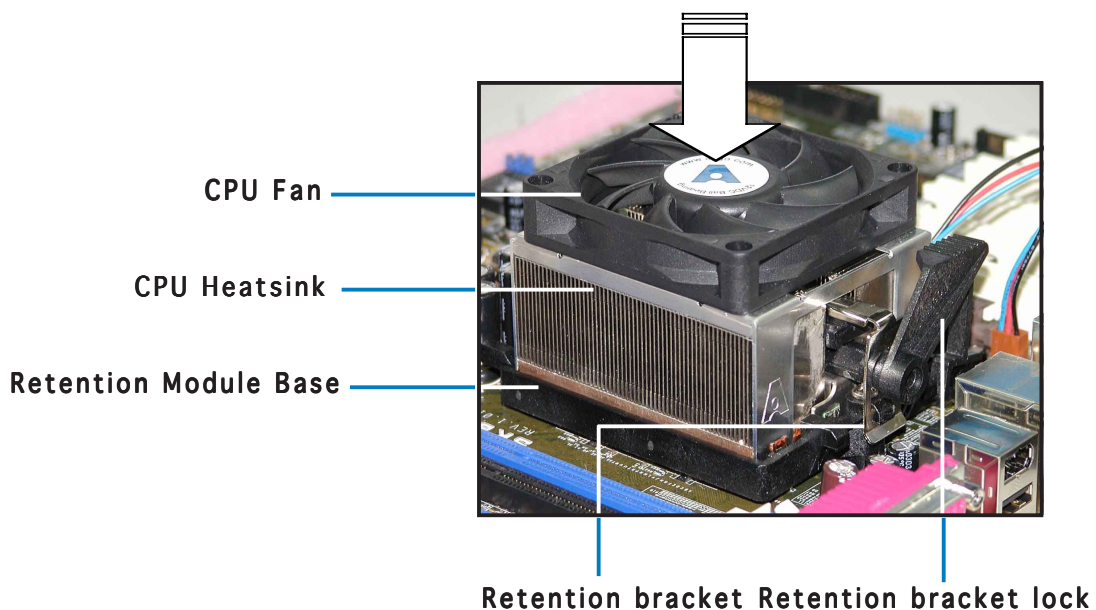
The AMD Athlon™ 64FX or AMD Athlon 64™ processor require a specially designed heatsink and fan assembly to ensure optimum thermal condition and performance.

Follow these steps to install the CPU heatsink and fan.

1. Place the heatsink on top of the installed CPU, making sure that the heatsink fits properly on the retention module base.

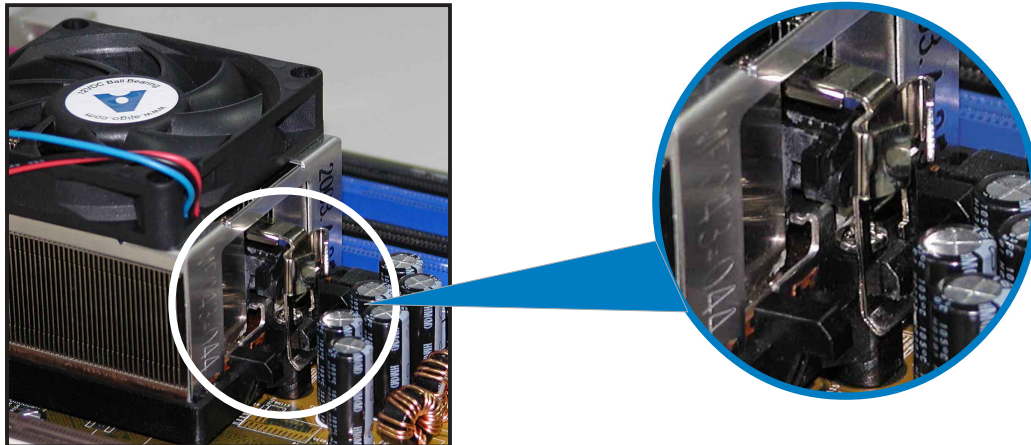


- The retention module base is already installed on the motherboard upon purchase.
- You do not have to remove the retention module base when installing the CPU or installing other motherboard components.
- If you purchased a separate CPU heatsink and fan assembly, make sure that a Thermal Interface Material is properly applied to the CPU heatsink or CPU before you install the heatsink and fan assembly.



Your boxed CPU heatsink and fan assembly should come with installation instructions for the CPU, heatsink, and the retention mechanism. If the instructions in this section do not match the CPU documentation, follow the latter.

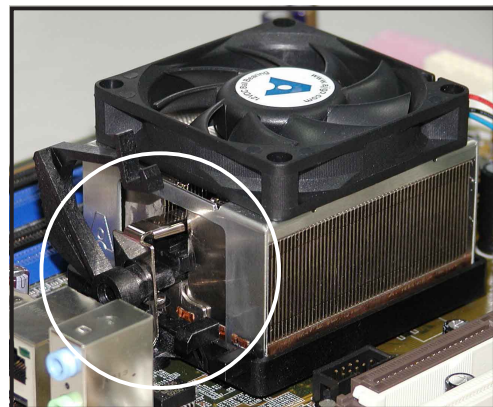
2. Attach one end of the retention bracket to the retention module base.



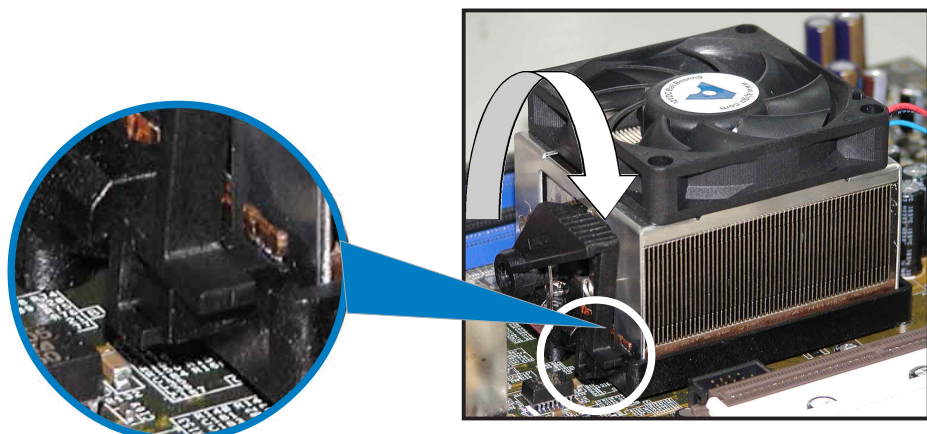
3. Align the other end of the retention bracket (near the retention bracket lock) to the retention module base. A clicking sound denotes that the retention bracket is in place.



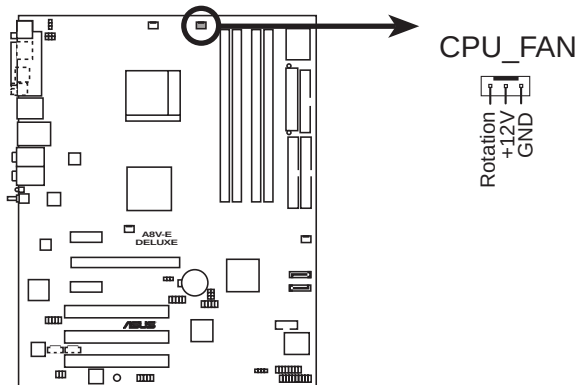
Make sure that the fan and heatsink assembly perfectly fits the retention mechanism module base, otherwise you cannot snap the retention bracket in place.



4. Push down the retention bracket lock on the retention mechanism to secure the heatsink and fan to the module base.



- When the fan and heatsink assembly is in place, connect the CPU fan cable to the connector on the motherboard labeled CPU_FAN.



A8V-E DELUXE CPU_Fan connector



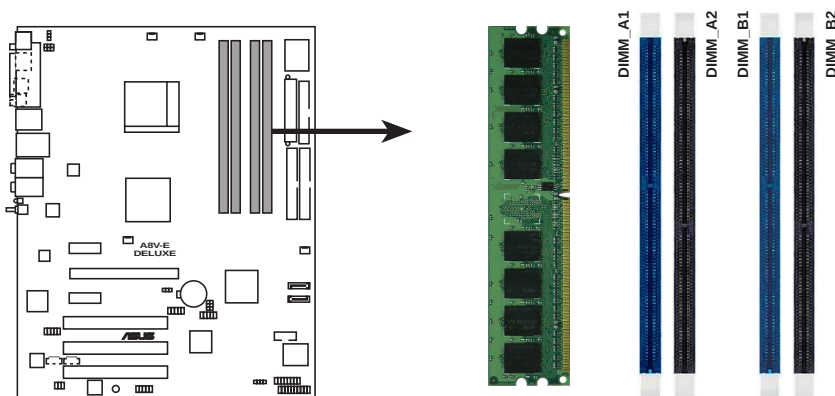
Do not forget to connect the CPU fan connector! Hardware monitoring errors can occur if you fail to plug this connector.

2.4 System memory

2.4.1 Overview

The motherboard comes with four 184-pin Double Data Rate (DDR) Dual Inline Memory Modules (DIMM) sockets.

The following figure illustrates the location of the sockets:



A8V-E DELUXE 184-pin DDR DIMM sockets

Channel	Sockets
Channel A	DIMM_A1 and DIMM_A2
Channel B	DIMM_B1 and DIMM_B2

2.4.2 Memory Configurations

You may install 256 MB, 512 MB and 1 GB unbuffered ECC or non-ECC DDR DIMMs into the DIMM sockets using the memory configurations in this section.



- For dual-channel configuration, the total size of memory module(s) installed per channel must be the same for better performance (DIMM_A1+DIMM_A2=DIMM_B1+DIMM_B2).
- Always install DIMMs with the same CAS latency. For optimum compatibility, it is recommended that you obtain memory modules from the same vendor. Refer to the DDR400 Qualified Vendors List on the next page for details.
- Due to chipset resource allocation, the system may detect less than 4 GB of system memory when you installed four 1 GB DDR memory modules.
- Due to chipset limitation, DIMM modules with 128 Mb memory chips or double-sided x16 memory chips are not supported in this motherboard.
- Due to CPU limitation, install on Channel B slots for a single-channel memory configuration.

DDR400 Qualified Vendors List

Size	Vendor	Model	Brand	Side(s)	Component	DIMM support		
						A	B	C
256MB	KINGSTON	KVR400X64C3A/256	Hynix	SS	HY5DU56822BT-D43	•	•	•
512MB	KINGSTON	KVR400X64C3A/512	Hynix	DS	HY5DU56822BT-D43	•	•	
256MB	KINGSTON	KVR400X72C3A/256	Mosel	SS	V58C2256804SAT5(ECC)			
512MB	KINGSTON	KVR400X72C3A/512	Mosel	DS	V58C2256804SAT5(ECC)	•	•	
256MB	KINGSTON	KVR400X64C3A/256	Infineon	SS	HYB25D256800BT-5B		•	•
512MB	KINGSTON	KVR400X64C3A/512	Infineon	DS	HYB25D256809BT-5B	•		
256MB	KINGSTON	KVR400X64C3A/256	KINGSTON	SS	D3208DL2T-5	•	•	•
512MB	KINGSTON	KVR400X64C3A/512	KINGSTON	DS	D328DJB-50	•		
1024MB	KINGSTON	HYB25D512800BE-5B	N/A	DS	KVR400X64C3A/1G	•		
256MB	SAMSUNG	M381L3223ETM-CCC	SAMSUNG	SS	K4H560838E-TCCC(ECC)	•	•	•
512MB	SAMSUNG	M381L6423ETM-CCC	SAMSUNG	DS	K4H560838E-TCCC(ECC)	•	•	•
256MB	SAMSUNG	M368L3223ETM-CCC	SAMSUNG	SS	K4H560838E-TCCC	•	•	•
256MB	SAMSUNG	M368L3223FTN-CCC	SAMSUNG	SS	K4H560838F-TCCC	•	•	•
512MB	SAMSUNG	M368L6423FTN-CCC	SAMSUNG	DS	K4H560838F-TCCC	•	•	
512MB	SAMSUNG	M368L6523BTM-CCC	SAMSUNG	SS	K4H510838B-TCCC	•	•	•
256MB	MICRON	MT8VDDT3264AG-40BCB	MICRON	SS	MT46V32M8TG-5BC	•	•	•
512MB	MICRON	MT16VDDT6464AG-40BCB	MICRON	DS	MT46V32M8TG-5BC	•	•	
256MB	Infineon	HYS64D32300HU-5-C	Infineon	SS	HYB25D256800CE-5C	•	•	•
512MB	Infineon	HYS64D64320HU-5-C	Infineon	DS	HYB25D256800CE-5C	•		
256MB	CORSAIR	CMX256A-3200C2PT	Winbond	SS	W942508BH-5	•		
512MB	CORSAIR	V512MB400	VALUE seLecT	DS	VS32M8-5	•		
1024MB	CORSAIR	TWINX2048-3200C2	N/A	DS	N/A	•		
256MB	Hynix	HYMD232645D8J-D43	Hynix	SS	HY5DU56822DT-D43	•	•	•
512MB	Hynix	HYMD264646D8J-D43	Hynix	DS	HY5DU56822DT-D43	•	•	
256MB	GEIL	GE2563200B	GEIL	SS	GL3LC32G88TG-5A	•	•	•
256MB	GEIL	GD3200-256V	GEIL	SS	GLIL DDR 32M8	•		
512MB	GEIL	GD3200-512V	GEIL	DS	GLIL DDR 32M8	•		

(continued on the next page)

Size	Vendor	Model	Brand	Side(s)	Component	DIMM support		
						A	B	C
256MB	TwinMOS	M2G9I08AIAATT9F081AADT	TwinMOS	SS	TMD7608F8E50D	•	•	•
256MB	TwinMOS	M2G9I08A8ATT9F081AADT	TwinMOS	SS	TMD7608F8E50D	•	•	•
512MB	TwinMOS	M2G9J16A8ATT9F081AADT	TwinMOS	DS	TMD7608F8E50D	•	•	•
256MB	Transcend	TS32MLD64V4F3	SAMSUNG	SS	K4H560838F-TCCC	•	•	•
512MB	Transcend	TS64MLD64V4F3	SAMSUNG	DS	K4H560838F-TCCC	•	•	•
1024MB	Transcend	TS128MLD64V4J	SAMSUNG	DS	K4H510838B-TCCC	•	•	•
512MB	Transcend	TS64MLD64V4F3	Mosel	DS	V58C2256804SAT5B	•	•	•
256MB	Transcend	TS32MLD64V4F3	SAMSUNG	SS	K4H560838E-TCCC	•	•	•
256MB	Apacer	77.10636.33G	Infineon	SS	HYB25D256800CE-5C	•	•	•
512MB	Apacer	77.10736.33G	Infineon	DS	HYB25D256800CE-5C	•	•	•
256MB	Apacer	77.10639.60G	ProMOS	SS	V58C2256804SCT5B	•	•	•
512MB	Apacer	77.10739.60G	ProMOS	DS	V58C2256804SCT5B	•	•	•
512MB	A DATA	MDOSS6F3H41Y0N1E0Z	SAMSUNG	DS	K4H560838F-TCCC	•	•	•
256MB	A DATA	MDOHY6F3G31Y0N1E0Z	Hynix	SS	HY5DU56822CT-D43	•	•	•
256MB	A DATA	MDOAD5F3G31Y0D1E02	N/A	SS	ADD8608A8A-5B	•	•	•
512MB	A DATA	MDOAD5F3H41Y0D1E02	N/A	DS	ADD8608A8A-5B	•	•	•
256MB	Winbond	W9425GCDB-5	Winbond	SS	W942508CH-5	•	•	•
512MB	Winbond	W9451GCDB-5	Winbond	DS	W942508CH-5	•	•	•
256MB	KINGMAX	MPXB62D-38KT3R	N/A	SS	KDL388P4LA-50	•	•	•
512MB	KINGMAX	MPXC22D-38KT3R	N/A	DS	KDL388P4LA-50	•	•	•
512MB	ATP	AG64L64T8SQC4S	SAMSUNG	DS	K4H560838D-TCC4	•	•	•
1024MB	ATP	AG28L64T8SMC4M	MICRON	DS	MT46V64M4TG-5BC	•	•	•
256MB	NANYA	NT256D64S88C0G-5T	N/A	SS	NT5DS32M8CT-5T	•	•	•
512MB	NANYA	NT512D64S88C0G-5T	N/A	DS	NT5DS32M8CT-5T	•	•	•
256MB	BRAIN POWER	B6U808-256M-SAM-400	SAMSUNG	SS	K4H560838D-TCC4	•	•	•
256MB	ProMOS	V826632K24SCTG-D0	N/A	SS	V58C2256804SCT5B	•	•	•
512MB	ProMOS	V82664K24SCTG-D0	N/A	DS	V58C2256804SCT5B	•	•	•
256MB	Deutron	A8C53T-5B1T	PSC	SS	A2S56D30CTP	•	•	•
512MB	Deutron	AL6D8C53T-5B1T	PSC	DS	A2S56D30CTP	•	•	•
256MB	Novax	96M425653CE-40TB6	CEON	SS	C2S56D30TP-5	•	•	•
512MB	Novax	96M451253CE-40TB6	CEON	DS	C2S56D30TP-5	•	•	•

Side(s): SS - Single Sided

DS - Double Sided

DIMM Support:

- A** - supports one module inserted into either slot, in a Single-channel memory configuration.
- B** - supports on pair of modules inserted into either the yellow slots or the black slots as one pair of Dual-channel memory configuration.
- C** - support for 4 modules inserted into the yellow and black slots as two pairs of Dual-channel memory configuration.



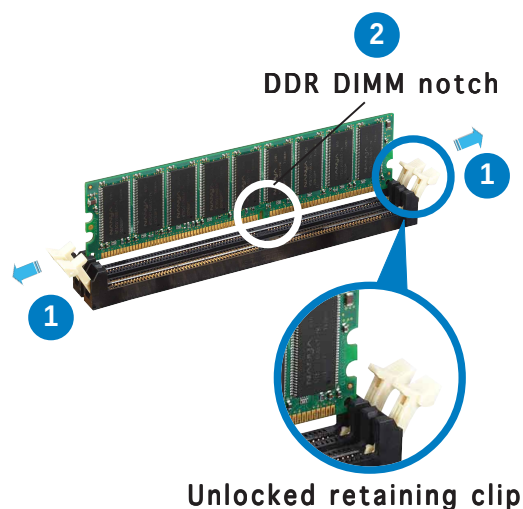
Visit the ASUS website (www.asus.com) for the latest DDR400 Qualified Vendors List.

2.4.3 Installing a DIMM



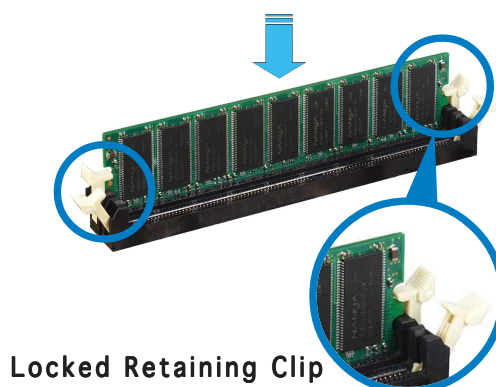
Make sure to unplug the power supply before adding or removing DIMMs or other system components. Failure to do so may cause severe damage to both the motherboard and the components.

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.



A DDR 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.

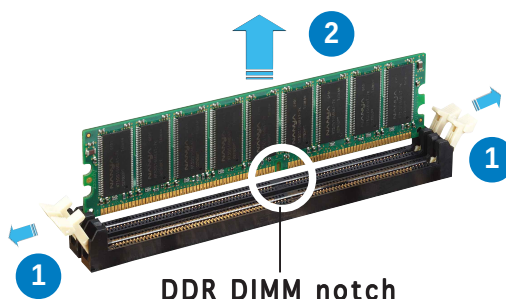
3. Firmly insert the DIMM into the socket until the retaining clips snap back in place and the DIMM is properly seated.



2.4.4 Removing a DIMM

Follow these steps to remove a DIMM.

1. 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.

2. Remove the DIMM from the socket.

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 Installing an expansion card

To install an expansion card:

1. Before installing the expansion card, read the documentation that came with it and make the necessary hardware settings for the card.
2. Remove the system unit cover (if your motherboard is already installed in a chassis).
3. Remove the bracket opposite the slot that you intend to use. Keep the screw for later use.
4. Align the card connector with the slot and press firmly until the card is completely seated on the slot.
5. Secure the card to the chassis with the screw you removed earlier.
6. Replace the system cover.

2.5.2 Configuring an expansion card

After installing the expansion card, configure the it by adjusting the software settings.

1. Turn on the system and change the necessary BIOS settings, if any. See Chapter 4 for information on BIOS setup.
2. Assign an IRQ to the card. Refer to the tables on the next page.
3. Install the software drivers for the expansion card.

2.5.3 Interrupt assignments

Standard interrupt assignments

IRQ	Priority	Standard Function
0	1	System Timer
1	2	Keyboard Controller
2	–	Re-direct to IRQ#9
3	11	Communications Port (COM2)*
4	12	Communications Port (COM1)*
5	13	IRQ holder for PCI steering*
6	14	Floppy Disk Controller
7	15	Printer Port (LPT1)*
8	3	System CMOS/Real Time Clock
9	4	IRQ holder for PCI steering*
10	5	IRQ holder for PCI steering*
11	6	IRQ holder for PCI steering*
12	7	PS/2 Compatible Mouse Port*
13	8	Numeric Data Processor
14	9	Primary IDE Channel
15	10	Secondary IDE Channel

* These IRQs are usually available for ISA or PCI devices.

IRQ assignments for this motherboard

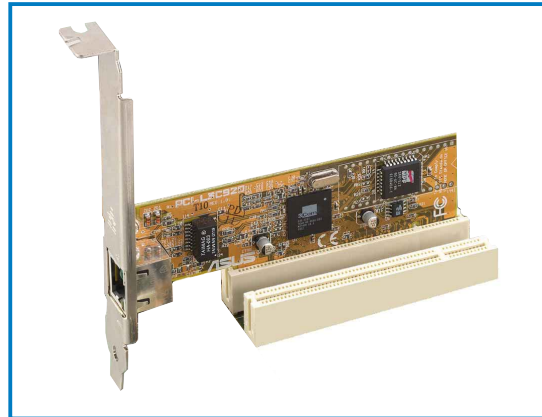
	A	B	C	D	E	F	G	H
PCI slot 1	shared	—	—	—	—	—	—	—
PCI slot 2	—	shared	—	—	—	—	—	—
PCI slot 3	—	—	shared	—	—	—	—	—
PCI E x1 slot 1	shared	—	—	—	—	—	—	—
PCI E x1 slot 2	shared	—	—	—	—	—	—	—
PCI E x16 slot	shared	—	—	—	—	—	—	—
Onboard USB controller 1	shared	—	—	—	—	—	—	—
Onboard USB controller 2	shared	—	—	—	—	—	—	—
Onboard USB controller 3	—	shared	—	—	—	—	—	—
Onboard USB controller 4	—	shared	—	—	—	—	—	—
Onboard USB 2.0 controller	—	—	shared	—	—	—	—	—
Onboard LAN	shared	—	—	—	—	—	—	—
Onboard wireless LAN	—	shared	—	—	—	—	—	—
Onboard 1394a	shared	—	—	—	—	—	—	—



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.

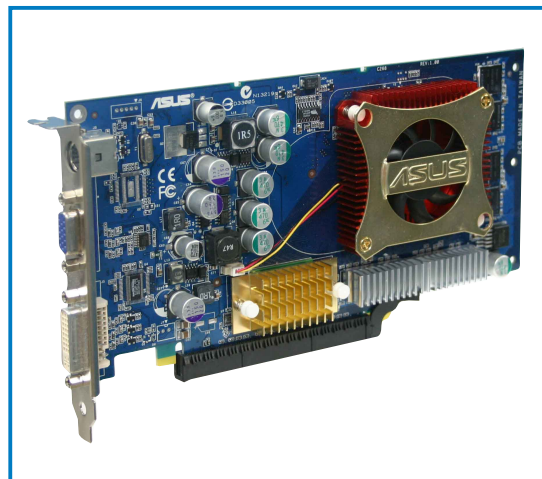
2.5.4 PCI slots

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.



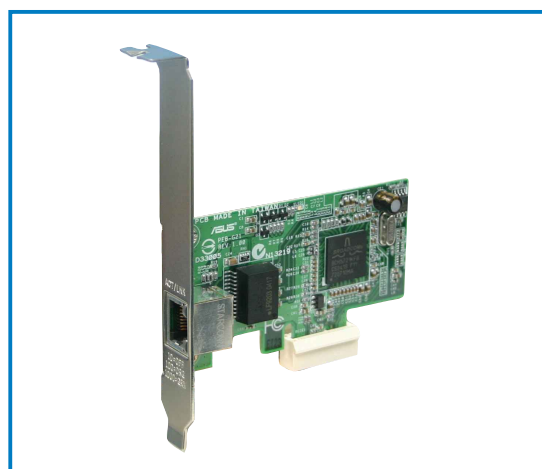
2.5.5 PCI Express x16 slot

This motherboard supports PCI Express x16 graphic cards that comply with the PCI Express specifications. The figure shows a graphics card installed on the PCI Express x16 slot.



2.5.6 PCI Express x1 slot

This motherboard supports PCI Express x1 network cards, SCSI cards and other cards that comply with the PCI Express specifications. The figure shows a network card installed on the PCI Express x1 slot.



2.6 Jumpers

1. Clear RTC RAM (CLRRTC)

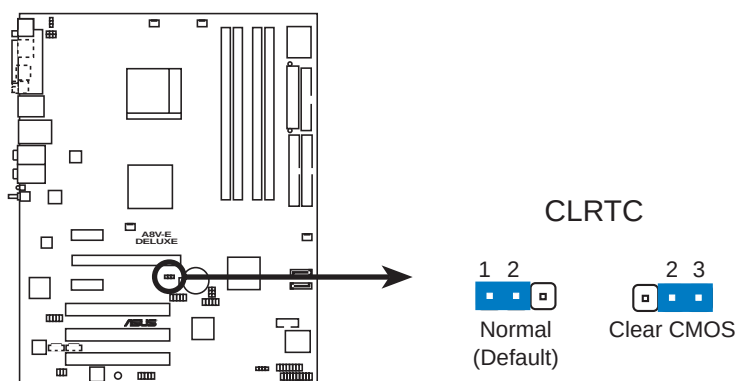
This jumper allows you to clear the Real Time Clock (RTC) RAM in CMOS. You can clear the CMOS memory of date, time, and system setup parameters by erasing the CMOS RTC RAM data. The onboard button cell battery powers the RAM data in CMOS, which include system setup information such as system passwords.

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. Re-install 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 CLRRTC jumper default position. Removing the cap will cause system boot failure!



A8V-E DELUXE Clear RTC RAM

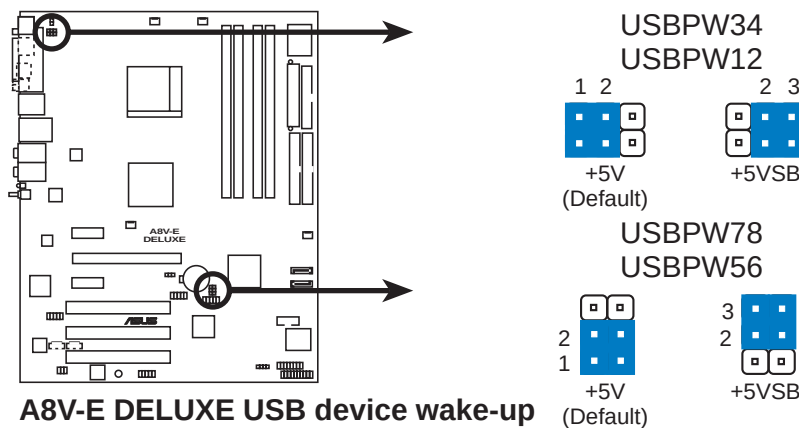


You do not need to clear the RTC when the system hangs due to overclocking. For system failure due to overclocking, use the C.P.R. (CPU Parameter Recall) feature. Shut down and reboot the system so the BIOS can automatically reset parameter settings to default values.

2. USB device wake-up (3-pin USBPW12, USBPW34, USBPW56, USBPW78)

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).

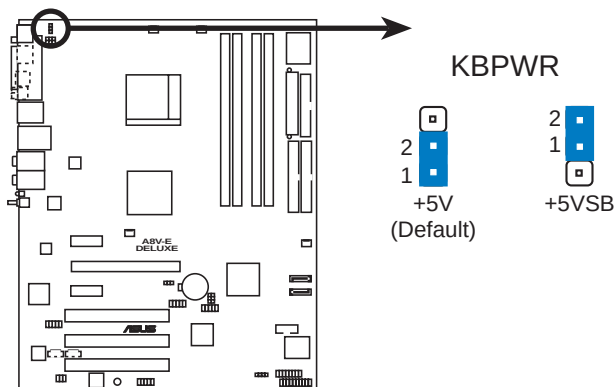
The USBPW12 and USBPW34 jumpers are for the rear USB ports. The USBPW56 and USBPW78 jumper is for the internal USB connectors that you can connect to additional USB ports.



- 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.

3. Keyboard power (3-pin KBPWR)

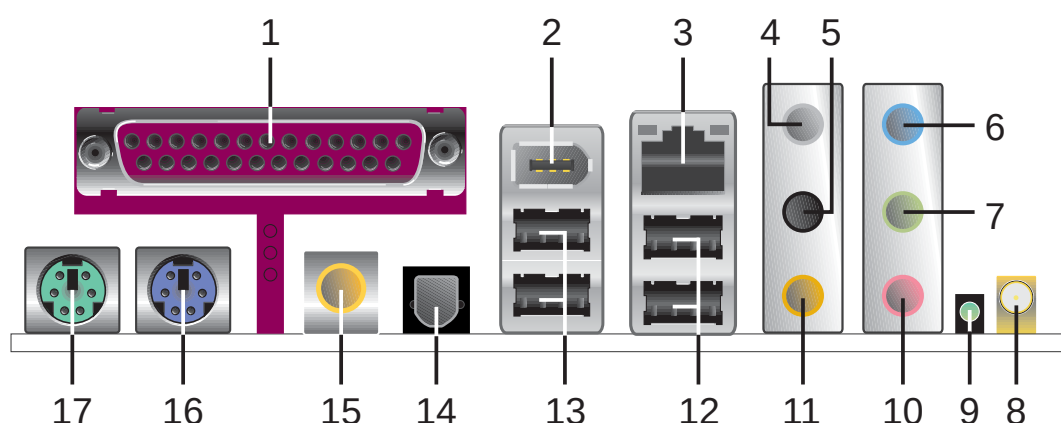
This jumper allows you to enable or disable the keyboard wake-up feature. Set this jumper to pins 2-3 (+5VSB) if you wish to wake up the computer when you press a key on the keyboard (the default is the Space Bar). This feature requires an ATX power supply that can supply at least 1A on the +5VSB lead, and a corresponding setting in the BIOS.



A8V-E DELUXE Keyboard power setting

2.7 Connectors

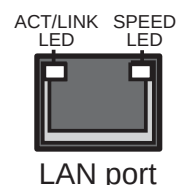
2.7.1 Rear panel connectors



1. **Parallel port.** This 25-pin port connects a parallel printer, a scanner, or other devices.
2. **IEEE 1394a port.** This 6-pin IEEE 1394 port provides high-speed connectivity for audio/video devices, storage peripherals, PCs, or portable devices.
3. **LAN RJ-45 port.** 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.

LAN port LED indications

ACT/LINK LED		SPEED LED	
Status	Description	Status	Description
OFF	No link	OFF	10 Mbps connection
GREEN	Linked	ORANGE	100 Mbps connection
BLINKING	Data activity	GREEN	1 Gbps connection



4. **Rear Speaker Out port (gray).** This port connects the rear speakers on a 4-channel, 6-channel, or 8-channel audio configuration.
5. **Side Speaker Out port (black).** This port connects the side speakers in an 8-channel audio configuration.
6. **Line In port (light blue).** This port connects the tape, CD, DVD player, or other audio sources.
7. **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.



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.

8. **WiFi-g™ antenna port.** This port connects to the optional dipolar antenna for the onboard ASUS WiFi-g™ solution. (*Wireless Edition only*)
9. **Wireless LAN data transmission LED.** This green **AIR** LED indicates the data transmission status of the onboard wireless LAN adapter. Refer to the table below for the LED indications.

Wireless LAN LED indications

Status	Indication
On	The onboard WiFi-g™ is on but has no data activity.
Off	The onboard WiFi-g™ card is off.
Flashing	The onboard WiFi-g™ card is transmitting and/or receiving data.

10. **Microphone port (pink).** This port connects a microphone.
11. **Center/Subwoofer port (yellow orange).** This port connects the center/subwoofer speakers.

Audio 2, 4, 6, or 8-channel configuration

Port	Headset 2-channel	4-channel	6-channel	8-channel
Light Blue	Line In	Line In	Line In	Line In
Lime	Line Out	Front Speaker Out	Front Speaker Out	Front Speaker Out
Pink	Mic In	Mic In	Mic In	Mic In
Gray	•	Rear Speaker Out	Rear Speaker Out	Rear Speaker Out
Black	•	•	•	Side Speaker Out
Yellow Orange	•	•	Center/Subwoofer	Center/Subwoofer

12. **USB 2.0 ports 3 and 4.** These two 4-pin Universal Serial Bus (USB) ports are available for connecting USB 2.0 devices.
13. **USB 2.0 ports 1 and 2.** These two 4-pin Universal Serial Bus (USB) ports are available for connecting USB 2.0 devices.
14. **Optical S/PDIF Out port.** This port connects an external audio output device via an optical S/PDIF cable.
15. **Coaxial S/PDIF Out port.** This port connects an external audio output device via a coaxial S/PDIF cable.
16. **PS/2 keyboard port (purple).** This port is for a PS/2 keyboard.
17. **PS/2 mouse port (green).** This port is for a PS/2 mouse.

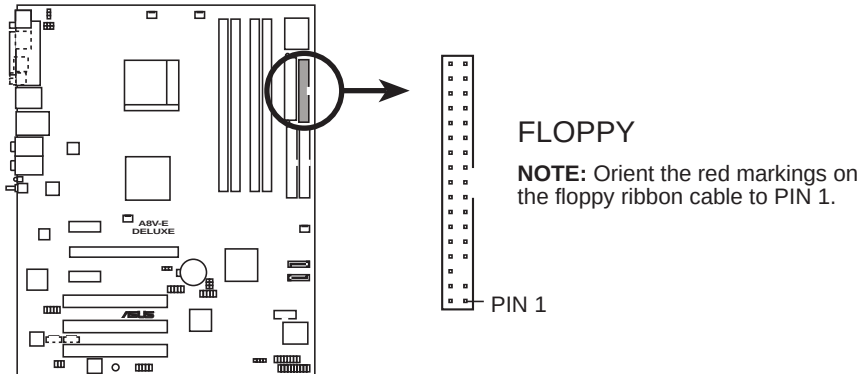
2.7.2 Internal connectors

1. Floppy disk drive connector (34-1 pin FLOPPY)

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.



The Pin 5 on the connector is removed to prevent incorrect cable connection when using an FDD cable with a covered Pin 5.



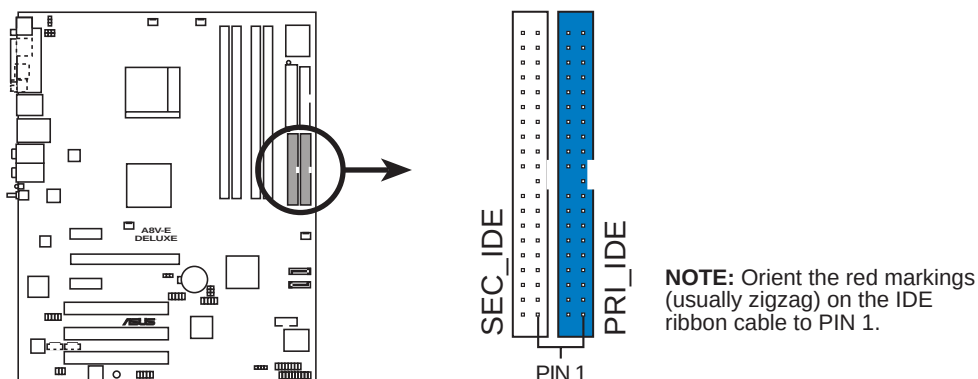
A8V-E DELUXE Floppy disk drive connector

2. IDE connectors (40-1 pin PRI_IDE, SEC_IDE)

These connectors are for Ultra DMA 133/100/66 signal cables. The Ultra DMA 133/100/66 signal cable has three connectors: a blue connector for the primary IDE connector on the motherboard, a black connector for an Ultra DMA 133/100/66 IDE slave device (optical drive/hard disk drive), and a gray connector for an Ultra DMA 133/100/66 IDE master device (hard disk drive). If you install two hard disk drives, you must configure the second drive as a slave device by setting its jumper accordingly. Refer to the hard disk documentation for the jumper settings.



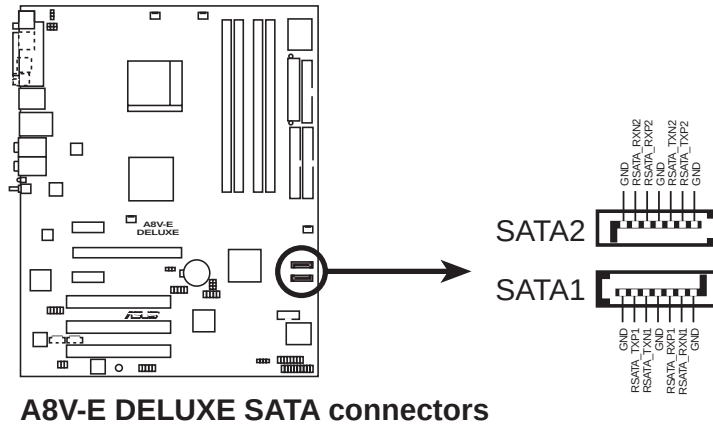
- The Pin 20 on the IDE connector is removed to match the covered hole on the Ultra DMA cable connector. This prevents incorrect insertion when you connect the IDE cable.
- Use the 80-conductor IDE cable for Ultra DMA 100/66 IDE devices.



A8V-E DELUXE IDE connectors

3. Serial ATA connectors (7-pin SATA1, SATA2)

These connectors are for the Serial ATA signal cables for Serial ATA hard disk drives.



Important notes on Serial ATA

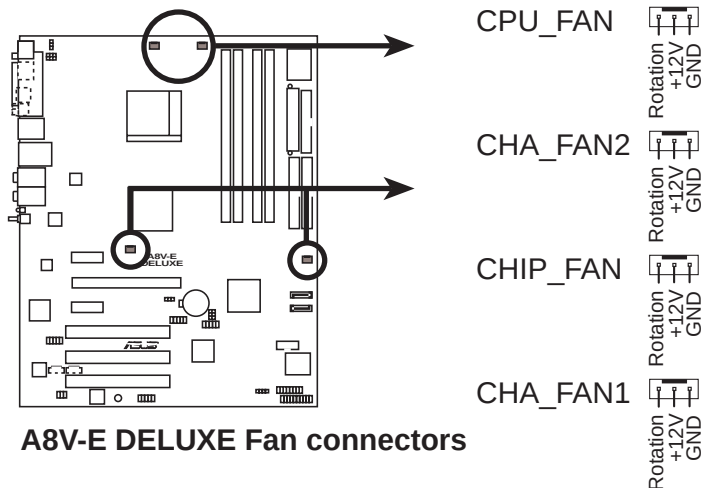
- The Serial ATA RAID feature (RAID 0, RAID 1) is available only if you are using Windows® 2000/XP.
 - Install the Windows® 2000 Service Pack 4 or the Windows® XP Service Pack1 when using Serial ATA.
-

4. CPU, Chassis, and Power fan connectors (3-pin CPU_FAN, 3-pin CHA_FAN1, 3-pin CHIP_FAN, CHA_FAN2)

The fan connectors support cooling fans of 350mA~2000mA (24 W max.) or a total of 1A~3.48A (41.76 W max.) 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.

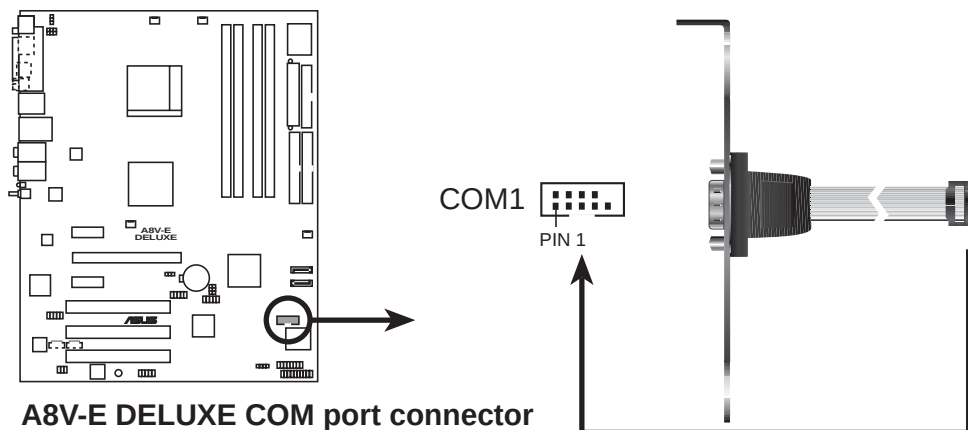


- Do not forget to connect the fan cables to the fan connectors. Lack of sufficient air flow inside the system may damage the motherboard components. These are not jumpers! DO NOT place jumper caps on the fan connectors!
- The ASUS Q-Fan2 function is supported using the CPU Fan (CPU_FAN) and Chassis Fan 1 (CHA_FAN1) connectors only.



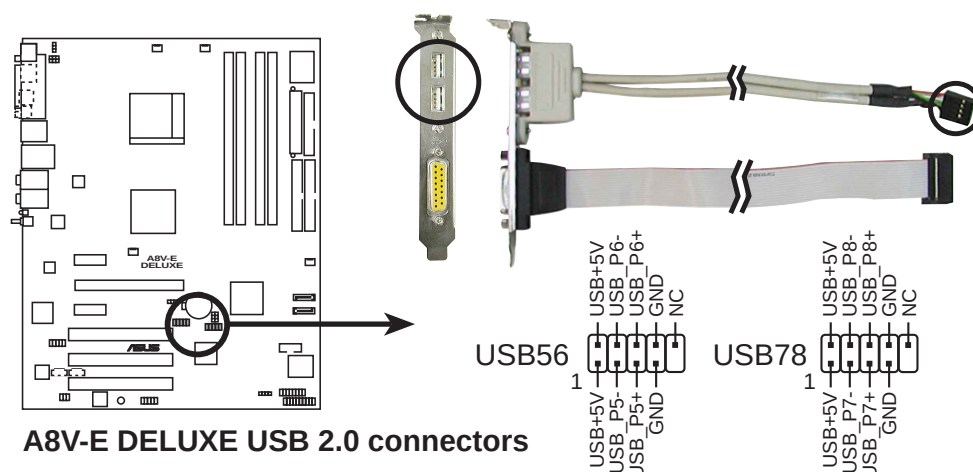
5. Serial port connector (10-1 pin COM1)

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.



6. USB connectors (10-1 pin USB56, USB78)

These connectors are for USB 2.0 ports. Connect the USB/GAME 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.



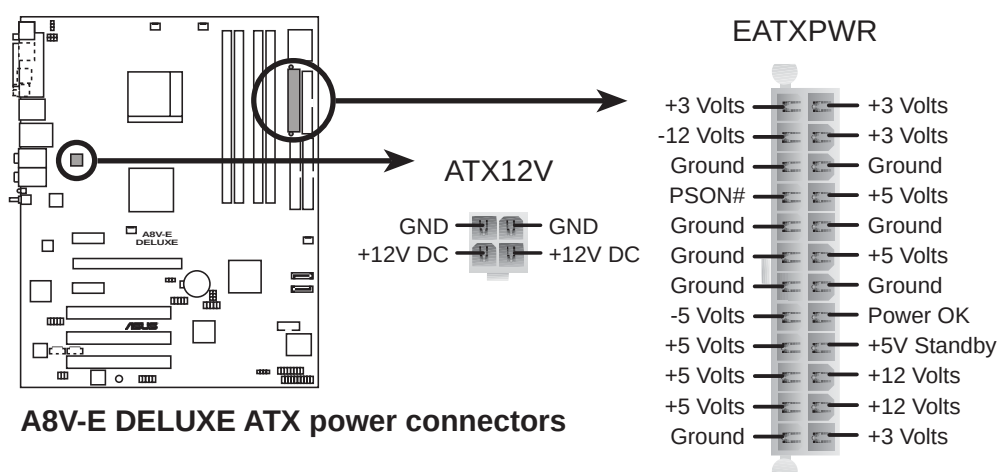
Never connect a **1394 cable** to the USB connectors. Doing so will damage the motherboard!

7. ATX power connectors (24-pin EATXPWR, 4-pin ATX12V)

These connectors are for an 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.

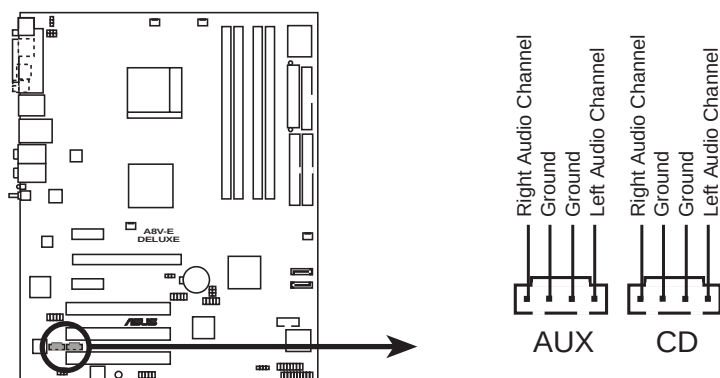


- Use of an ATX 12 V Specification 2.0-compliant power supply unit (PSU) that provides a minimum power of 350 W is recommended for a fully-configured system.
- Do not forget to connect the 4-pin ATX +12 V power plug; otherwise, the system will not boot up.
- Use of a PSU with a higher power output is 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.
- You must install a PSU with a higher power rating if you intend to install additional devices.



8. Internal audio connectors (4-pin CD, AUX)

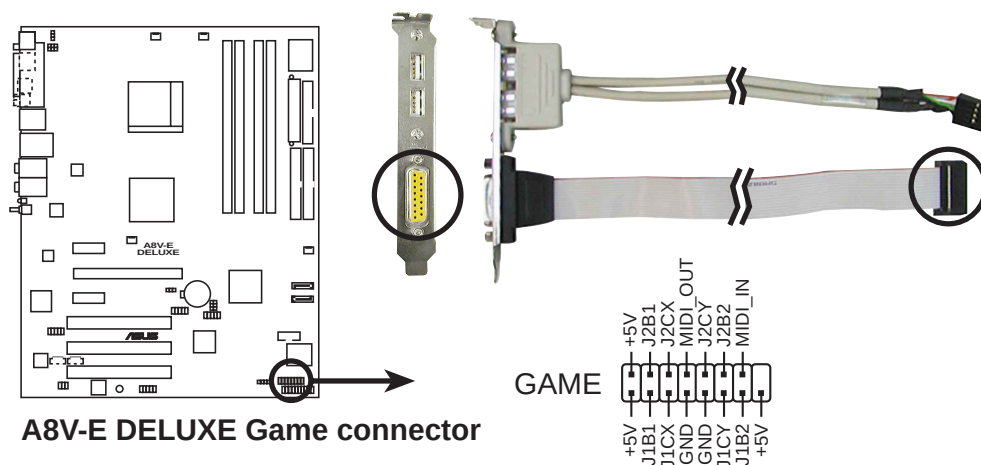
These connectors allow you to receive stereo audio input from sound sources such as a CD-ROM, TV-tuner, or MPEG card.



A8V-E DELUXE Internal audio connectors

9. GAME/MIDI port connector (16-1 pin GAME)

This connector is for a GAME/MIDI port. Connect the USB/GAME module cable to this connector, then install the module to a slot opening at the back of the system chassis. The GAME/MIDI port connects a joystick or game pad for playing games, and MIDI devices for playing or editing audio files.

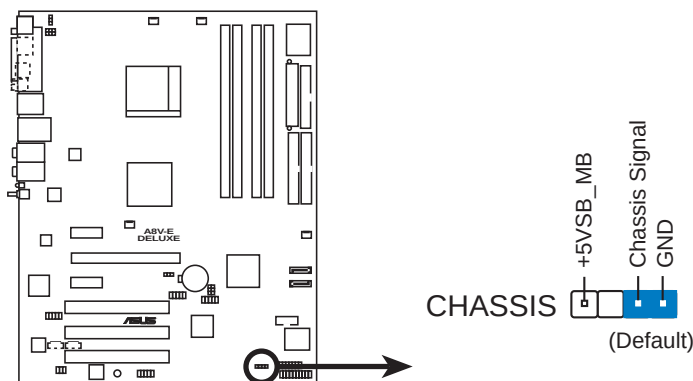


A8V-E DELUXE Game connector

10. Chassis intrusion connector (4-1 pin CHASSIS)

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.

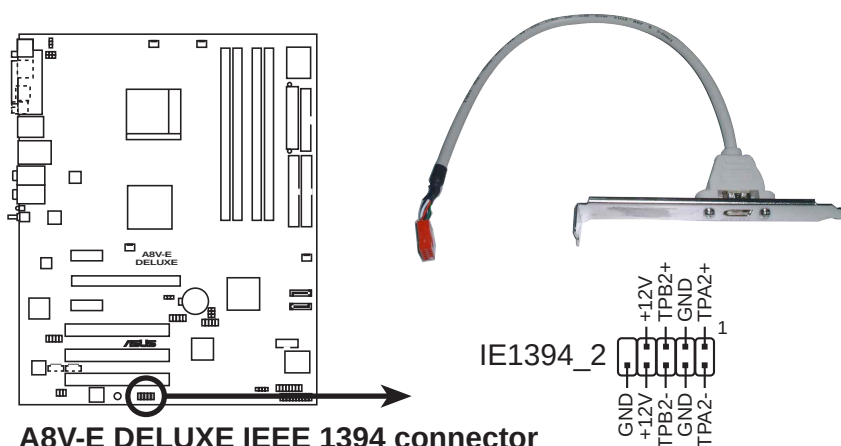
By default, the pins labeled “Chassis Signal” and “Ground” are shorted with a jumper cap. Remove the jumper caps only when you intend to use the chassis intrusion detection feature.



A8V-E DELUXE Chassis alarm lead

11. IEEE 1394 connector (10-1 pin IE1394_2)

These connectors are for IEEE 1394a ports. Connect the IEEE 1394 module cable to this connector, then install the module to a slot opening at the back of the system chassis.



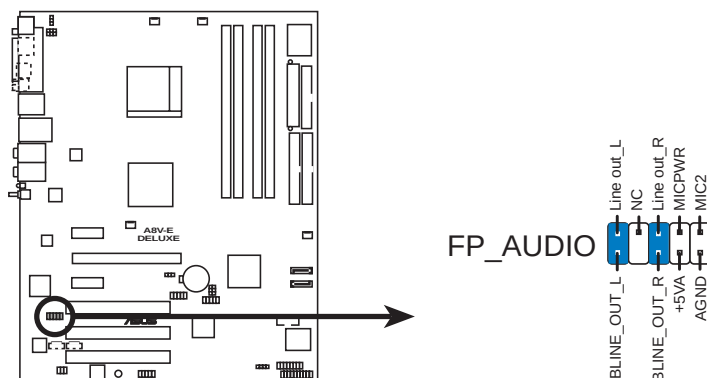
A8V-E DELUXE IEEE 1394 connector



Never connect a **USB cable** to the IEEE 1394a connectors. Doing so will damage the motherboard!

12. Front panel audio connector (10-1 pin FP_AUDIO)

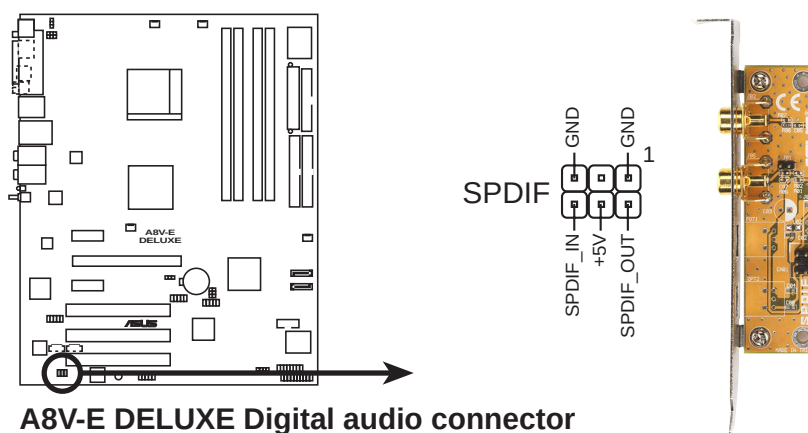
This connector is for a chassis-mounted front panel audio I/O module that supports legacy AC '97 audio standard. Connect one end of the front panel audio I/O module cable to this connector.



A8V-E DELUXE Front panel audio connector

13. Digital audio connector (4-1 pin SPDIF)

This connector is for an additional Sony/Philips Digital Interface (S/PDIF) port(s). Connect the S/PDIF module cable to this connector, then install the module to a slot opening at the back of the system chassis.



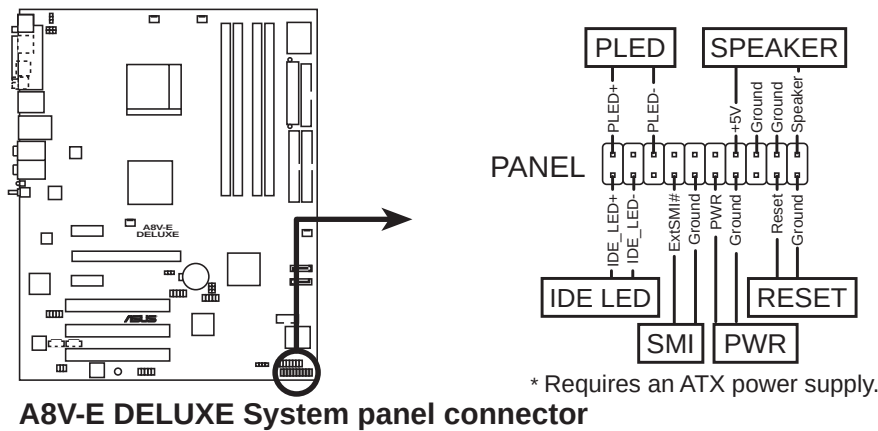
A8V-E DELUXE Digital audio connector



The S/PDIF module is purchased separately.

14. System panel connector (20-pin PANEL)

This connector supports several chassis-mounted functions.



The system panel connector is color-coded for easy connection. Refer to the connector description below for details.

- **System power LED (Green 3-pin PLED)**
This 3-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.
- **System warning speaker (Orange 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.
- **Hard disk drive activity (Red 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.
- **Power/Soft-off button (Yellow 2-pin PWR)**
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 (Blue 2-pin RESET)**
This 2-pin connector is for the chassis-mounted reset button for system reboot without turning off the system power.

This chapter describes the power up sequence, the vocal POST messages, and ways of shutting down the system.

Powering up

Chapter summary

3.1	Starting up for the first time	3-1
3.2	Powering off the computer	3-2
3.3	ASUS POST Reporter™	3-3

3.1 Starting up for the first time

1. After making all the connections, replace the system case cover.
2. Be sure that all switches are off.
3. Connect the power cord to the power connector at the back of the system chassis.
4. Connect the power cord to a power outlet that is equipped with a surge protector.
5. Turn on the devices in the following order:
 - a. Monitor
 - b. External SCSI devices (starting with the last device on the chain)
 - c. System power
6. After applying power, the system power LED on the system front panel case lights up. For systems with ATX power supplies, the system LED lights up when you press the ATX power button. If your monitor complies with “green” standards or if it has a “power standby” feature, the monitor LED may light up or switch between orange and green after the system LED turns on.

The system then runs the power-on self tests or POST. While the tests are running, the BIOS beeps (see BIOS beep codes table below) or additional messages appear on the screen. If you do not see anything within 30 seconds from the time you turned on the power, the system may have failed a power-on test. Check the jumper settings and connections or call your retailer for assistance.
7. At power on, hold down the <Delete> key to enter the BIOS Setup. Follow the instructions in Chapter 4.

3.2 Powering off the computer

3.2.1 Using the OS shut down function

If you are using Windows® 2000:

1. Click the **Start** button then click **Shut Down...**
2. Make sure that the **Shut Down** option button is selected, then click the **OK** button to shut down the computer.
3. The power supply should turn off after Windows® shuts down.

If you are using Windows® XP:

1. Click the **Start** button then select **Turn Off Computer.**
2. Click the **Turn Off** button to shut down the computer.
3. 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. 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” in Chapter 4 for details.

3.3 ASUS POST Reporter™

This motherboard includes the Winbond speech controller to support a special feature called the ASUS POST Reporter™. This feature lets you hear vocal messages during POST that alerts you of system events and boot status. In case of a boot failure, you will hear the specific cause of the problem.

These POST messages are customizable using the Winbond Voice Editor software that came with your package. You can record your own messages to replace the default messages.

3.3.1 Vocal POST messages

Following is a list of the default POST messages and the corresponding actions you can take:

POST Message	Action
No CPU installed	• Install a supported processor to the CPU socket. See section “2.3 Central Processing Unit (CPU)” for details.
System failed CPU test	• Check the CPU if properly installed. • Call ASUS technical support for assistance. See the ASUS contact information on the inside front cover of this user guide.
System failed memory test	• Install supported DDR2 DIMMs into the memory sockets. • Check if the DIMMs on the DIMM sockets are properly installed. • Make sure that your DIMMs are not defective. • Refer to section “2.4 System memory” for instructions on installing a DIMM.
System failed VGA test	• Install a PCI graphics card into one of the PCI slots, or a PCI Express AGP card into the PCI Express x16 slot. • Make sure that your graphics card is not defective.
System failed due to CPU	• Check your CPU overclocking settings in the BIOS setup and restore the default CPU parameters.
No keyboard detected	• Check if your keyboard is properly connected to the purple PS/2 connector on the rear panel. • See section “2.7.1 Rear panel connectors” for the location of the connector.
No IDE hard disk detected	• Make sure you have connected an IDE hard disk drive to one of the IDE connectors on the motherboard.

POST Message	Action
CPU temperature too high	• Check if the CPU fan is working properly.
CPU fan failed	• Check the CPU fan and make sure it turns on after you apply power to the system. • Make sure that your CPU fan supports the fan speed detection function.
CPU voltage out of range	• Check your power supply and make sure it is not defective. • Call ASUS technical support for assistance. See the “ASUS contact information” on the inside front cover of this user guide.
Computer now booting from operating system	• No action required



You can enable or disable the ASUS POST Reporter™ in the **Speech Configuration** option in the BIOS setup. See section 4.4.9 for details.

3.3.2 Winbond Voice Editor

The Winbond Voice Editor software allows you to customize the vocal POST messages. You can install this application from the support CD.

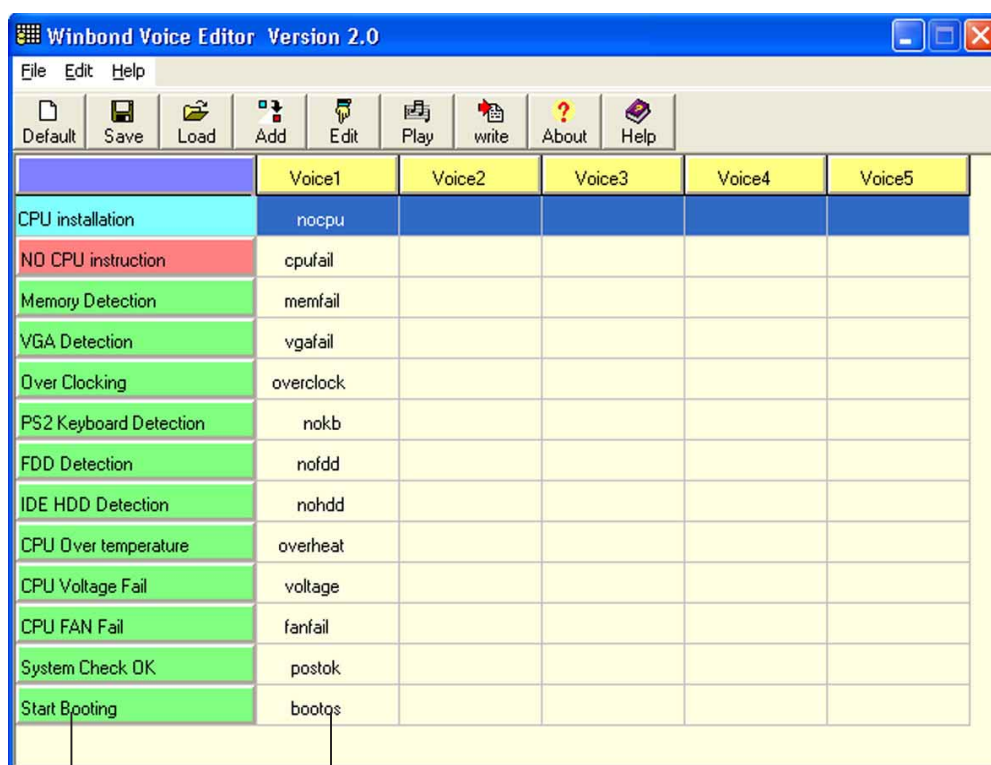


To avoid conflicts, do not run the Winbond Voice Editor while running the ASUS PC Probe application.

Launching the Voice Editor

You can launch the program from the Windows® desktop by clicking **Start > All Programs > Winbond Voice Editor > Voice Editor**.

The Winbond Voice Editor screen appears.



POST Events Default Messages

Playing the default wave files

To play the default wave files, simply click on a POST event on the left side of the screen, then click the Play button.



The default language setting is English.

Changing the default language

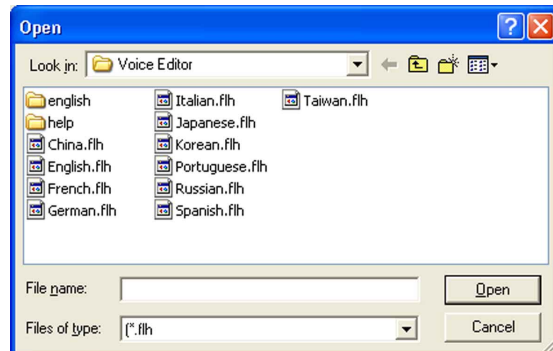
To change the default language:

1. Click the **Load** button from the Voice Editor main window. A window with the available languages appears.



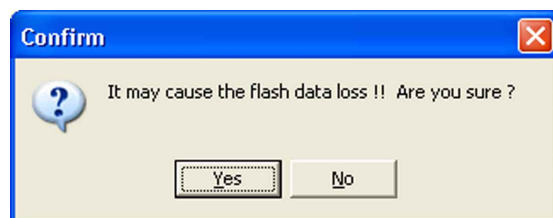
2. Select your desired language, then click **Open**.

The event messages for the language you selected appear on the Voice Editor main window.



Not all events on some languages have a corresponding message due to file size constraints.

3. Click the **Write** button from the Voice Editor main window to update the EEPROM.
4. Click **Yes** to confirm.



The next time you boot your computer, the ASUS Post Reporter announces the messages in the selected language.

Customizing your POST messages

The Voice Editor application allows you to record your own POST messages if your language is not supported or if you wish to replace the pre-installed wave files.

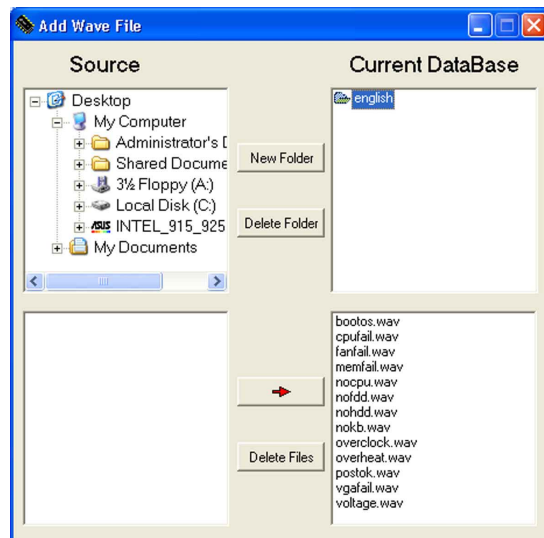
To customize your POST messages.

1. Launch the Voice Editor application and note the list of POST events on the leftmost column of the screen.
2. Prepare your message for each event.
3. Use a recording software (e.g. Windows® Recorder) to record your messages, then save the messages as wave files (.WAV).



- The total compressed size for all the wave files must not exceed 1Mbit, so keep your messages as short as possible.
- To keep file sizes small, save your files at a low quality. For example, use 8-bit, mono quality at 22Khz sampling rate.
- Create a separate folder for your wave files so you can locate them easily.

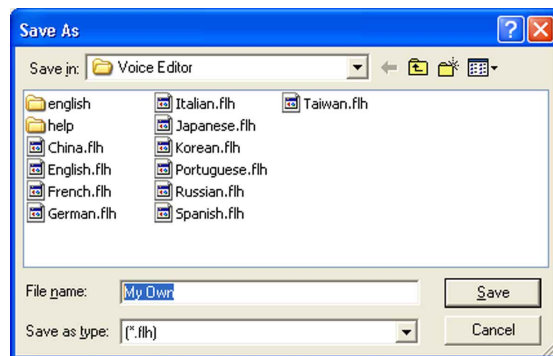
4. From the Voice Editor screen, click the **Add** button to display the **Add Wave File** window.
5. Copy the wave files that you recorded to the database, then close the window when done.



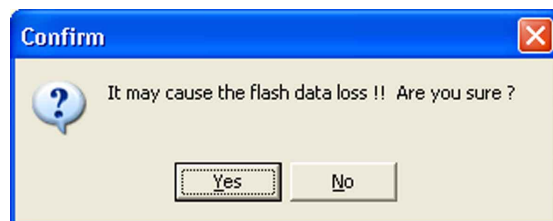
6. Select a POST event on the Voice Editor main window, then click the **Edit** button. The **Event Sound Editor** window appears.
7. Locate and select your wave file for the event, then click on the arrow opposite Voice1. The file you select appears on the space next to it.
8. Click **OK** to return to the Voice Editor main window.
9. Do steps 6 to 8 for the other events.



10. When done, click **Save**. A window appears prompting you to save your configuration.
11. Type a file name with an **.flh** extension, then click Save.



12. Click the **Write** button to compress the file and copy into the EEPROM.
13. Click **Yes** on the confirmation window that appears.



If you receive an error message telling you that the files exceed the total allowable size, do any or all of the following:

- Shorten your messages.
- Save the wave files at a lower quality
- Do not include seldom-used events like FDD Detection, IDE HDD Detection, etc.