



Asus A55BM-K - Motherboard Manual

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About this guide

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

How this guide is organized

This guide contains the following parts:

- Chapter 1: Product introduction
This chapter describes the features of the motherboard and the new technology it supports.
- Chapter 2: BIOS information
This chapter tells how to change system settings through the BIOS Setup menus. Detailed descriptions of the BIOS parameters are also provided.

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 ensure that you perform certain tasks properly, take note of the following symbols used throughout this manual.

/

Information to prevent injury to yourself when trying to complete a task.

Information to prevent damage to the components when trying to complete a task.

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.
<i>Italics</i>	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 (+).

Package contents

Check your motherboard package for the following items.

Motherboard	ASUS A55BM-K motherboard
Cables	2 x Serial ATA 3.0 Gb/s cables
Accessories	1 x I/O Shield
Application DVD	Support DVD
Documentation	User Guide

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

A55BM-K specifications summary

APU	AMD® FM2+ Socket for AMD® A-series/Athlon™ Series processors AMD® Turbo Core Technology 3.0 support Supports APU up to 4 cores • Refer to www.asus.com for the AMD® APU support list.
Chipset	AMD® A55 FCH (Hudson D2)

Memory	<p>2 x DDR3 DIMM, max. 32GB, DDR3 2133* / 1866 / 1600 / 1333 MHz, non-ECC un-buffered memory</p> <p>Dual-channel memory architecture</p> <p>Supports AMD Memory Profile (AMP) memory</p> <ul style="list-style-type: none"> • The maximum 32GB memory capacity can be supported with 16GB or above DIMMs. ASUS will update the memory QVL once the DIMMs are available in the market. • Hyper DIMM support is subject to the physical characteristics of individual APUs. • Refer to www.asus.com for the latest Memory QVL (Qualified Vendors List). • When you install a total memory of 4GB capacity or more, Windows® 32-bit operating system may only recognize less than 3GB. We recommend a maximum of 3GB system memory if you are using a Windows® 32-bit operating system.
Graphics	<p>Integrated AMD® Radeon™ HD 7000 / 8000 Series Graphics in the A-Series APU</p> <p>Multi-VGA output support: DVI and D-Sub ports</p> <p>Supports Dual-link DVI with max. resolution 2560x1600@60Hz</p> <p>Supports D-Sub with max. resolution 1920x1600@60Hz</p> <p>AMD® Dual Graphics technology support*</p> <p>Maximum shared memory of 2G</p> <p>Supports AMD® Dual Graphics technology</p> <ul style="list-style-type: none"> • Refer to http://www.amd.com/us/products/technologies/dual-graphics/Pages/dual-graphics.aspx#3 for the discrete GPUs which support Dual Graphics technology.
Expansion slots	<p>1 x PCIe 3.0/2.0 x16 slot*</p> <p>1 x PCIe 2.0 x1 slot</p> <p>1 x PCI slot</p> <ul style="list-style-type: none"> • Only FM2+ processors support PCIe 3.0.
Storage / RAID	<p>AMD® A55 FCH:</p> <ul style="list-style-type: none"> • 4 x Serial ATA 3.0Gb/s connectors (dark brown) support RAID 0, RAID 1, RAID 10, and JBOD configurations
LAN	Realtek® 8111G PCIe Gigabit LAN controller
Audio	<p>Realtek® ALC887-VD 8-channel High Definition Audio CODEC</p> <ul style="list-style-type: none"> • Use a chassis with HD audio module in the front panel to support a 7.1-channel audio output.
USB	<p>AMD® A55 FCH:</p> <ul style="list-style-type: none"> • 8 x USB 2.0 ports (4 ports at the back panel, 4 ports at mid-board)

ASUS unique features	<p>ASUS DIGI+ VRM</p> <ul style="list-style-type: none"> • 3+1 Phase digital power design <p>ASUS Enhanced DRAM Overcurrent Protection</p> <ul style="list-style-type: none"> • Short circuit damage protection <p>ASUS ESD Guards</p> <ul style="list-style-type: none"> • Strong ESD protection for extended component lifespan <p>ASUS Stainless Steel Back I/O</p> <ul style="list-style-type: none"> • 3x More durable corrosion-resistant coating <p>ASUS Exclusive Features</p> <ul style="list-style-type: none"> • ASUS EPU • ASUS Network iControl • ASUS AI Charger • ASUS AI Suite III • ASUS Anti-Surge Protection <p>ASUS Quiet Thermal Solution</p> <ul style="list-style-type: none"> • ASUS Fanless Design: Stylish Heatsink Solution • ASUS Fan Xpert <p>ASUS EZ DIY</p> <ul style="list-style-type: none"> • ASUS UEFI BIOS EZ Mode • ASUS CrashFree BIOS 3 • ASUS EZ Flash 2 • ASUS MyLogo 2™
Back Panel I/O ports	<p>1 x PS/2 mouse port (green)</p> <p>1 x PS/2 keyboard port (purple)</p> <p>1 x DVI-D port</p> <p>1 x VGA output port</p> <p>1 x LAN (RJ-45) port</p> <p>4 x USB 2.0/1.1 ports</p> <p>8-channel audio I/O ports (3-jack)</p>
Internal I/O connectors	<p>2 x USB 2.0 connectors support additional 4 USB 2.0 ports</p> <p>1 x COM connector</p> <p>4 x SATA 3.0Gb/s connectors</p> <p>1 x System panel connector</p> <p>1 x Internal Speaker connector</p> <p>1 x CPU fan connector (4-pin)</p> <p>1 x S/PDIF output connector</p> <p>1 x Chassis fan connector (4-pin)</p> <p>1 x Front panel audio connector</p> <p>1 x 24-pin EATX power connector</p> <p>1 x 4-pin ATX 12V power connector</p>
BIOS	<p>64 Mb Flash ROM, UEFI AMI BIOS, PnP, DMI 2.0, WfM 2.0, SM BIOS 2.7, ACPI 2.0a, Multi-language BIOS, ASUS EZ Flash 2, ASUS CrashFree BIOS 3, F12 Printscreen function, F3 Shortcut function and ASUS DRAM SPD (Serial Presence Detect) memory information</p>
Support DVD	<p>Drivers</p> <p>ASUS Update</p> <p>ASUS utilities</p> <p>Anti-Virus software (OEM version)</p>
Operating System Support	<p>Windows® 8.1 / 8.1 64bit</p> <p>Windows® 8 / 8 64bit</p> <p>Windows® 7 / 7 64bit</p> <p>Windows® Vista / Vista 64-bit</p> <p>Windows® XP</p>
Form factor	<p>uATX form factor: 8.9 in x 7.2 in (22.6 cm x 18.3 cm)</p>

Specifications are subject to change without notice.

Product introduction

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.
- Before handling components, use a grounded wrist strap or touch a safely grounded object or a metal object, such as the power supply case, 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, or components.

Standby Power 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.

A55BM-K Onboard LED

Motherboard overview

Before you install the motherboard, study the configuration of your chassis to ensure that the motherboard fits into it.

Ensure that you unplug the power cord before installing or removing the motherboard.

Failure to do so can cause you physical injury and damage motherboard components.

Placement direction

When installing the motherboard, ensure 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.

Screw holes

Place six 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.

Motherboard layout

Connectors/Jumpers/Slots/LED

1. Keyboard and USB device wake up (3-pin KB_USBPWB)
2. ATX power connectors (24-pin EATXPWR, 4-pin ATX12V)
3. AMD FM2+ socket
4. CPU and chassis fan connectors (4-pin CPU_FAN and 4-pin CHA_FAN)
5. DDR3 DIMM slots
6. Speaker connector (4-pin SPEAKER)
7. SATA 3.0Gb/s connectors (7-pin SATA3G_1~4)
8. System panel connector (10-1 pin F_PANEL)
9. USB 2.0 connectors (10-1 pin USB34, USB56)
10. Clear RTC RAM (3-pin CLRTC)

11. USB device wake-up (3-pin USBPWF)
12. Digital audio connector (4-1 pin SPDIF_OUT)
13. Serial port connector (10-1 pin COM)
14. Standby power LED (SB_PWR)
15. Front panel audio connector (10-1 pin AAFP)

Accelerated Processing Unit (APU)

This motherboard comes with an FM2+ socket designed for AMD[®] A-series accelerated processors with AMD[®] Radeon[™] HD 7000/8000 series graphics.

A55BM-K CPU socket FM2+

Ensure that you use an APU designed for the FM2+ socket. The APU fits in only one correct orientation. DO NOT force the APU into the socket to prevent bending the pins and damaging the APU!

Installing the APU

APU heatsink and fan assembly installation

Apply the Thermal Interface Material to the APU heatsink and

APU before you install the heatsink and fan if necessary.

To install the APU heatsink and fan assembly

To uninstall the APU heatsink and fan assembly

System memory

Overview

The motherboard comes with two Double Data Rate 3 (DDR3) Dual Inline Memory Modules (DIMM) sockets.

A DDR3 module has the same physical dimensions as a DDR2 DIMM but is notched differently to prevent installation on a DDR2 DIMM socket. DDR3 modules are developed for better performance with less power consumption.

The figure illustrates the location of the DDR3 DIMM sockets:

A55BM-K 240-pin DDR3 DIMM sockets

Memory configurations

You may install 1GB, 2GB, 4GB, and 8GB unbuffered non-ECC DDR3 DIMMs into the DIMM sockets.

- 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 optimal compatibility, we recommend that you install memory modules of the same version or date code (D/C) from the same vendor. Check with the retailer to get the correct memory modules.
- Due to the memory address limitation on 32-bit Windows® OS, when you install 4GB or more memory on the motherboard, the actual usable memory for the OS can be about 3GB or less. For effective use of memory, we recommend that you do any of the following:
 - Install a maximum of 3GB system memory if you are using a 32-bit Windows® OS.
 - Use a 64-bit Windows® OS if you want to install 4GB or more memory on the motherboard.
- This motherboard does not support DIMMs made up of 512Mb (64MB) chips or less.
- The maximum 32GB memory capacity can be supported with 16GB or above DIMMs. ASUS will update the memory QVL once the DIMMs are available in the market.
- The default memory operation frequency is dependent on its

Serial Presence Detect (SPD), which is the standard way of accessing information from a memory module. Under the default state, some memory modules for overclocking may operate at a lower frequency than the vendor-marked value. To operate at the vendor-marked or at a higher frequency, refer to section Ai Tweaker menu for manual memory frequency adjustment.

- For system stability, use a more efficient memory cooling system to support a full memory load (2 DIMMs) or overclocking condition.
- Refer to www.asus.com for the latest Memory QVL (Qualified Vendors List).

Installing a DIMM

To remove a DIMM

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.

Unplug the power cord before adding or removing expansion cards. Failure to do so may cause you physical injury and damage motherboard components.

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.

Configuring an expansion card

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

1. Turn on the system and change the necessary BIOS settings, if any. See BIOS information Chapter for information on BIOS setup.
2. Assign an IRQ to the card.

3. 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.

PCI slot

The PCI slot supports cards such as a LAN card, SCSI card, USB card, and other cards that comply with PCI specifications.

PCI Express x1 slot

This motherboard supports PCI Express 2.0 x1 network cards, SCSI cards, and other cards that comply with the PCI Express specifications.

PCI Express x16 slot

This motherboard supports one PCI Express 3.0/2.0 x16 graphics cards that comply with the PCI Express specifications.

IRQ assignments for this motherboard

	A	B	C	D	E	F	G	H
PCIEx16_1	-	-	shared	-	-	-	-	-
PCIEx1_1	shared	-	-	-	-	-	-	-
PCI1 slot	-	-	-	-	shared	-	-	-

Realtek LAN controller	-	-	shared	-	-	-	-	-
HD audio	shared	-	-	-	-	-	-	-
SATA controller	-	-	-	shared	-	-	-	-
On Chip USB EHCI 1/2/3	-	shared	-	-	-	-	-	-
On Chip USB OHCI 1/2/3/4	-	-	shared	-	-	-	-	-

Jumpers

Clear RTC RAM (3-pin 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.

A55BM-K Clear RTC RAM

To erase the RTC RAM:

1. Turn OFF the computer and unplug the power cord.
2. 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.
3. Plug the power cord and turn ON the computer.
4. Hold down the key during the boot process and enter BIOS setup to reenter data.

Except when clearing the RTC RAM, never remove the cap on CLRTC jumper default position. Removing the cap will cause system boot failure!

- If the steps above do not help, remove the onboard battery and move the jumper again to clear the CMOS RTC RAM data. After clearing the CMOS, reinstall the battery.
- You do not need to clear the RTC when the system hangs due to overclocking. For system failure due to overclocking, use the CPU Parameter Recall (C.P.R.) feature. Shut down and reboot the system, then the BIOS automatically resets parameter settings to default values.

USB device wake-up (3-pin USBPWF)

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).

A55BM-K USB device wake up

- 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.

Keyboard and USB device wake up (3-pin KB_USBPWB)

This jumper allows you to enable or disable the keyboard and USB device 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. This feature requires an ATX power supply that can supply at least 1A on the +5VSB lead, and a corresponding setting in the BIOS.

A55BM-K Keyboard and USB device wake up

Connectors

Rear panel connectors

1. PS/2 Mouse port (green). This port is for a PS/2 mouse.
2. Video Graphics Adapter (VGA) port. This 15-pin port is for a VGA monitor or other VGA-compatible devices.
3. LAN (RJ-45) port. This port allows Gigabit connection to a Local Area Network (LAN) through a network hub.
4. Line In port (light blue). This port connects to the tape, CD, DVD player, or other audio sources.

5. Line Out port (lime). This port connects to a headphone or a speaker. In the 4.1, 5.1, and 7.1-channel configurations, the function of this port becomes Front Speaker Out.
6. Microphone port (pink). This port connects to a microphone. Refer to the audio configuration table below for the function of the audio ports in 2.1, 4.1, 5.1, or 7.1-channel configuration.

Audio 2.1, 4.1, 5.1, or 7.1-channel configuration

Port	Headset 2.1-channel	4.1-channel	5.1-channel	7.1-channel
Light Blue (Rear panel)	Line In	Rear Speaker Out	Rear Speaker Out	Rear Speaker Out
Lime (Rear panel)	Line Out	Front Speaker Out	Front Speaker Out	Front Speaker Out
Pink (Rear panel)	Mic In	Mic In	Bass/Center	Bass/Center
Lime (Front panel)	—	—	—	Side Speaker Out

To configure a 7.1-channel audio output:

Use a chassis with HD audio module in the front panel to support a 7.1-channel audio output.

7. USB 2.0 ports. These 4-pin Universal Serial Bus (USB) ports are for USB 2.0/1.1 devices.
8. DVI-D port. This port is for any DVI-D compatible device. DVI-D can't be converted to output RGB Signal to CRT and isn't compatible with DVI-I.
9. PS/2 Keyboard port (purple). This port is for a PS/2 keyboard.

Internal connectors

CPU and chassis fan connectors (4-pin CPU_FAN, and 4-pin CHA_FAN)

Connect the fan cables to the fan connectors on the motherboard, ensuring that the black wire of each cable matches the ground pin of the connector.

A55BM-K Fan connectors

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.

- The CPU_FAN connector supports a CPU fan of maximum 2A (24 W) fan power.
- The CPU_FAN and CHA_FAN connectors support the ASUS Fan Xpert feature.

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

These connectors are for an ATX power supply. The plugs from the power supply are designed to fit these connectors in only one orientation. Find the proper orientation and push down firmly until the connectors completely fit.

A55BM-K ATX power connectors

- We recommend that you use an ATX 12V Specification 2.0-compliant power supply unit (PSU) with a minimum of 300W power rating. This PSU type has 24-pin and 4-pin power plugs.
- If you intend to use a PSU with 20-pin and 4-pin power plugs, ensure that the 20-pin power plug can provide at least 15 A on +12 V and that the PSU has a minimum power rating of 300W. The system may become unstable or may not boot up if the power is inadequate.
- DO NOT forget to connect the 4-pin ATX +12V power plug. Otherwise, the system will not boot up.
- We recommend that you use a PSU with higher power output when configuring a system with more power-consuming devices or when you intend to install additional devices. The system may become unstable or may not boot up if the power is inadequate.
- If you are uncertain about the minimum power supply requirement for your system, refer to the Recommended Power Supply Wattage Calculator at <http://support.asus.com/PowerSupplyCalculator/PSCalculator.aspx?SLanguage=en-us> for details.

Serial ATA 3.0 Gb/s connectors (7-pin SATA3G 1~4)

These connectors are for the Serial ATA 3.0 Gb/s signal cables for Serial ATA hard disk drives and optical disc drives. If you installed Serial ATA hard disk drives, you can create a RAID 0, RAID 1, or

RAID 10 configuration through the onboard controller.

A55BM-K SATA 3.0Gb/s connectors

- These connectors are set to AHCI mode by default. If you intend to create a Serial ATA RAID set using these connectors, set the type of the SATA connectors in the BIOS to [RAID].
- You must install Windows[®] XP Service Pack 3 or later version before using Serial ATA hard disk drives. The Serial ATA RAID feature is available only if you are using Windows[®] XP SP3 or later version.
- When using hot-plug and NCQ, set the type of the SATA connectors in the BIOS to [AHCI].

Digital audio connector (4-1 pin SPDIF_OUT)

This connector is for an additional Sony/Philips Digital Interface (S/PDIF) port.

A55BM-K Digital audio connector

The S/PDIF module is purchased separately.

System panel connector (10-1 pin F_PANEL)

This connector supports several chassis-mounted functions.

A55BM-K System panel connector

- System power LED (2-pin PWR_LED)

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 HDD_LED)

This 2-pin connector is for the HDD Activity LED. Connect the HDD Activity LED cable to this connector. The HDD LED lights up or flashes when data is read from or written to the HDD.

- ATX power button/soft-off button (2-pin PWR_BTN)

This 2-pin connector is for the system power button.

- 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.

Speaker connector (4-pin SPEAKER)

The 4-pin connector is for the chassis-mounted system warning speaker. The speaker allows you to hear system beeps and warnings.

A55BM-K Speaker Out Connector

Front panel audio connector (10-1 pin AAFP)

This connector is for a chassis-mounted front panel audio I/O

module that supports either High Definition Audio or AC'97 audio standard. Connect one end of the front panel audio I/O module cable to this connector.

A55BM-K Front panel audio connector

- We recommend that you connect a high-definition front panel audio module to this connector to avail of the motherboard 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 to [HD].
- The front panel audio I/O module is purchased separately.

USB 2.0 connectors (10-1 pin USB34, USB56)

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 480Mbps connection speed.

A55BM-K USB2.0 connectors

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

The USB 2.0 module is purchased separately.

Serial port connector (10-1 pin COM)

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.

A55BM-K Serial port connectors

The COM module is purchased separately.

Software support

Installing an operating system

This motherboard supports Windows® Vista / 64-bit Windows® Vista / Windows® XP / Windows® 7 / 64-bit Windows® 7 / Windows® 8 / 64-bit Windows® 8 Operating Systems (OS). Always install the latest OS version and corresponding updates to maximize the features of your hardware.

- Motherboard settings and hardware options vary. Refer to your OS documentation for detailed information.
- Ensure that you install Windows® XP Service Pack 3 or later versions before installing the drivers for better compatibility and system stability.
- Only motherboards installed with an AMD Trinity APU support

Windows® Vista / 64bit Windows® Vista operating system.

Support DVD information

The Support DVD that comes with the motherboard package contains the drivers, software applications, and utilities that you can install to avail all motherboard features.

The contents of the Support DVD are subject to change at any time without notice. Visit the ASUS website at www.asus.com for updates.

To run the Support DVD

Place the Support DVD into the optical drive. If Autorun is enabled in your computer, the DVD automatically displays the Specials screen which contains the unique features of ASUS motherboard. Click Drivers, Utilities, Make Disk, Manual, Contact and Specials tabs to display their respective menus.

The following screen is for reference only.

If Autorun is NOT enabled in your computer, browse the contents of the Support DVD to locate the file ASSETUP.EXE from the BIN folder. Double-click the ASSETUP.EXE to run the DVD.

BIOS information

Managing and updating your BIOS

Save a copy of the original motherboard BIOS file to a USB flash disk in case you need to restore the BIOS in the future. Copy the original motherboard BIOS using the ASUS Update utility.

EZ Update

EZ Update is a utility that allows you to automatically update your motherboard's softwares, drivers and the BIOS version easily. With this utility, you can also manually update the saved BIOS and select a boot logo when the system goes into POST.

To launch EZ Update, click EZ Update on the AI Suite 3 main menu bar.

EZ Update requires an Internet connection either through a network or an ISP (Internet Service Provider).

ASUS EZ Flash 2

The ASUS EZ Flash 2 feature allows you to update the BIOS without using an OS-based utility.

Before you start using this utility, download the latest BIOS file from the ASUS website at www.asus.com.

To update the BIOS using EZ Flash 2:

1. Insert the USB flash disk that contains the latest BIOS file to the USB port.
 2. Enter the Advanced Mode of the BIOS setup program. Go to the Tool menu to select ASUS EZ Flash 2 Utility and press <Enter> to enable it.
 3. Press <Tab> to switch to the Drive field.
 4. Press the Up/Down arrow keys to find the USB flash disk that contains the latest BIOS, and then press <Enter>.
 5. Press <Tab> to switch to the Folder Info field.
 6. Press the Up/Down arrow keys to find the BIOS file, and then press <Enter> to perform the BIOS update process. Reboot the system when the update process is done.
- This function supports USB flash disks 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 CrashFree BIOS 3 utility

The ASUS CrashFree BIOS 3 is an auto recovery tool that allows you to restore the BIOS file when it fails or gets corrupted during the updating process. You can restore a corrupted BIOS file using the motherboard support DVD or a USB flash drive that contains the updated BIOS file.

- Before using this utility, rename the BIOS file in the removable device into A55BMK.CAP.
- The BIOS file in the support DVD may not be the latest version. Download the latest BIOS file from the ASUS website at www.asus.com.

Recovering the BIOS

To recover the BIOS:

1. Turn on the system.
2. Insert the support DVD to the optical drive or the USB flash drive that contains the BIOS file to the USB port.
3. The utility automatically checks the devices for the BIOS file. When found, the utility reads the BIOS file and enters ASUS EZ Flash 2 utility automatically.
4. The system requires you to enter BIOS Setup to recover BIOS setting. To ensure system compatibility and stability, we recommend that you press <F5> to load default BIOS values.

DO NOT shut down or reset the system while updating the BIOS!
Doing so can cause system boot failure!

ASUS BIOS Updater

The ASUS BIOS Updater allows you to update BIOS in DOS environment. This utility also allows you to copy the current BIOS

file that you can use as a backup when the BIOS fails or gets corrupted during the updating process.

The succeeding utility screens are for reference only. The actual utility screen displays may not be same as shown.

Before updating BIOS

1. Prepare the motherboard support DVD and a USB flash drive in FAT32/16 format and single partition.
2. Download the latest BIOS file and BIOS Updater from the ASUS website at <http://support.asus.com> and save them on the USB flash drive.

NTFS is not supported under DOS environment. Do not save the BIOS file and BIOS Updater to a hard disk drive or USB flash drive in NTFS format.

3. Turn off the computer and disconnect all SATA hard disk drives (optional).

Booting the system in DOS environment

1. Insert the DOS-bootable USB flash drive with the latest BIOS file and BIOS Updater to your computer's USB port.
2. Boot your computer. When the ASUS Logo appears, press <F8> to show the BIOS Boot Device Select Menu.
3. Select the USB flash drive as the boot device. The DOS screen appears.

Updating the BIOS file

To update the BIOS file using BIOS Updater:

1. At the FreeDOS prompt, type `bupdater /pc /g` and press `<Enter>`.
2. The BIOS Updater screen appears as below.
3. Press `<Tab>` to switch between screen fields and use the `<Up/Down/Home/End>` keys to select the BIOS file and press `<Enter>`. BIOS Updater checks the selected BIOS file and prompts you to confirm BIOS update.
4. Select Yes and press `<Enter>`. When BIOS update is done, press `<ESC>` to exit BIOS Updater. Restart your computer.

DO NOT shut down or reset the system while updating the BIOS to prevent system boot failure!

- For BIOS Updater version 1.30 or later, the utility automatically exits to the DOS prompt after updating BIOS.
- Ensure to load the BIOS default settings to ensure system compatibility and stability. Select the Load Optimized Defaults item under the Exit menu. Refer to section Exit menu for details.
- Ensure to connect all SATA hard disk drives after updating the BIOS file if you have disconnected them.

BIOS setup program

Use the BIOS Setup program to update the BIOS or configure its parameters. The BIOS screens include navigation keys and brief online help to guide you in using the BIOS Setup program.

Entering BIOS Setup at startup

To enter BIOS Setup at startup:

- Press <Delete> during the Power-On Self Test (POST). If you do not press <Delete>, POST continues with its routines.

Entering BIOS Setup after POST

To enter BIOS Setup after POST:

- Press <Ctrl>+<Alt>+ simultaneously.
- Press the reset button on the system chassis.
- Press the power button to turn the system off then back on. Do this option only if you failed to enter BIOS Setup using the first two options.

Using the power button, reset button, or the <Ctrl>+<Alt>+ keys to force reset from a running operating system can cause damage to your data or system. We recommend to always shut down the system properly from the

operating system.

- The BIOS setup screens shown in this section are for reference purposes only, and may not exactly match what you see on your screen.
- Visit the ASUS website at www.asus.com to download the latest BIOS file for this motherboard.
- Ensure that a USB mouse is connected to your motherboard if you want to use the mouse to control the BIOS setup program.
- If the system becomes unstable after changing any BIOS setting, load the default settings to ensure system compatibility and stability. Select the Load Optimized Defaults item under the Exit menu or press hotkey F5. See section Exit Menu for details.
- If the system fails to boot after changing any BIOS setting, try to clear the CMOS and reset the motherboard to the default value. See section Jumpers for information on how to erase the RTC RAM.

BIOS menu screen

The BIOS setup program can be used under two modes: EZ Mode and Advanced Mode. You can change modes from the Exit menu or from the Exit/Advanced Mode button in the EZ Mode/Advanced Mode screen.

EZ Mode

By default, the EZ Mode screen appears when you enter the BIOS setup program. The EZ Mode provides you an overview of the basic system information, and allows you to select the display language, system performance mode and boot device priority. To access the Advanced Mode, click Exit/Advanced Mode or press F7 for the advanced BIOS settings.

The default screen for entering the BIOS setup program can be changed.

- The boot device options vary depending on the devices you installed to the system.
- The Boot Menu(F8) button is available only when the boot device is installed to the system.

Advanced Mode

The Advanced Mode provides advanced options for experienced end-users to configure the BIOS settings. The figure below shows an example of the Advanced Mode. Refer to the following sections for the detailed configurations.

To access the EZ Mode, click Exit, then select ASUS EZ Mode or press F7.

Menu bar

The menu bar on top of the screen has the following main items:

My Favorites	For saving the frequently-used system settings and configuration
Main	For changing the basic system configuration
Ai Tweaker	For changing the overclocking settings
Advanced	For changing the advanced system settings
Monitor	For displaying the system temperature, power status, and changing the fan settings
Boot	For changing the system boot configuration
Tool	For configuring options for special functions
Exit	For selecting the exit options and loading default settings

My Favorites

My Favorites is your personal space where you can easily save and access your favorite BIOS items.

Adding items to My Favorites

To add frequently-used BIOS items to My Favorites:

1. Use the arrow keys to select an item that you want to add.
When using a mouse, hover the pointer to the item.
2. Press <F4> on your keyboard or right-click on your mouse to add the item to My Favorites page.

You cannot add the following items to My Favorites:

- Items with submenu options
- User-configurable items such as language and boot device

order

- Configuration items such as Memory SPD Information, system time and date

Main menu

The Main menu screen appears when you enter the Advanced Mode of the BIOS Setup program. The Main menu provides you an overview of the basic system information, and allows you to set the system date, time, language, and security settings.

- If you have forgotten your BIOS password, erase the CMOS Real Time Clock (RTC) RAM to clear the BIOS password. See section Jumpers for information on how to erase the RTC RAM.
- The Administrator or User Password items on top of the screen show the default Not Installed. After you set a password, these items show Installed.

Ai Tweaker menu

The Ai Tweaker menu items allow you to configure overclocking-related items.

Be cautious when changing the settings of the Ai Tweaker menu items. Incorrect field values can cause the system to malfunction.

The configuration options for this section vary depending on the CPU and DIMM model you installed on the motherboard.

Scroll down to display the other items.

Advanced menu

The Advanced menu items allow you to change the settings for the CPU and other system devices.

Be cautious when changing the settings of the Advanced menu items. Incorrect field values can cause the system to malfunction.

Monitor menu

The Monitor menu displays the system temperature/power status, and allows you to change the fan settings.

Boot menu

The Boot menu items allow you to change the system boot options.

Scroll down to display the other items.

Tools menu

The Tools menu items allow you to configure options for special functions. Select an item then press <Enter> to display the submenu.

Exit menu

The Exit menu items allow you to load the optimal default values for the BIOS items, and save or discard your changes to the BIOS items. You can access the EZ Mode from the Exit menu.

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.
- Ensure 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, ensure 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.

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Documents / Resources

References

[ASUS Global](#)

[ASUS Deutschland](#)

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Here you can download full pdf version of manual, it may contain additional safety instructions, warranty information, FCC rules, etc.

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[Motherboard Asus A55BM-K User Manual](#)

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[Motherboard Asus A55-C User Manual](#)

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