

Republic of Gamers

AI Suite II User Manual



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AI Suite II

AI Suite II is an all-in-one interface that integrates several ASUS utilities and allows users to launch and operate these utilities simultaneously.

Installing AI Suite II

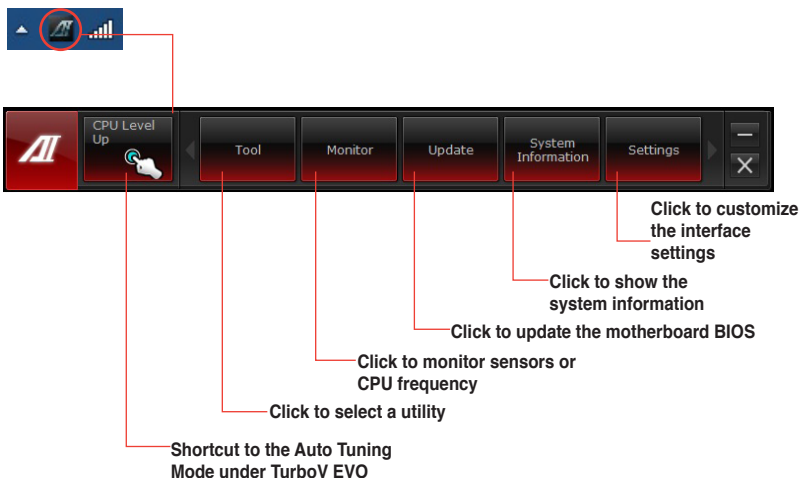
To install AI Suite II on your computer

1. Place the support DVD to the optical drive. The Drivers installation tab appears if your computer has enabled the Autorun feature.
2. Click on the Utilities tab, then click **AI Suite II**.
3. Follow the onscreen instructions to complete installation.

Using AI Suite II

AI Suite II automatically starts when you enter the Windows® operating system (OS). The AI Suite II icon appears in the Windows® notification area. Click on the icon to open the AI Suite II main menu bar.

Click on each button to select and launch a utility, to monitor the system, to update the motherboard BIOS, to display the system information, and to customize the settings of AI Suite II.



- The **CPU Level Up** button appears only on models with the TurboV EVO function.
- The applications in the Tool menu vary with models.
- The screenshots of AI Suite II in this user manual are for reference only. The actual screenshots vary with models.
- Refer to the software manual in the support DVD or visit the ASUS website at www.asus.com for detailed software configuration.

TurboV EVO

ASUS TurboV EVO introduces **TurboV** that allows you to manually adjust the CPU frequency and related voltages as well as **CPU Level Up** function that offers automatic and easy overclocking and system level up. After installing AI Suite II from the motherboard support DVD, launch TurboV EVO by clicking **Tool > TurboV EVO** on the AI Suite II main menu bar.



Refer to the software manual in the support DVD or visit the ASUS website at www.asus.com for detailed software configuration.

TurboV

TurboV allows you to overclock the BCLK frequency, CPU voltage, IMC voltage, and DRAM Bus voltage in Windows® environment and takes effect in real-time without exiting and rebooting the OS.



Refer to the CPU documentation before adjusting CPU voltage settings. Setting a high voltage may damage the CPU permanently, and setting a low voltage may make the system unstable.



For system stability, all changes made in TurboV will not be saved to BIOS settings and will not be kept on the next system boot. Use the **Save Profile** function to save your customized overclocking settings and manually load the profile after Windows starts.

Click to select mode

Load profile

Target values

Current values

Click to show settings

Click to restore all start-up settings

Save the current settings as a new profile

Voltage Adjustment bars

Undoes all changes without applying

Applies all changes immediately

Using Advanced Mode

Click on the **Advanced Mode** tab to adjust the advanced voltage settings.

Advanced mode Target values

Current values

Click to restore all start-up settings

Voltage Adjustment bars

Undoes all changes without applying

Applies all changes immediately

CPU Ratio

Allows you to manually adjust the CPU ratio.



The first time you use **CPU Ratio**, go to **AI Tweaker > CPU Power Management** in BIOS and set the **Turbo Ratio** item to **[Maximum Turbo Ratio setting in OS]**.

1. Click on the **CPU Ratio** tab.
2. Drag the adjustment bar upwards or downwards to the desired value.
3. Click on **Apply** to make the change take effect.

CPU Ratio

Adjustment bar

Click to restore all start-up settings

Undoes all changes without applying

Applies all changes immediately



- Set the **CPU Ratio Setting** item in BIOS to **[Auto]** before using the CPU Ratio function in TurboV. Refer to Chapter 3 of your motherboard user manual for details.
- The CPU Ratio bars show the status of the CPU cores, which vary with your CPU model.

CPU Strap

Allows you to manually adjust CPU Strap.

1. Click on the **CPU Strap** tab.
2. Click on the adjustment bar to the desired value. The graph on the right will change value accordingly.
3. Click on **Apply** to make the change take effect.



- Every CPU Strap support is subject to the physical characteristics of individual CPUs.

CPU Level Up

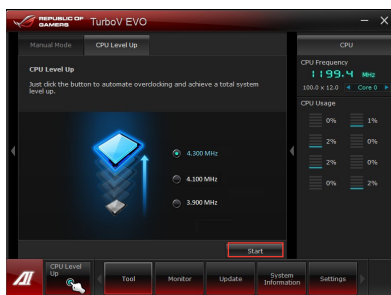
ASUS TurboV EVO includes three CPU level up modes, providing the most flexible auto-tuning options.



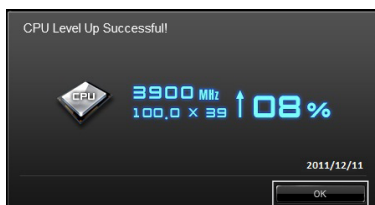
- The overclocking result varies with the CPU model and the system configuration.
- To prevent overheating from damaging the motherboard, a better thermal environment is strongly recommended
- The CPU Level Up modes depend upon the CPU installed in your system.

Using CPU Level Up

1. Click the **CPU Level Up** tab, choose the mode, and click **Start**.
2. Read through the warning messages and click **OK** to start auto-overclocking.



3. TurboV automatically overclocks the CPU, saves BIOS settings, and restarts the system. After re-entering Windows, a message appears indicating successful overclocking. Click **OK** to exit.



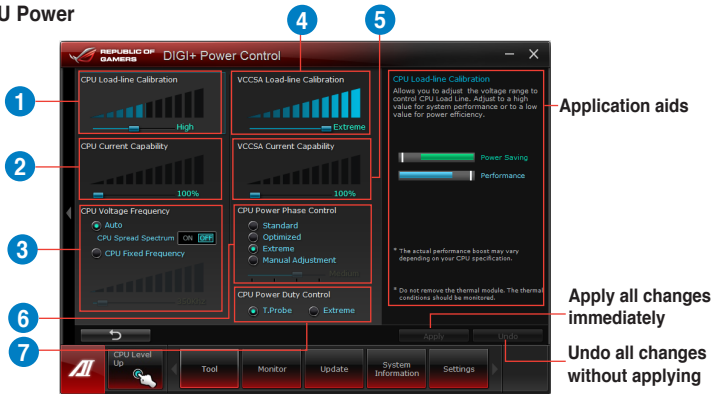
New DIGI+ Power Control

New DIGI+ PowerControl allows you to adjust VRM voltage and frequency modulation to enhance reliability and stability. It also provides the highest power efficiency, generating less heat to longer component lifespan and minimize power loss.

After installing AI Suite II from the motherboard support DVD, launch DIGI+ Power Control by clicking **Tool > DIGI+ Power Control** on the AI Suite II main menu bar.

Select **CPU Power** or **DRAM Power** to adjust the power control settings.

CPU Power



Function no.	Function description
1	CPU Load-line Calibration It allows you to adjust the voltage settings and control the system temperature. Higher load-line calibration could get higher voltage and good overclocking performance but increases the CPU and VRM thermal.
2	CPU Current Capability CPU Current Capability provides wider total power range for overclocking. A higher value setting gets higher VRM power consumption delivery.
3	CPU Voltage Frequency Switching frequency will affect the VRM transient response and component thermal. Higher frequency gets quicker transient response.
4	VCCSA Load-line Calibration The behavior of the DRAM Controller is decided by the VCCSA Load-line. Set to a higher value for system performance, or to a lower value for better thermal solution.
5	VCCSA Current Capability A higher value brings wider total DRAM Controller power range and extends the overclocking frequency range simultaneously.
6	CPU Power Phase Control Increase phase number under heavy system loading to get more transient and better thermal performance. Reduce phase number under light system loading to increase VRM efficiency.
7	CPU Power Duty Control CPU Power Duty Control adjusts the current of every VRM phase and the thermal of every phase component.

DRAM Power

The screenshot shows the ASUS DIGI+ Power Control window. It features several sliders and buttons for adjusting DRAM settings. Annotations with red circles and lines point to specific features:

- 1** points to the **DRAM-AB Current Capability** slider.
- 2** points to the **DRAM-AB Voltage Frequency** slider.
- 3** points to the **DRAM-AB Power Phase Control** radio buttons, which are set to **Optimized**.
- An annotation on the right points to the **DRAM-AB Current Capability** text box, stating: "Application aids".
- Another annotation on the right points to the **Apply** button, stating: "Apply all changes immediately".
- A third annotation on the right points to the **Undo** button, stating: "Undo all changes without applying".

Function no.	Function description
1	DRAM Current Capability A higher value brings a wider total power range and extends the overclocking frequency range simultaneously.
2	DRAM Voltage Frequency Allows you to adjust the DRAM switching frequency for system stability or to increase OC Range.
3	DRAM Power Phase Control Select Extreme for full phase mode to increase system performance or select Optimized for ASUS optimized phase tuning profile to increase DRAM power efficiency.

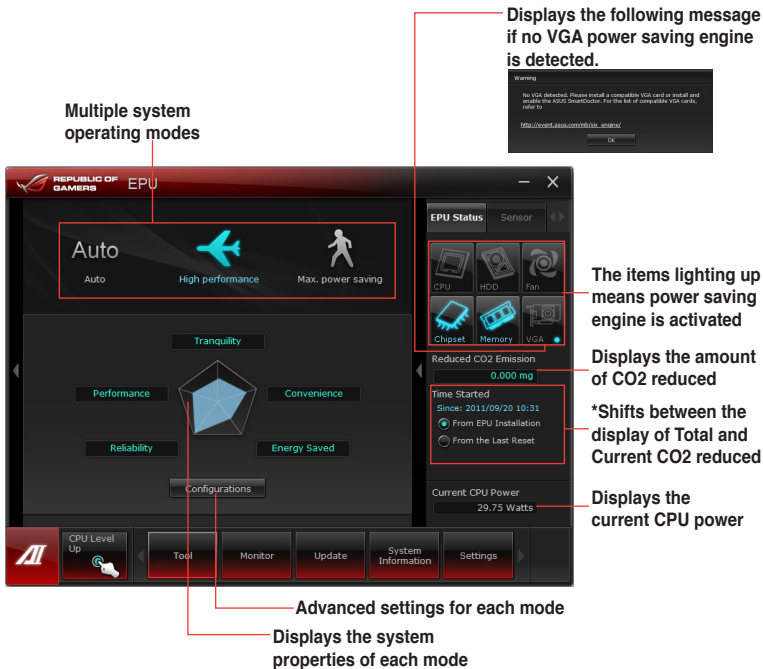
- The actual performance boost may vary depending on your CPU specification.
- Do not remove the thermal module. The thermal conditions should be monitored.

EPU

EPU is an energy-efficient tool that satisfies different computing needs. This utility provides several modes that you can select to save system power. Selecting Auto mode will have the system shift modes automatically according to current system status. You can also customize each mode by configuring settings like CPU frequency, GPU frequency, vCore Voltage, and Fan Control.

Launching EPU

After installing AI Suite II from the motherboard support DVD, launch EPU by clicking **Tool > EPU** on the AI Suite II main menu bar.



- * Select **From EPU Installation** to show the CO2 that has been reduced since you installed EPU.
- * Select **From the Last Reset** to show the total CO2 that has been reduced since you click the Clear button **Clear**.
- * Refer to the software manual in the support DVD or visit the ASUS website at www.asus.com for detailed software configuration.

FAN Xpert

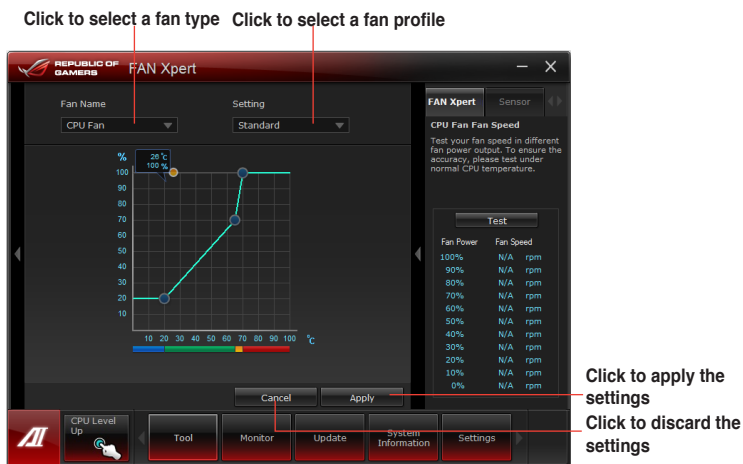
FAN Xpert intelligently allows you to adjust both the CPU and chassis fan speeds according to different ambient temperatures caused by different climate conditions in different geographic regions and your PC's system loading. The built-in variety of useful profiles offer flexible automatic and manual fan speed controls to achieve a quiet and cool environment.

Launching FAN Xpert

After installing AI Suite II from the motherboard support DVD, launch FAN Xpert by clicking **Tool > FAN Xpert** on the AI Suite II main menu bar.

Using FAN Xpert

Click **Fan Name** to select a fan and then click **Setting** to select a preset mode for your selected fan.



Fan setting

- **Disable**: disables the **FAN Xpert** function.
- **Standard**: adjusts fan speed in a moderate pattern.
- **Silent**: minimizes fan speed for quiet fan operation.
- **Turbo**: maximizes the fan speed for the best cooling effect.
- **Intelligent**: automatically adjusts the CPU fan speed according to the ambient temperature.
- **Stable**: fixes the CPU fan speed to avoid noise caused by the unsteady fan rotation. However, the fan will speed up when the temperature exceeds 70°C.
- **User**: Allows you to configure the CPU fan profile under certain limitations.



Refer to the software manual in the support DVD or visit the ASUS website at www.asus.com for detailed software configuration.

Probe II

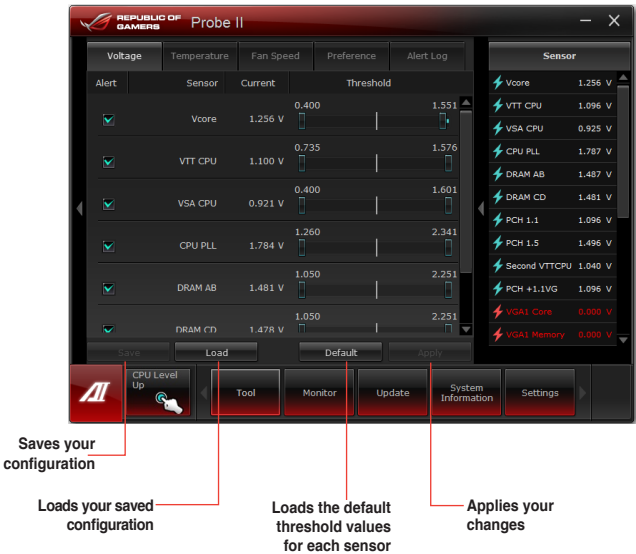
Probe II is a utility that monitors the computer's vital components, detects and alerts you of any problem with this function. Probe II senses fan rotations, CPU temperature, and system voltages among others. With this utility, you are assured that your computer is always in a healthy operating condition.

Launching Probe II

After installing AI Suite II from the motherboard support DVD, launch Probe II by clicking **Tool > Probe II** on the AI Suite II main menu bar.

Configuring Probe II

Click the **Voltage/Temperature/Fan Speed** tabs to activate the sensors, or to adjust the sensor threshold values. The **Preference** tab allows you to customize the time interval of sensor alerts, or change the temperature unit.



Refer to the software manual in the support DVD or visit the ASUS website at www.asus.com for detailed software configuration.

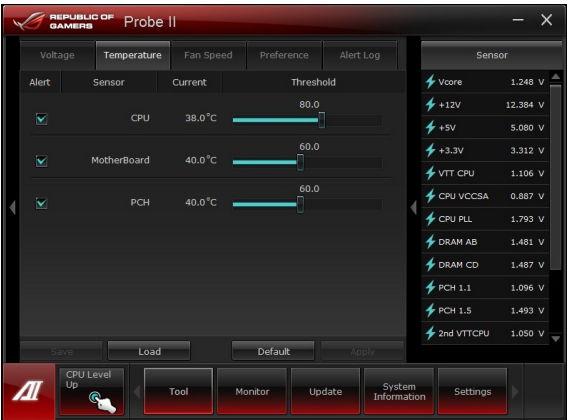
Voltage

The Voltage tab displays the system voltages sensors, including the current and threshold values. When a system voltage is less or more than the threshold percentage, the sensor sends an alert to the user through the monitor panels, or a pop-up message.



Temperature

The Temperature tab displays the CPU and motherboard temperature sensors, including the current and threshold values. When the CPU/MB temperature exceeds the threshold temperature, the sensor sends an alert to the user through the monitor panels or a pop-up message.



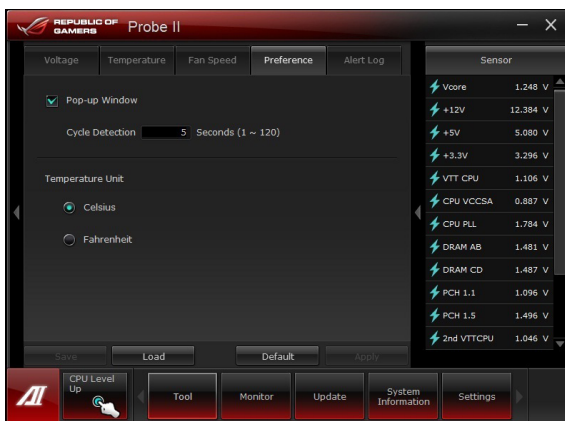
Fan Speed

The Fan Speed tab displays the current and threshold rotations (per minute) of the CPU, chassis, and power fans. When a fan rotation is less than the threshold rotation, the sensor sends an alert to the user through the monitor panels or a pop-up message.



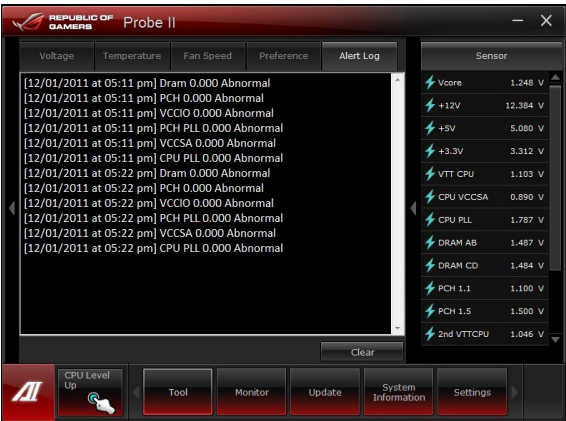
Preference

The Preference tab allows you to enable the pop-up window, set the cycle detection interval, and select the temperature scale.



Alert Log

The Alert Log tab displays all normal and critical events detected by the sensors, including the sensor value at the time of the event. Click **Clear** to clear the log.



Sensor Recorder

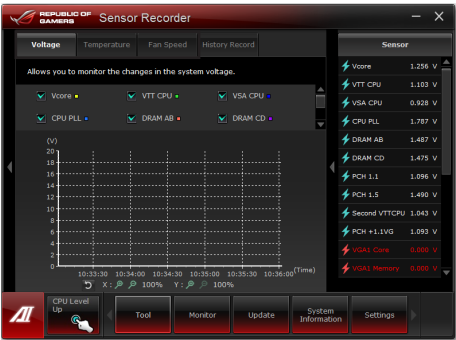
Sensor Recorder monitors the changes in the system voltage, temperature, and fan speed on a timeline. The History Record function allows you to designate specific time spans on record to keep track of the three system statuses for certain purposes.

Launching Sensor Recorder

After installing AI Suite II from the motherboard support DVD, launch Sensor Recorder by clicking **Tool > Sensor Recorder** on the AI Suite II main menu bar.

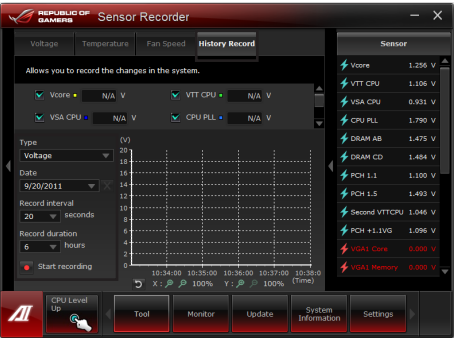
Using Sensor Recorder

Click on **Voltage/ Temperature/ Fan Speed** tabs for the status you want to monitor. Colored lines will automatically appear on the diagram to indicate the immediate changes in the system status.



Using History Record

1. Click on the **History Record** tab and adjust the settings on the left for **Record Interval** and **Record Duration** according to need.
2. Click on **Recording** to start measurement and recording of each sensor.
3. To stop recording, click on **Recording** again.
4. To track the recorded contents, set **Type/ Date/ Select display items** to display the history details.



Click on **Monitor > Sensor** on the AI Suite II main menu bar and a highlight of the system statuses will appear on the right panel.

USB 3.0 Boost

The ASUS exclusive USB 3.0 Boost provides speed boost for USB 3.0 devices and the up-to-date support of USB Attached SCSI Protocol (UASP). With USB 3.0 Boost, you can accelerate the transfer speed of your USB 3.0 devices with ease.

Launching USB 3.0 Boost

After installing AI Suite II from the motherboard support DVD, launch USB 3.0 Boost by clicking **Tool > USB 3.0 Boost** on the AI Suite II main menu bar.

Configuring USB 3.0 Boost

1. Connect a USB 3.0 device to the USB 3.0 port.
2. USB 3.0 Boost automatically detects the property of the connected device and switches to **Turbo** mode or **UASP** mode (if UASP is supported by the connected device).
3. You can manually switch the USB 3.0 mode back to **Normal** mode at any time.



Refer to the software manual in the support DVD or visit the ASUS website at www.asus.com for detailed software configuration.

Ai Charger+

Battery Charging Version 1.1 (BC 1.1), a USB Implementers Forum (USB-IF) certified USB charging function, is designed to make USB charging faster than the standard USB devices. If your USB device supports the BC 1.1 function*, when you connect your USB device to your system, the system automatically detects your USB device and starts a fast USB charging. The charging speed may get 3 times faster than that of the standard USB devices**.



- * Check your USB device manufacturer if it fully supports the BC 1.1 function.
- ** The actual charging speed may vary with your USB device's conditions.
- Ensure to remove and reconnect your USB device after enabling or disabling Ai Charger+ to ensure normal charging function.



Monitor

This section includes the Sensor and CPU Frequency functions.

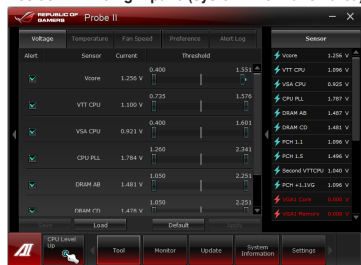
Sensor

The sensor panel displays the current value of a system sensor such as fan rotation, CPU temperature, and voltages. Click **Monitor > Sensor** on the AI Suite II main menu bar to launch the Sensor panel.

CPU Frequency

The CPU Frequency panel displays the current CPU frequency and CPU usage. Click **Monitor > CPU Frequency** on the AI Suite II main menu bar to open the CPU Frequency panel.

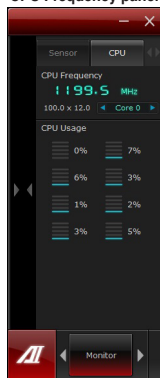
Resident in the right pane (system information area)



Sensor panel



CPU Frequency panel



ASUS Update

ASUS Update lays out the options for updating BIOS on your system. Update BIOS utility on your system or simply save the utility for later use just by following the directions on this convenient updating feature.

Launching ASUS Update

After installing AI Suite II from the motherboard support DVD, launch ASUS Update by clicking **Update> ASUS Update** on the AI Suite II main menu bar.

Using ASUS Update

Select the way you would like to do with the BIOS utility. Click on **Next** and follow the instructions to complete your request.



- **Update BIOS from Internet**
Download the latest BIOS utility from the ASUS service website (www.asus.com) and follow the suggested procedures to update the BIOS version on your system.
- **Download BIOS from Internet**
Download the latest BIOS utility from the ASUS service website (www.asus.com) and save for later use.
- **Update BIOS from file**
Use the BIOS utility demanded from a source file to update the BIOS version on your system.
- **Save BIOS to file**
Back up the current BIOS utility on your system to another file or USB disk to save for later use.



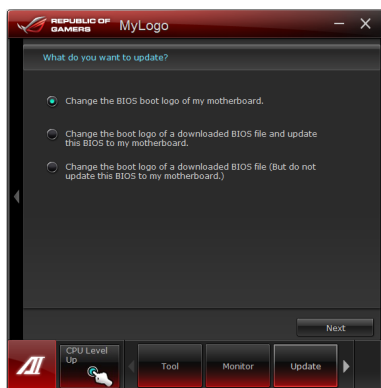
There may be risks of system crash when updating BIOS. Backing up the original BIOS utility is recommended before updating.

MyLogo2

This MyLogo utility lets you customize the boot logo. The boot logo is the image that appears on screen during the Power-On-Self-Tests (POST). Personalize your computer from the very beginning!

Launching ASUS Update

After installing AI Suite II from the motherboard support DVD, launch MyLogo by clicking **Update> MyLogo** on the AI Suite II main menu bar.

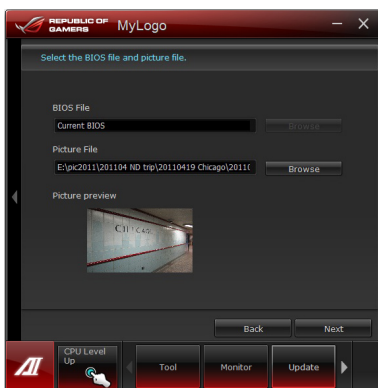


Using MyLogo

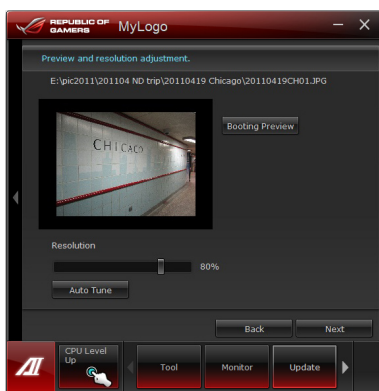
Select the way you would like to do update your boot logo. Then click Next and follow the given instructions.

Change the BIOS boot logo of my motherboard

1. Under Current BIOS, click **Browse** and choose the desired image for your boot logo. Then click on Next.

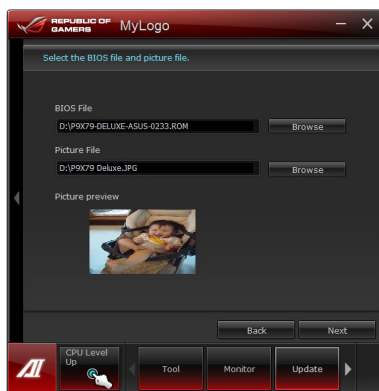


2. Click on **Auto Tune** to adjust image size compatibility or adjust the resolution bar.
3. You can click on Booting Preview to preview the boot image. Then click Next.
4. Click on **Flash** to start updating the image to the boot logo.
5. Click on Yes to reboot or you can also see the new logo next time you restart your computer.



Change the boot logo of a downloaded BIOS file and update (or do not update) this BIOS to the motherboard

1. At BIOS File, **Browse** to download the requested BIOS file to your system. This utility will help you detect the compatibility of the BIOS version.
2. Then at Picture File, Browse to select the desired image for boot logo. Click Next.
3. Follow steps 2-5 in **Change the BIOS boot logo of my motherboard** to complete logo update.

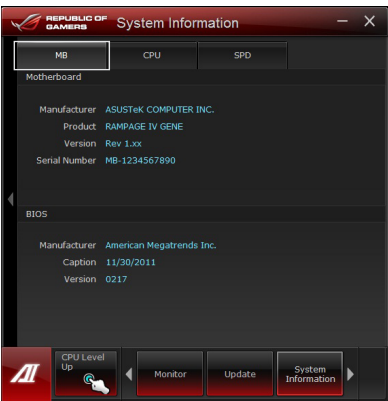


The fullscreen logo application in BIOS utility must be enabled for MyLogo to take effect.

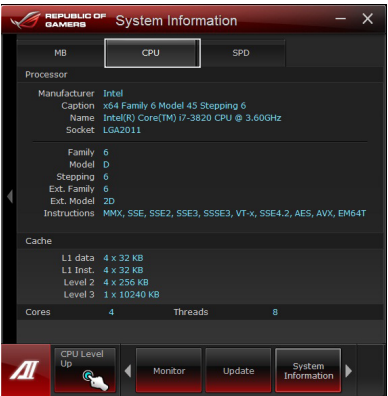
System Information

The System Information section displays the information about the motherboard, CPU, and memory slots.

- Click the **MB** tab to see the details on the motherboard manufacturer, product name, version, and BIOS.



- Click the **CPU** tab to see the details on the processor, and the cache.



- Click the **SPD** tab, and select the memory slot to view the details on the memory module installed on the corresponding slot.

