

ASUS AI Suite II

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ASUS AI Suite II

ASUS 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

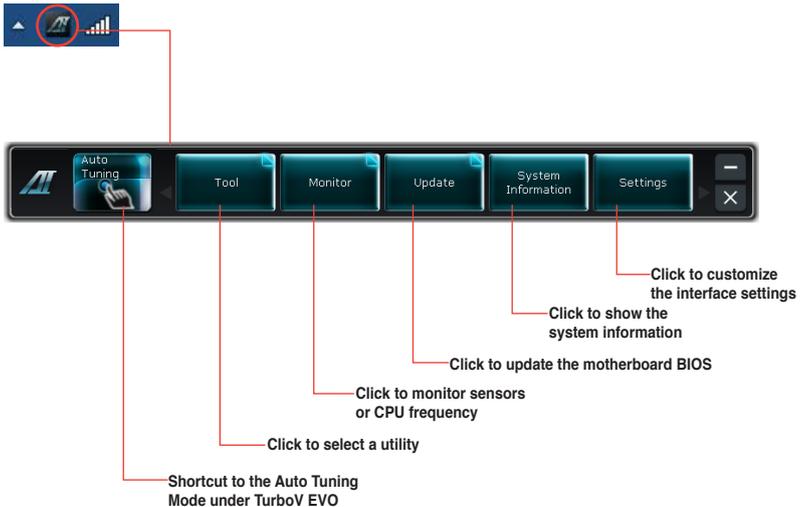
To install AI Suite II on your computer

1. Place the support DVD to the optical drive. The Drivers installation tab appears if your computer has enabled the Autorun feature.
2. Click 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 the icon to open the AI Suite II main menu bar.

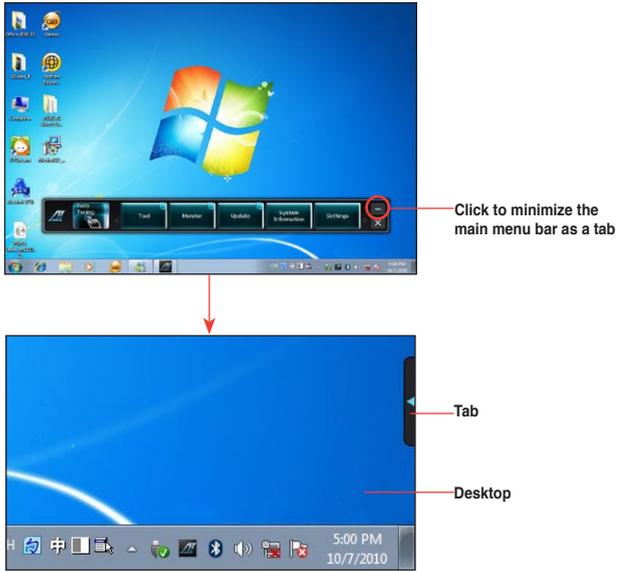
Click each button to select and launch a utility, to monitor the system, to update the motherboard BIOS, to display the system information, and to customize the settings of AI Suite II.



- The **Auto Tuning** 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.

Other feature buttons

- Click  to minimize the main menu bar as a tab on the side of the Windows desktop. Click the tab again to restore the main menu bar.



- When on a function screen, click  on the upper-right corner of the screen to switch back to the main menu bar.



- When on a function screen, you may hide the middle pane (main operation area) by clicking  on the left side of the middle pane.



You may hide the right pane (system information area) by clicking  on the right side of the middle pane.



- Click  to close the main menu bar and keep the AI Suite II icon in the Windows notification area (). AI Suite II is still running.
- To exit AI Suite II, right click the AI Suite II icon  in the Windows notification area, then, left-click and select **Exit**.

Customizing the interface

From the main menu bar, click **Settings** to customize the main menu bar settings and the interface's skin.

Application

Allows you to select the application that you want to enable.

1. Tick the item that you want to display on the main menu bar, and then click **Apply**.
2. Click **Ok** to restart AI Suite II and apply the setting.



Scroll up/down to see more items

3. The new setting has been applied to the main menu bar.

Before



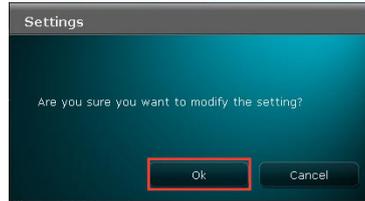
After



Bar

Allows you to modify the bar setting.

1. Tick **Auto hide** and select the countdown time that the Auto hide function takes effect.
2. Click **Apply** to apply the setting.



The **Auto hide** function only takes effect in Bar mode.

Skin

Allows you to customize the interface's contrast, brightness, saturation, hue, and gamma.

1. Move the slider of the item that you want to customize.
2. Click **Apply** to apply the setting.



TurboV EVO

ASUS TurboV EVO introduces **TurboV** that allows you to manually adjust the CPU frequency and related voltages as well as **Auto Tuning** function that offers automatic and easy overlocking 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.

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.

Auto Tuning Mode

The screenshot shows the ASUS TurboV EVO software interface. At the top, it says "ASUS TurboV EVO Powered by TPU". Below that, there are two tabs: "TurboV" and "Auto Tuning", with "Auto Tuning" selected. The main area is divided into several sections:

- Profile:** A dropdown menu with a plus sign and a "Save Profile" button.
- Current values:** A table showing current settings: BCLK Frequency (100), CPU Voltage (1.1 V), and DDR Voltage (1.5 V). Each value has a corresponding slider control.
- Target values:** A table showing target settings: BCLK Frequency (100 MHz), CPU Voltage (1.1 V), and DDR Voltage (1.5 V). Each value has a corresponding slider control.
- More Settings:** A button labeled "More Settings" with a right-pointing arrow.
- OS Default Settings:** A button labeled "OS Default Settings" with a left-pointing arrow.
- Undo and Apply:** Buttons labeled "Undo" and "Apply" at the bottom.
- Right Panel:** Displays "CPU Frequency" (3088.5 MHz), "CPU Usage" (0%), and "Core 0" (100.0 x 31.0).

Labels on the left side of the screenshot:

- TurboV Load profile
- Target values
- Current values
- Click to show / hide more settings
- Click to restore all start-up settings

Labels on the right side of the screenshot:

- Save the current settings as a new profile
- Voltage Adjustment bars
- Undoes all changes without applying
- Applies all changes immediately

At the bottom of the interface, there are several buttons: "Auto Tuning" (with a hand icon), "Tool", "Monitor", "Update", and "System Information".



For advanced overclock ability, adjust first the BIOS items, and then proceed more detailed adjustments in **More Settings**.

Using Advanced Mode

Click **More Settings**, and then click the **Advanced Mode** tab to adjust the advanced voltage settings.

The screenshot shows the ASUS TurboV EVO software interface. The 'Advanced Mode' tab is selected under 'More Settings'. It displays various voltage settings with current and target values, and adjustment bars. On the right, CPU frequency and usage are shown. Callouts point to specific elements:

- Advanced mode Target values:** Points to the 'Advanced Mode' tab and the 'More Settings' section.
- Current values:** Points to the numerical values for VCCIO Voltage (1.05), 1.8SFR Voltage (1.80), and PCH Voltage (1.05).
- Click to restore all start-up settings:** Points to the 'OS Default Settings' button.
- Voltage Adjustment bars:** Points to the sliders for VCCIO Voltage, 1.8SFR Voltage, and PCH Voltage.
- Undoes all changes without applying:** Points to the 'Undo' button.
- Applies all changes immediately:** Points to the 'Apply' button.

GPU Boost

GPU Boost overlocks the integrated iGPU for the best graphics performance.

1. Click **More Settings**, and then click the **GPU Boost** tab.
2. Adjust the iGPU engine clock and iGPU voltage, then you will be requested to restart the system. Click **Yes** to make the change take effect.

The screenshot shows the ASUS TurboV EVO software interface with the 'GPU Boost' tab selected under 'More Settings'. It displays iGPU Engine Clock and iGPU Voltage settings with current and target values, and adjustment bars. On the right, CPU frequency and usage are shown. Callouts point to specific elements:

- GPU Boost:** Points to the 'GPU Boost' tab.
- Target values:** Points to the 'More Settings' section.
- Current values:** Points to the numerical values for iGPU Engine Clock (1100) and iGPU Voltage (1).
- Adjustment bars:** Points to the sliders for iGPU Engine Clock and iGPU Voltage.
- Click to restore all start-up settings:** Points to the 'OS Default Settings' button.
- Undoes all changes without applying:** Points to the 'Undo' button.
- Applies all changes immediately:** Points to the 'Apply' button.



GPU Boost is available on selected models.

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]**, or activate CPU Ratio by clicking the ON button on the CPU Ratio function screen.

1. Click **More Settings**, and then click the **CPU Ratio** tab.
2. Click the ON button to activate CPU Ratio.
3. You will be requested to restart the system. Click **Yes** to make the change take effect.



4. Drag the adjustment bar upwards or downwards to the desired value.



- 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.

Auto Tuning

ASUS TurboV EVO includes two auto tuning 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.

- **Fast Tuning:** fast CPU overclocking
- **Extreme Tuning:** extreme overclocking for CPU and memory

Using Fast Tuning

1. Click the **Auto Tuning** tab and then click **Fast**.
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 auto tuning success. Click **OK** to exit.



Using Extreme Tuning

1. Click the **Auto Tuning** tab and then click **Extreme**.
2. Read through the warning messages and click **OK** to start auto-overclocking.



3. TurboV automatically overlocks the CPU and memory and restarts the system. After re-entering Windows, a message appears indicating the current overclocking result. To keep the result, click **Stop**.



4. If you did not click **Stop** in the previous step, TurboV automatically starts further system overclocking and stability test. An animation appears indicating the overclocking process. Click **Stop** if you want to cancel the Overclocking process.



5. TurboV automatically adjusts and saves BIOS settings and restarts the system. After re-entering Windows, a message appears indicating auto tuning success. Click **OK** to exit.



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.

The screenshot shows the ASUS EPU Control Panel. On the left, there are three mode buttons: 'Auto', 'High performance', and 'Max. power saving'. The main area features a central pentagon with five points labeled 'Tranquility', 'Performance', 'Convenience', 'Reliability', and 'Energy Saved'. Below this is a 'Configurations' button. At the bottom, there are buttons for 'Auto Tuning', 'Tool', 'Monitor', 'Update', and 'System Information'. On the right, an 'EPU Status' window is open, showing 'Mode' as 'Auto-Max. power saving', a grid of icons for 'CPU', 'HDD', 'FAN', 'Chipset', 'Memory', and 'VGA', and CO2 emission statistics. A 'Warning' dialog box is also visible at the top right, stating: 'No VGA detected. Please install a compatible VGA card for install and enable the BIOS. Refer to the list of compatible VGA cards. http://www.asus.com/BIOS/BIOS_VGA.asp'. Red callouts with arrows point from text labels to these specific elements in the interface.

Displays the following message if no VGA power saving engine is detected.

Displays current mode

The items lighting up means power saving engine is activated

Displays the amount of CO2 reduced

Shifts between the display of Total and Current CO2 reduced

Displays the current CPU power

Advanced settings for each mode

Displays the system properties of each mode

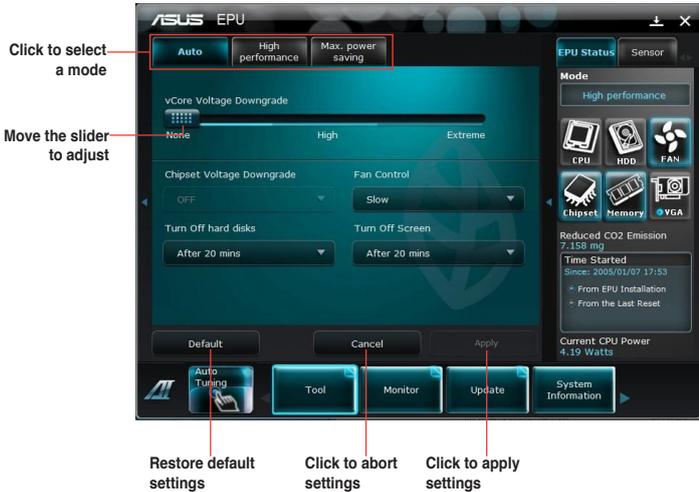
Multiple system operating modes



- * 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 .

Configuring EPU

Click **Configurations** from the EPU control panel to display configuration options in each mode. Some options in certain modes are dimmed, meaning that they are not available.



Configuration options in Advanced settings menu

The following lists the configuration options and their definitions in Advanced settings menu.

- **vCore Voltage Downgrade:** Lowers CPU vCore voltage.
 - **Extreme:** Downgrades voltage to the highest level for CPU power saving.
 - **High:** Downgrades voltage to the high level for CPU power saving.
 - **None:** Turns off the vCore voltage downgrade function.
- **Chipset Voltage Downgrade:** Lowers chipset voltage.
 - **Light:** Downgrades chipset voltage to the minimum level.
 - **Heavy:** Downgrades chipset voltage to the highest level.
- **Turn Off hard disks:** Turns off hard disk drives when they are not accessed after a certain time.
- **Fan Control:** Adjusts fan speeds to reduce noise and save system power.
 - **Quiet:** Lowers CPU fan speed and shuts off two chassis fans.
 - **Keep BIOS Setting:** Follows the BIOS setting.
 - **Slow:** Lowers CPU fan and two chassis fan speeds.
- **Turn Off Screen:** Turns off the display screen after a certain time during system idle process.

FAN Xpert

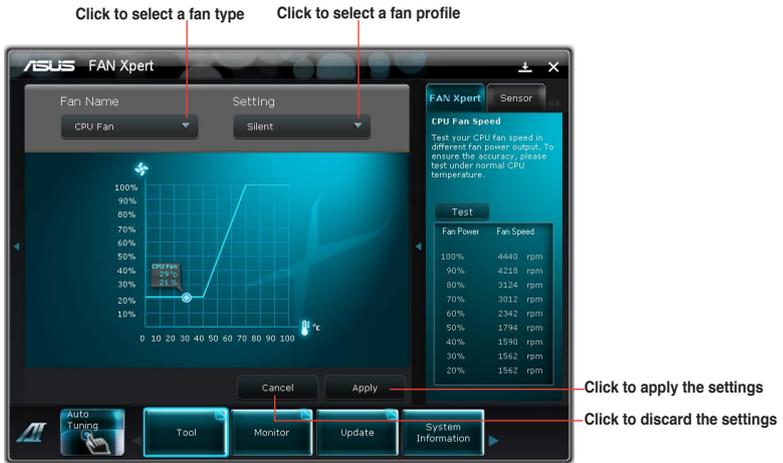
Fan Xpert intelligently allows you to adjust both the CPU and chassis fan speeds according to different ambient temperatures caused by different climate conditions in different geographic regions and your PC's system loading. The built-in variety of useful profiles offer flexible controls of fan speed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

Probe II

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



Saves your configuration

Loads your saved configuration

Loads the default threshold values for each sensor

Applies your changes

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.



Pop-up Window A message box appears on the screen when the sensor detects a breach on the threshold value.

Cycle Detection The cycle detection is the time interval for a sensor to monitor a particular component. The default interval is five seconds.

Temperature Unit Allows you to convert the temperature scale to degree Celsius (°C) or degree Fahrenheit (°F). The temperature monitor panels automatically converts the value (from °C to °F or vice-versa) when you change 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 allows you to monitor the changes in the system voltage, temperature, and fan speed, as well as recording the changes.

Launching Sensor Recorder

After installing AI Suite II from the motherboard support DVD, click **Tool > Sensor Recorder** on the AI Suite II main menu bar to launch PC Probe II.

Configuring Sensor Recorder

Click the **Voltage/Temperature/Fan Speed** tabs and select the sensors that you want to monitor. The **History Record** tab allows you to record the changes in the sensors that you enable.

The screenshot shows the ASUS Sensor Recorder application window. It features a top navigation bar with tabs for Voltage, Temperature, Fan Speed, and History Record. The Voltage tab is active, displaying a list of sensors to monitor: Vcore, +3.3V, +12V, and +5V. A red box highlights the Vcore and +3.3V sensors, with an annotation: "Select the sensors that you want to monitor". Below the list is a line graph showing voltage (V) on the Y-axis (0 to 20) and time on the X-axis (17:06:00 to 17:08:30). A red arrow points to the graph with the annotation: "Drag to view the status during a certain period of time". On the right side, there is a "Sensor" panel listing various system metrics: Vcore (0.792 V), +3.3V (3.296 V), +5V (5.040 V), +12V (12.208 V), CPU (47.0 °C), MB (33.0 °C), CPU (1654 rpm), Chassis1 (0 rpm), and Power (0 rpm). At the bottom, there are buttons for "Auto Tuning", "Tool", "Monitor", "Update", and "System Information". Annotations point to these buttons: "Click to return to the default mode" points to the "Tool" button, "Click to zoom in/out the X axis" points to the "Monitor" button, and "Click to zoom in/out the Y axis" points to the "Update" button.

Voltage

The **Voltage** tab displays the status of the system voltages. Select the items that you want to monitor.



Temperature

The **Temperature** tab displays the status of the CPU and motherboard temperatures. Select the items that you want to monitor.



Fan Speed

The **Fan Speed** tab displays the status of the rotations (per minute) of the CPU, chassis, and power fans. Select the items that you want to monitor.



History Record

The **History Record** tab allows you to record the changes in the system.



To use the recording function

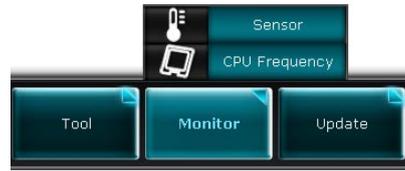
1. Select the sensor type, and then select the sensors whose changes you want to record.
2. Select the record interval and duration.
3. Click **Start recording**. To stop, click **Recording** while the recording is in progress.

To edit the recorded history

- Select a date to view a certain recorded history.
- If you want to delete a recorded history, click **X** beside the date of the selected recorded history to clear it.

Monitor

The Monitor section includes the Sensor and CPU Frequency panels.



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



Update

The Update section allows you to update the motherboard BIOS and the BIOS boot logo with the ASUS designed update utilities.



ASUS Update

ASUS Update is a utility that allows you to manage, save, and update the motherboard BIOS in Windows® environment. ASUS Update allows you to:

- Update the BIOS directly from the Internet
- Download the latest BIOS file from the Internet
- Update the BIOS from an updated BIOS file
- Save the current BIOS file
- View the BIOS version information



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

Updating the BIOS

1. From the AI Suite II main menu bar, click **Update > ASUS Update**.
2. You can choose to update the BIOS from the Internet or from a BIOS file. Follow the steps below based on your selected updating option.

To update the BIOS from the Internet

- a) From the list of options, select **Update BIOS from Internet** and click **Next**.
- b) Select the ASUS FTP site nearest you to avoid network traffic. Tick the two items to enable the BIOS downgradable and auto BIOS backup functions.



- c) Select the BIOS version that you want to download and click **Next**.



To update the BIOS from a BIOS file

- a) From the list of options, select **Update BIOS from file** and then click **Next**.



- b) Click **Browse** to locate the BIOS file and then click **Next**.



- Click **Yes** if you want to change BIOS boot logo, which is the image appearing on the screen during the Power-On Self-Tests (POST). Click **No** to continue.

If you click **Yes**, follow the steps below:

- Locate the picture file that you want to use as the boot logo and then click **Next**.
- Move the **Resolution** slider or click **Auto Adjustment** for the system to automatically adjust the screen resolution.



- Click the **Booting Preview** button to preview the way the picture is displayed during POST. Left-click the mouse to return to the setting screen.
- Click **Next** when the changes are finished.



- Click **Flash** to start updating the BIOS to your motherboard, and then follow the onscreen instructions to complete the update.



If you click **No**, click **Flash** to start updating the BIOS to your motherboard, and then follow the onscreen instructions to complete the update.



ASUS MyLogo

ASUS MyLogo allows you to customize the boot logo. The boot logo is the image that appears on screen during the Power-On Self-Tests (POST). **ASUS MyLogo allows you to:**

- Change the current BIOS boot logo of your motherboard
- Change the boot logo of a downloaded BIOS file and update this BIOS to your motherboard
- Change the boot logo of a downloaded BIOS file without updating this BIOS to your motherboard



Ensure that the BIOS item **Full Screen Logo** is set to [Enabled] to display the boot logo. See the section **Boot Settings Configuration** of the BIOS Setup chapter in the user manual.

Changing the BIOS boot logo

1. From the AI Suite II main menu bar, click **Update > MyLogo**.
2. Select any of these three options, then click **Next**:
 - Change the BIOS boot logo of my motherboard
 - Change the boot logo of a downloaded BIOS file and update this BIOS to my motherboard
 - Change the boot logo of a downloaded BIOS file (But do not update this BIOS to my motherboard)



Before using the last two options, ensure that you download a BIOS file to your computer using ASUS Update.

3. Locate the picture file that you want to use as the boot logo (and the downloaded BIOS if required) and then click **Next**.



4. Move the **Resolution** slider or click **Auto Adjustment** for the system to automatically adjust the screen resolution.
5. Click the **Booting Preview** button to preview the way the picture is displayed during the POST. Left-click the mouse to return to the setting screen.
6. Click **Next** when the adjustment is finished.
7. Click **Flash** and follow the onscreen instructions to complete the process.



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 then select the memory slot to see the details on the memory module installed on the corresponding slot.



