

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

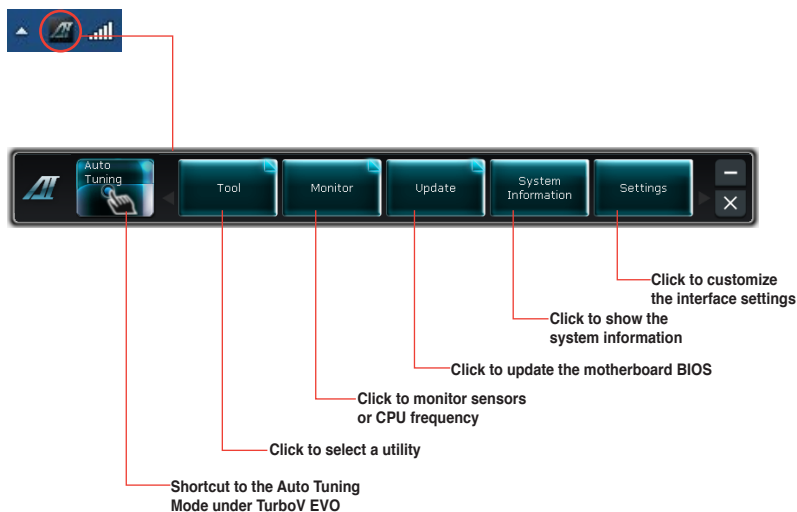
To install AI Suite II on your computer

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.

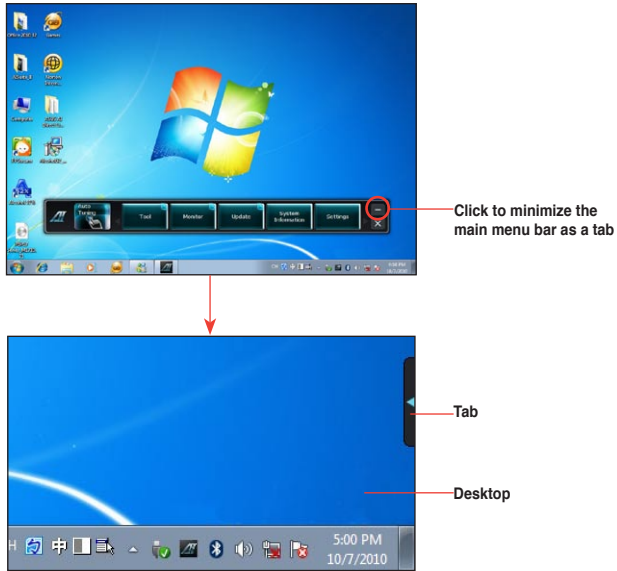
Click each button to select and launch a utility, to monitor the system, to update the motherboard BIOS, to display the system information, and to customize the settings of AI Suite II.




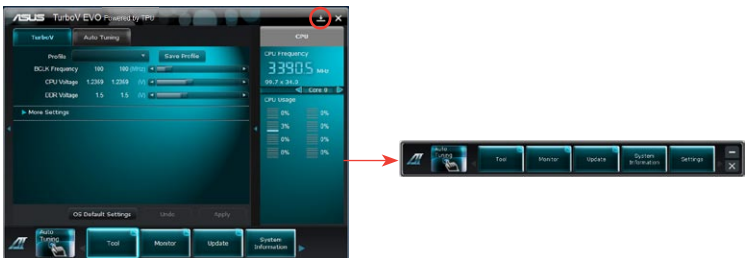
- The **Auto Tuning** button appears only on models with the TurboV EVO function.
- The applications in the Tool menu vary with models.
- The screenshots of AI Suite II in this user manual are for reference only. The actual screenshots vary with models.


Other feature buttons

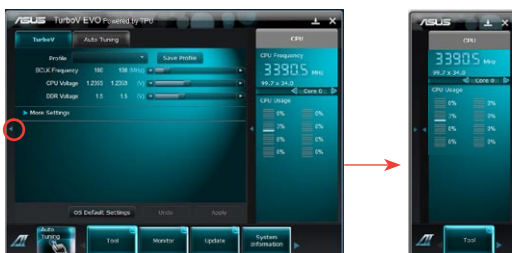
- Click  to minimize the main menu bar as a tab on the side of the Windows desktop. Click the tab again to restore the main menu bar.




- 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.

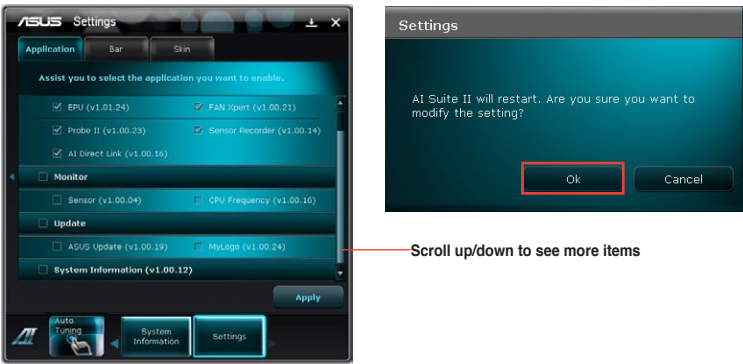
Application

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

1.

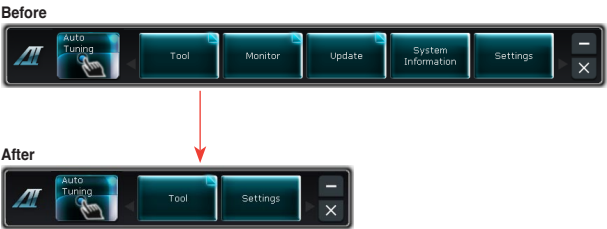
Tick the item that you want to display on the main menu bar, and then click **Apply**.
2.

Click **Ok** to restart AI Suite II and apply the setting.



3.

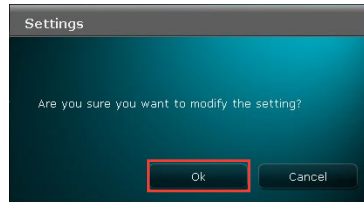
The new setting has been applied to the main menu bar.



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.

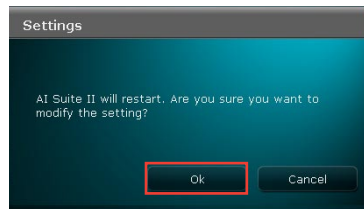


The **Auto hide** function only takes effect in Bar mode.

Skin

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

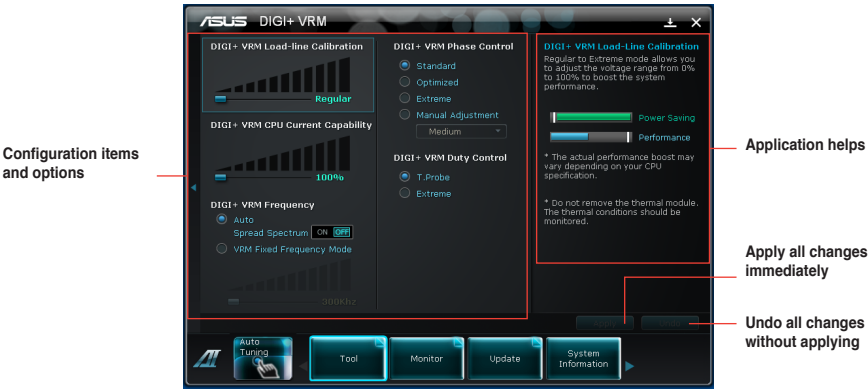
1. Move the slider of the item that you want to customize.
2. Click **Apply** to apply the setting.



DIGI+ VRM

ASUS DIGI+ VRM 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+ VRM by clicking **Tool > DIGI+ VRM** on the AI Suite II main menu bar.



Introduction on DIGI+ VRM Configuration Items

DIGI+ VRM Load-line Calibration

Load-line is defined by Intel VRM spec and affects CPU voltage. The CPU working voltage will decrease proportionally to CPU loading. Higher load-line calibration could get higher voltage and good overclocking performance but increase the CPU and VRM thermal.

- **Regular:** 0%
- **Medium:** 25%
- **High:** 50%
- **Ultra:** 75%
- **Extreme:** 100%



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

DIGI+ VRM CPU Current Capability

DIGI+ VRM CPU Current Capability provides wider total power range for overclocking. A higher value setting gets higher VRM power consumption delivery.

A higher value brings a wider total power range and extends the overclocking frequency range simultaneously.



Suggestion: choose higher value when overclocking or under high CPU loading for extra power support.

DIGI+ VRM Frequency

Switching frequency will affect the VRM transient response and component thermal. Higher frequency gets quicker transient response.

Enable **Spread Spectrum** to enhance system stability.

- VRM Fixed Frequency Range: 300–500kHz
- Manual Frequency Step: 10kHz



Do not remove the thermal module when switching to **Manual** mode. The thermal conditions should be monitored.

DIGI+ VRM Phase Control

Phase number is the number of working VRM phase. 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.

- **Standard:** Phase control based on CPU command.
- **Optimized:** ASUS optimized phase tuning profile
- **Extreme:** Full phase mode
- **Manual Adjustment:** Phase number adjusted by current (A) step



- Select **Ultra Fast** for a faster response. The reaction time will be longer when **Regular** is selected.
- Do not remove the thermal module when switching to **Extreme** and **Manual** mode. The thermal conditions should be monitored.

DIGI+ VRM Duty Control

DIGI+ VRM Duty Control adjusts the current of every VRM phase and the thermal of every phase component. Select the [T.Probe] option to maintain VRM thermal balance or the [Extreme] option to maintain VRM current balance.

- **T.Probe:** Thermal balance
- **Extreme:** Current balance



Do not remove the thermal module. The thermal conditions should be monitored.

BT GO!

BT GO! connects a bluetooth (BT) device with the motherboard through Bluetooth connection for file transferring, file synchronization, music playback, personal manager, and multiple remote functions.

Launching BT GO!

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

Using BT GO!




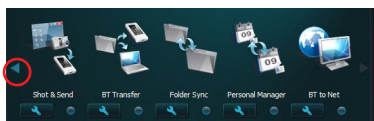
- Click and to scroll the device list.
- Click any of the device icons to select the device as the connected BT device and **BT GO!** will automatically search for the supported functions for the selected device.
- Click any of the device icons to connect the selected device.





- To remove the selected BT device, right-click the BT device icon and select **Remove**.
- To search for the supported functions for the selected BT device again, right-click the selected BT device icon and select **Rescan available functions**.



- When the exclamation mark  appears below a BT device icon, it means that the BT device has been paired with the computer but is not connected via the bluetooth connection or the bluetooth signal is weak currently.



- Click  and  to scroll the function list.
- Click any of the lightened function icons to enable/disable the selected function.

Shot & Send: allows you to snap and transfer the screenshot to the connected BT device.

BT Transfer: allows you to share the files stored in the host BT device to another connected BT devices.

Folder Sync: allows you to sync or back up the selected folder between the selected BT devices and the computer.

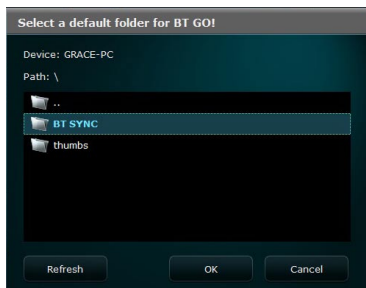
Personal Manager: allows you to synchronize the personal contacts and calendar information between the BT device and the system.

BT to Net: allows the system to access the Internet via the network shared by the Bluetooth device.

Music Player: allows you to play the selected music files in the BT device through the computer's speakers.

BT Turbo Remote: provides a user-friendly interface that allows you to use your smartphone as the remote controller via the bluetooth connection for the **BT Turbo Key**, **Pocket Media**, and **Reset/Off** functions.

- The first time you use any of **Shot & Send**, **BT Transfer**, and **Folder Sync**, you will be prompted to locate the default folder of the connected BT device for these functions.



Connecting to a BT device

1. Turn on the bluetooth function of the BT device that you want to connect with the computer.
2. From the BT GO! main screen, click **Search Device**.
3. From the device list, select the BT device that you want to connect, and then finish the pairing process.



- Only Windows® 7™ OS supports **BT GO!**.
- Ensure that you close other bluetooth applications while using **BT GO!** to search devices.
- Due to Bluetooth behavior, if **BT GO!** cannot find your BT device, click the Search Device button after you ensure that the bluetooth function of your BT device is turned on.
- For **BT Turbo Remote**, you need to install the **Mobilink** utility on your computer and the **BT Turbo Remote utility** on the selected Bluetooth device before pairing your computer with the Bluetooth device. Refer to the **BT Turbo Remote** section in this user manual for detailed instructions.
- Due to iPhone Bluetooth behavior, iPhone only supports **BT Turbo Remote**.
- Certain functions in **BT GO!** may not be available according to the BT device you use.

Using the same function on another BT device

If you want to use the same function that is running on the currently connected BT device on another BT device, do the following: (taking **Shot & Send** for example)

1. From the BT device list, select another BT device and finish the pairing process.
2. Click the **Shot & Send** icon, then the following message pops up, informing you that the currently connected BT device is running this function.



3. Click **OK**, then a message pops up, asking you whether to apply the current setting. Click **OK** to use **Shot & Send** on another BT device.

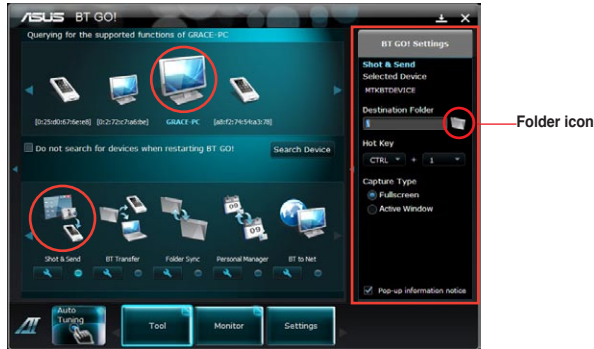


Shot & Send

This function allows you to snap and transfer the screenshot to the connected BT device.

Using Shot & Send

1. From the device list, select the connected BT device that you want to use for this function.
2. Click the **Shot & Send** icon enable this function.



3. The default destination folder is the folder that you select when you use **Shot & Send**, **BT Transfer**, or **Folder Sync** for the first time. To change the destination folder, click the **Folder** icon to locate another destination folder.
4. Select the **Hot Key** combination that you will use for capturing a screenshot on your computer.
5. Select the capture type from **Fullscreen** and **Active Window**. **Active Window** means the currently selected window.
6. From your computer, click the selected **Hot Key** combination to capture a screenshot. Then, a transferring mark appears below the connected BT device icon.
7. In the meantime, you will receive the screenshot transferring notice from the connected BT device. Confirm the notice to receive the transferred screenshot.
8. To disable this function, click the **Shot & Send** icon again.



Do not change the settings in the setting pane while transferring the captured file.

BT Transfer

This function allows you to share the files stored in the host BT device to another connected BT devices.

Using BT Transfer

1. From the device list, select the connected BT device that you want to use for this function.
2. Click the **BT Transfer** icon.
3. The default destination folder is the folder that you select when you use **Shot & Send**, **BT Transfer**, or **Folder Sync** for the first time.
4. In the BT GO! settings pane, click the top **Folder** icon to select the file(s) to be transferred from the host BT device. You can press <Ctrl> and click or <Shift> and click to select and deselect the files.
5. Then, from Target Device 1 (and Target Device 2 and 3 if the computer is also connected to these devices), select the BT device and locate the destination folder.

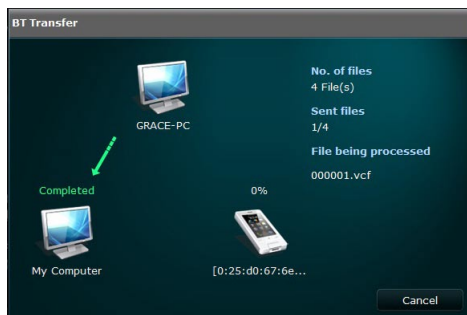


The dropdown list of the Target Device only contains the bluetooth devices that have been paired with the computer and support the FTP function.

6. When finishing the settings, click the **BT Transfer** icon to start transferring.



7. The following screen appears, showing the transferring progress.



Folder Sync

This function allows you to sync or back up the selected folder between the selected BT devices and the computer.



Performing Folder Sync may make the new data overwrite the original data. Ensure to back up all data in the selected folder before using this function.

Using Folder Sync

1. From the device list, select the connected BT device that you want to use for this function.
2. Click the **Folder Sync** icon.
3. The default destination folder is the folder that you select when you use **Shot & Send**, **BT Transfer**, or **Folder Sync** for the first time. To change the destination folder, click the **Folder** icon to locate another destination folder.
4. In the BT GO! settings pane, select the function from Backup and Sync.
5. Select the applying mode. **Remote** means the connected BT device, and **Local** means the computer.
6. Click **Folder** icon to locate the device folder and the local folder respectively.
7. When finishing the settings, click the **Folder Sync** icon to start the task.



8. The following screen appears, showing the transferring progress.



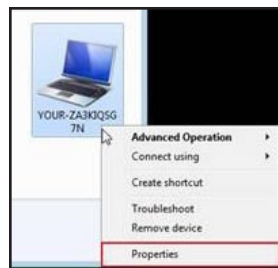
Personal Manager

This function allows you to synchronize the personal contacts and calendar information between the BT device and the system.

Enabling Personal Manager on your BT device

Not all BT devices that you select support or enable Personal Manager. To check if this function is supported or enabled on your BT device, do the following:

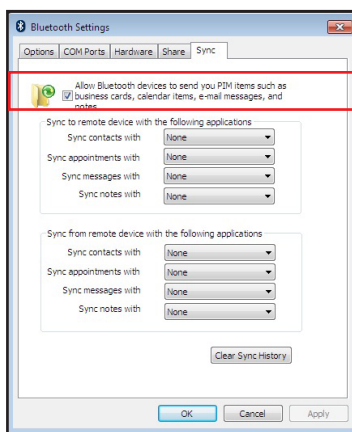
1. From the Control Panel, go to **Hardware and Sound > Devices and Printers > Bluetooth Devices**.
2. Right-click on your BT device icon and select **Properties**.



3. Click the **Service** tab and check if the **Device Synchronization** item is ticked.
If this item is not listed, it means that your BT device does not support Personal Manager.



4. From the Windows notification area, click the Bluetooth icon and select **Open Settings**.
5. Click the **Sync** tab and tick the item at the top of the dialog box. Then, select the items that you want to sync with your BT device.
6. Click **OK** when done.
7. In the meantime, a message pops up, asking if you allow the access to your information. Click **Allow** to continue the synchronization.



Using Personal Manager

1. From the device list, select the connected BT device that you want to use for this function.
2. If you have confirmed that your BT device supports **Personal Manager**, ensure to turn on the Sync function in the Bluetooth setting on your BT device.
3. Click the **Personal Manager** icon to start the synchronization of the personal contacts and calendar information.



4. The screen appears, showing the transferring progress.



BT to Net

This function allows the system to access the Internet via the network shared by the Bluetooth device.



- Ensure that the Bluetooth device is successfully connected to the Internet and is ready for sharing.
- Ensure that the computer and the Bluetooth device are in the same local area network.

Using BT to Net

1. From the device list, select the connected BT device that you want to use for this function.
2. Click the **BT to Net** icon.



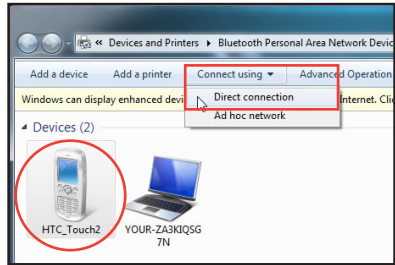
3. A notice window pops up. Click **OK**.



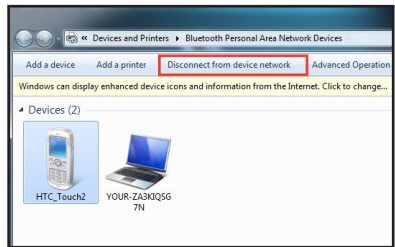
4. The Windows Network Connection window appears. Click the **Bluetooth Network Connection**, then click **View Bluetooth network devices**.



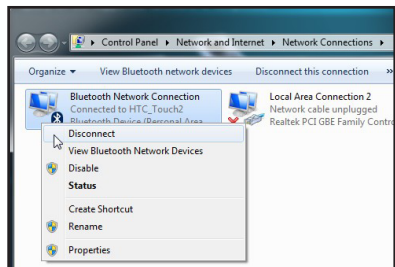
5. The **Bluetooth Personal Area Network Devices** window appears. Click the BT device icon, then click **Connect using > Direct connection**.



6. When the bluetooth network connection is successful, the Connect using tab changes as the **Disconnect from device network** tab.



You can also see the successful bluetooth network connection from the **Network Connections** window by clicking the **BT to Net** icon from the BT GO! window.



7. To disconnect the connection, click the **Disconnect from device network** tab from the **Bluetooth Personal Area Network Devices** window, or, click the **Disconnect this connection** tab from the **Network Connections** window.

Music Player

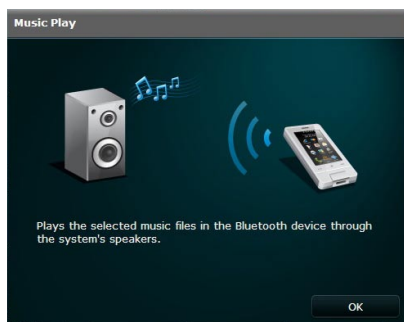
This function allows you to play the selected music files in the BT device through the computer's speakers.

Using Music Player

1. From the device list, select the connected BT device that you want to use for this function.
2. Click the **Music Player** icon.



3. An information window pops up. Click **OK**.



4. The connected BT device will receive a request of playing music through the computer. Confirm the request.
5. Manually open the audio files in the connected BT device.
6. The following music player control panel appears on your PC screen for playback control.



7. To disable this function, click the **Music Player** icon again.



If your BT device is a smartphone with Windows® Mobile OS, ensure to enable the Wireless Stereo function so as to use **Music Player** normally.

BT Turbo Remote

BT Turbo Remote provides a user-friendly interface that allows you to use your smartphone as the remote controller via the bluetooth connection for the **BT Turbo Key**, **Pocket Media**, and **Reset/Off** functions.



- Only Windows® 7™/Vista™ OS support **BT Turbo Remote**.
- **BT Turbo Remote** currently supports iPhone and smartphones using , Android, Windows Mobile, and Symbian systems.
- For iPhone, download the **BT Turbo Remote** utility from the **App Store**.
- The application interfaces vary with the phone platforms, but the functions remain the same.

BT Turbo Key

Allows you to use the smartphone to remotely overclock or monitor your computer.

Overclock



Monitor: voltage

Voltage	Temperature	Fan Speed	Frequency
Vcore	0.99200	[M]	
+3.3V	3.32800	[M]	
+5V	5.01700	[M]	
+12V	12.03300	[M]	

Monitor: temperature

Voltage	Temperature	Fan Speed	Frequency
CPU	37	[°C]	
MB	42	[°C]	

Monitor: fan speed

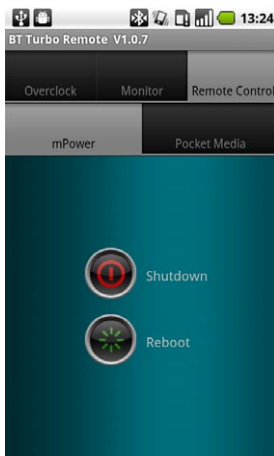
Voltage	Temperature	Fan Speed	Frequency
CPU	1618	[RPM]	

Monitor: frequency

Voltage	Temperature	Fan Speed	Frequency
Core 0	803.4	[MHz]	
Core 1	803.4	[MHz]	

Reset/Off

Allows you to use the smartphone to remotely shut down or restart your system .

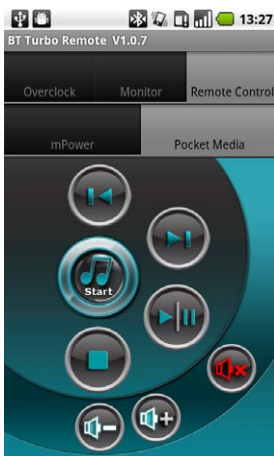
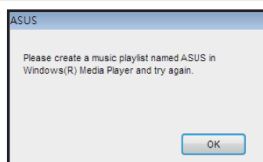


Pocket Media

Allows you to use the smartphone to remotely control the playback of the audio files in your computer via the Windows® Media Player.



The first time you click the **Pocket Media** tab on your iPhone / smartphone, a messages pops up on the computer requesting you to create a music playlist named ASUS in Windows® Media Player. If you do not do so, you need to manually open the Windows Media Player every time before you use the Pocket Media function on your iPhone / smartphone.

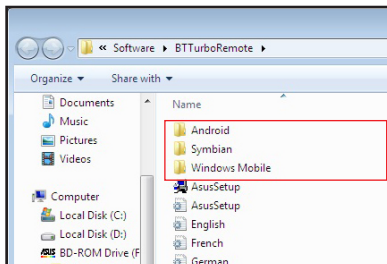


Setting up bluetooth connection between your computer and iPhone / smartphone

Installing the necessary utilities

Before using **BT Turbo Remote**, you need to install the **BT Turbo Remote** utility on your iPhone / smartphone and the **Mobilink** utility on your computer so as to pair your computer with your iPhone / smartphone.

1. Install the **BT Turbo Remote** utility on your smartphone. Get the utility from **motherboard support DVD > Utilities > ASUS BT Turbo Remote** and select the folder based on your smartphone system, or download the latest version from ASUS official website at <http://support.asus.com>.



2. Install the **Mobilink** utility on your computer from **motherboard support DVD > Utilities > ASUS AI Suite II > ASUS Mobilink**.



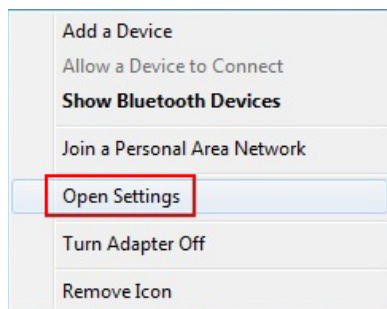
Establishing the Standard Serial over Bluetooth Link (Virtual COM Port)

Creating a virtual COM port on your computer is required for the communication between your computer and your iPhone / smartphone.

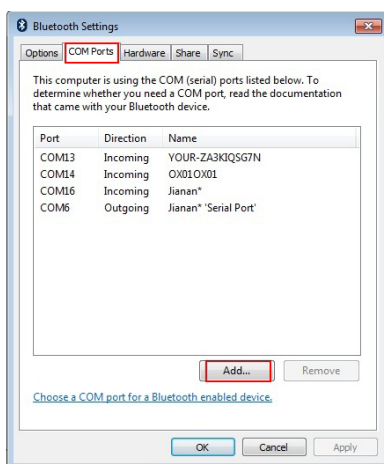


If your system cannot establish a virtual COM port automatically, follow the steps below to manually create one.

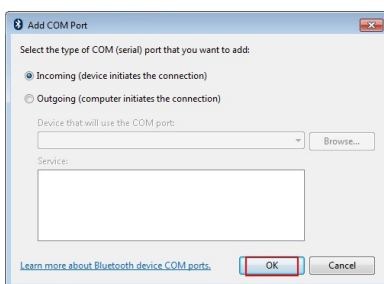
1. From the Windows notification area, click the Bluetooth icon and select **Open Settings**.



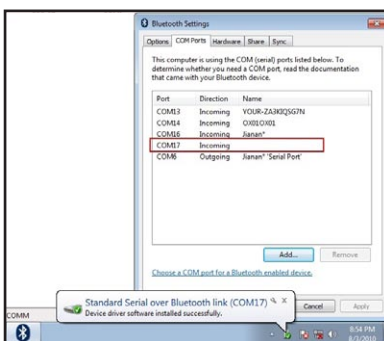
- Click the **COM Ports** tab and click **Add** to create (add) a virtual COM port.



- Select **Incoming** as the type of COM port.



- A virtual COM port is successfully created.



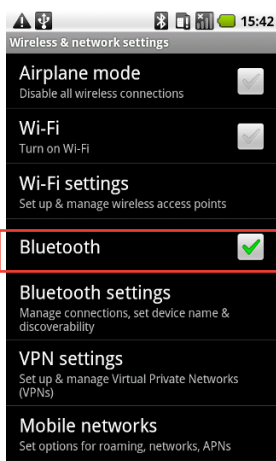
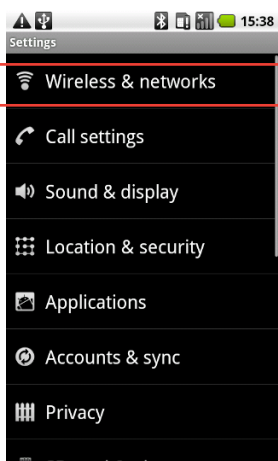
Pairing your iPhone / smartphone with BT Turbo Remote



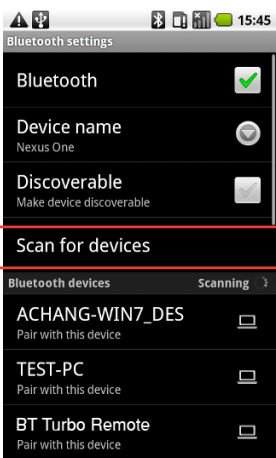
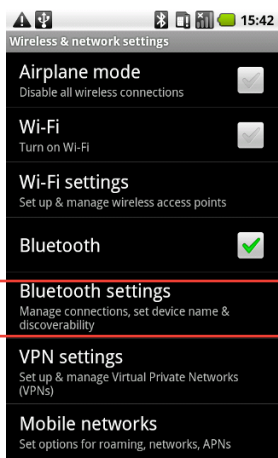
The operation screens in the following sections are for reference only. The operation procedures may vary with the smartphone brands and models. Refer to the user manual that came with your smartphone for detailed operation.

Android system

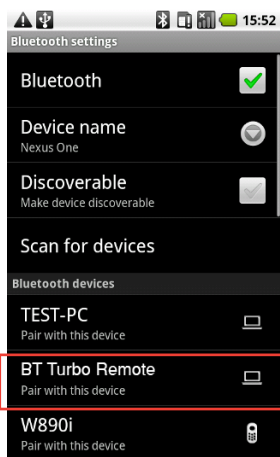
1. Select **Wireless & networks** under **Settings**.
2. Enable **Bluetooth**.



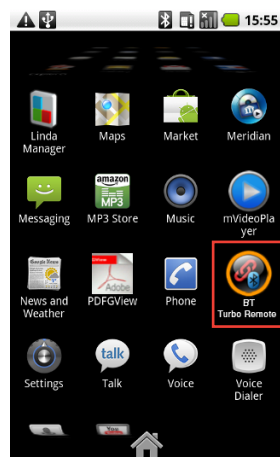
3. Select **Bluetooth settings**.
4. Select **Scan for devices**.



5. Pair with **BT Turbo Remote**.

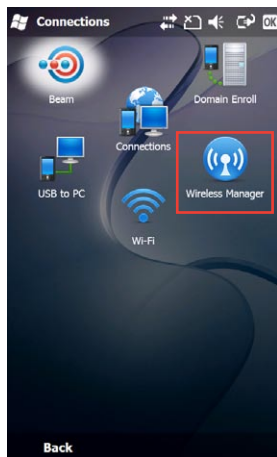


6. Run **BT Turbo Remote** from the program menu.



Windows Phone system

1. Select **Wireless Manager**.



2. Enable **Bluetooth**.



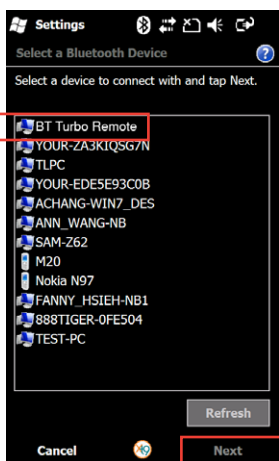
3. Select **Bluetooth**.



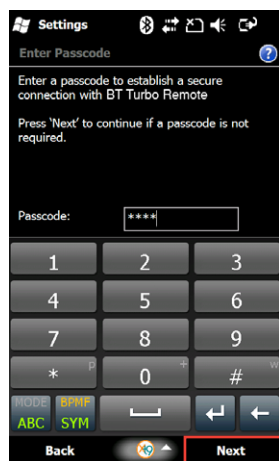
4. In the **Devices** tab, select **Add new device**.



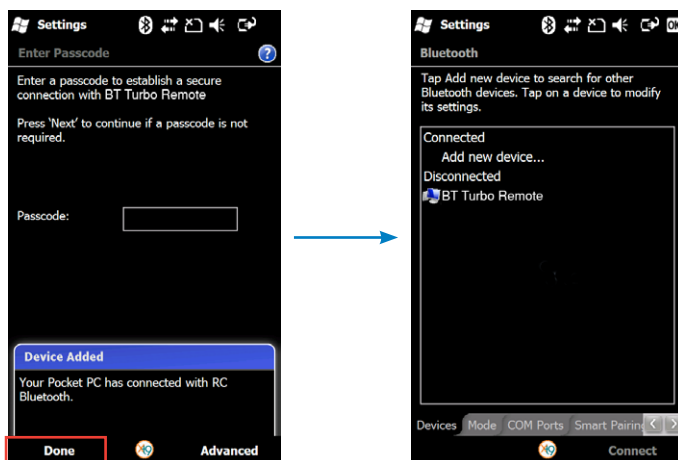
5. Select **BT Turbo Remote** and select **Next**.



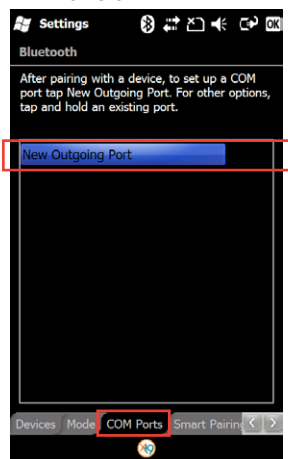
6. If a passcode is required, enter "000000" and select **Next**.



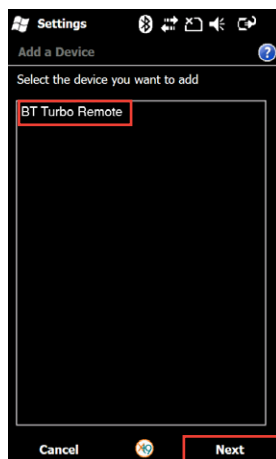
7. Select **Done** when your phone is paired with **BT Turbo Remote**.



8. In the **COM Ports** tab, create a **New Outgoing Port** for **BT Turbo Remote**.



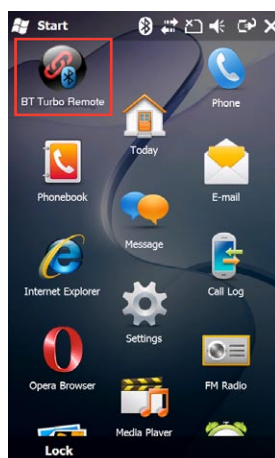
9. Select **BT Turbo Remote** and select **Next**.



10. Select a COM port for **BT Turbo Remote** and select **Finish**.

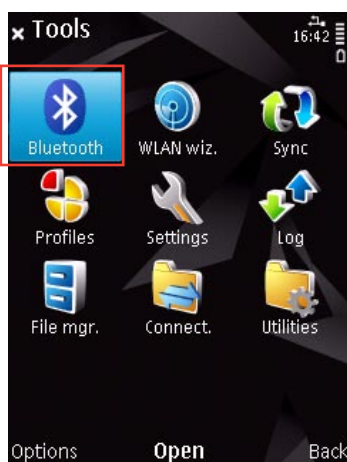


11. Run **BT Turbo Remote** from the program menu.

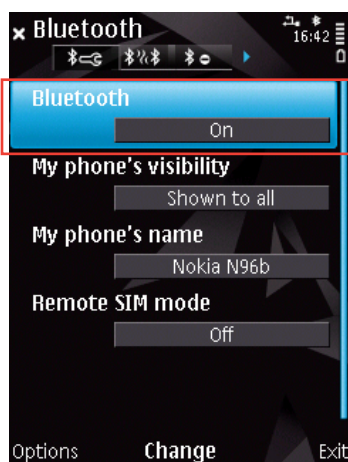


Symbian system

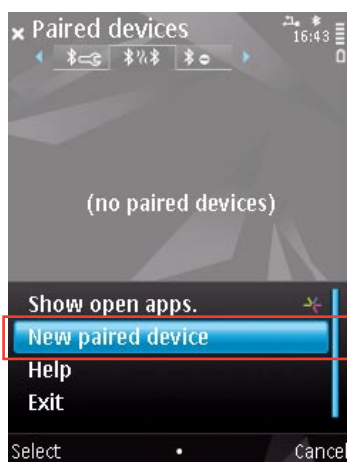
1. Open **Bluetooth** under **Tools**.



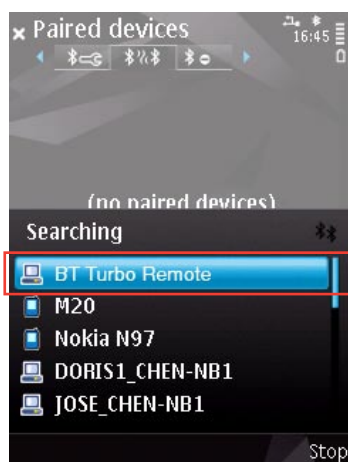
2. Enable **Bluetooth**.



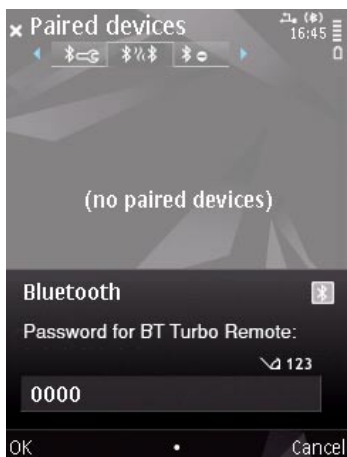
3. Select **New paired device**.



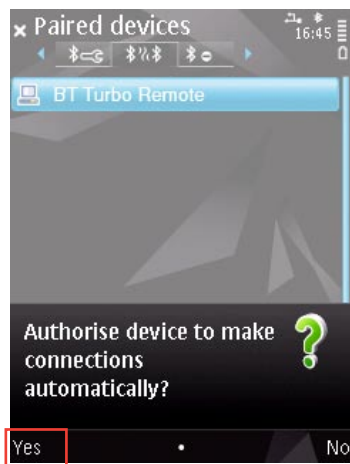
4. Select **BT Turbo Remote**.



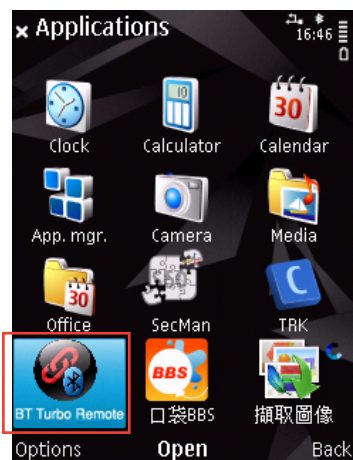
5. Enter "000000" for the passcord.



6. Select **Yes** to allow automatic authorisation.



7. Run **BT Turbo Remote** under **Applications**.



iPhone system

1. Search **BT Turbo Remote** within **App Store** and install it to your iPhone.



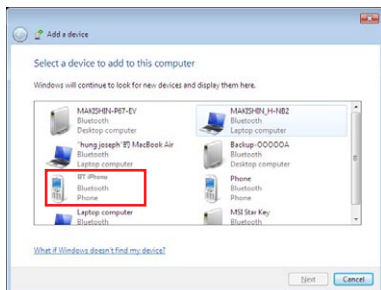
2. On your iPhone, tap **Settings > General > Network > Internet Tethering**. Enable **Internet Tethering** and tap **Turn on Bluetooth** when a dialog box appears.



3. Return to **General > Bluetooth**. Stay at this page for later PIN entering and pairing.



4. From the Windows notification area, click the Bluetooth icon and select **Add a device**.
5. Your iPhone should be detected by your computer now. Select **BT iPhone** (may be labeled as your iPhone's name) and click **Next**.
6. Right-click **BT iPhone** (may be labeled as your iPhone's name) and select **Connect**.

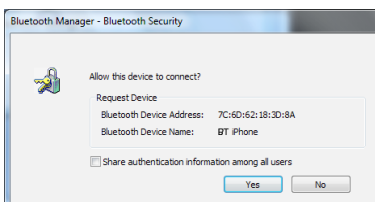


7. Enter **PIN** on your iPhone and tap **Done**. Enter the same **PIN** on your computer and click **Pair** to start the connection. When pairing succeeds, the name of the PC will be shown in the Devices list.

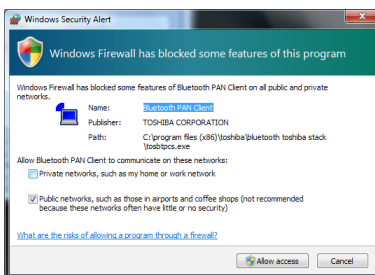


Ensure that you see **Internet Tethering** on the top of your iPhone. If not, repeat the previous steps to rebuild the connection.

8. Click **Yes** to allow the device to connect.



9. Windows Firewall may block the Bluetooth connection. Click **Allow access** to complete the connection.



The Bluetooth connection screens may vary with your operating system version and Bluetooth-enabled devices.

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

TurboV

Load profile

Target values

Current values

Click to show / hide more settings

Click to restore all start-up settings

ASUS TurboV EVO Powered by TPU

TurboV

Auto Tuning

Profile

BCLK Frequency

100

100 (MHz)

CPU Voltage

1

1 (V)

DDR Voltage

1.5

1.5 (V)

More Settings

OS Default Settings

Undo

Apply

Auto Tuning

Tool

Monitor

Update

System Information

Save Profile

CPU

CPU Frequency

3098.5

100.0 x 31.0

Core 0

CPU Usage

1%

0%

0%

0%

Save the current settings as a new profile

Voltage Adjustment bars

Undoes all changes without applying

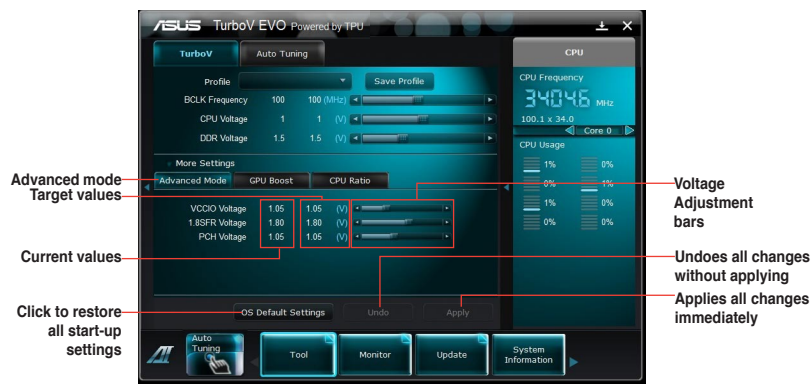
Applies all changes immediately



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

Using Advanced Mode

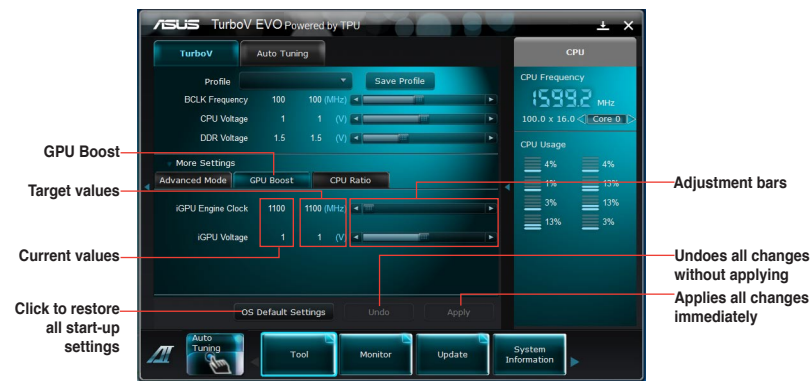
Click **More Settings**, and then click the **Advanced Mode** tab to adjust the advanced voltage settings.



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.



GPU Boost is available on selected models.

CPU Ratio

Allows you to manually adjust the CPU ratio.

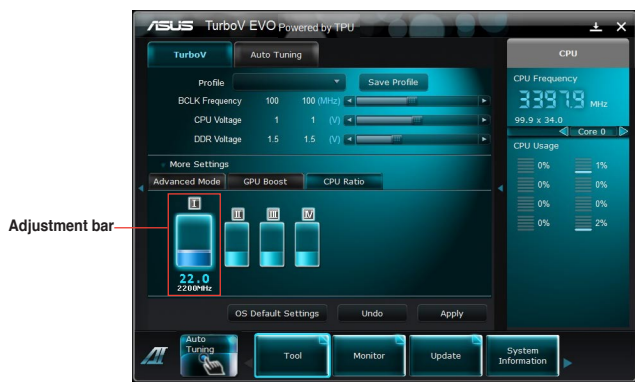


The first time you use **CPU Ratio**, go to **AI Tweaker > CPU Power Management** in BIOS and set the **Turbo Ratio** item to **[Maximum Turbo Ratio setting in OS]**, or activate CPU Ratio by clicking the ON button on the CPU Ratio function screen.

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.

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

The screenshot shows the ASUS EPU Control Panel interface. On the left, there are three mode buttons: 'Auto' (highlighted with a red box), 'High performance', and 'Max. power saving'. In the center is a 'Tranquility' hub with five surrounding icons: 'Performance', 'Convenience', 'Reliability', 'Energy Saved', and 'Configurations'. On the right, the 'EPU Status' panel shows 'Mode: Auto:Max. power saving' (with a red box and annotation), a grid of hardware icons (CPU, HDD, FAN, Chipset, Memory, VGA) where the first three are lit up (with a red box and annotation), and CO2 emission statistics: 'Reduced CO2 Emission 142.181 mg', 'Time Started Since: 2010/08/23 16:23', and 'From EPU Installation' / 'From the Last Reset' (with a red box and annotation). Below this is 'Current CPU Power 5.05 Watts' (with a red box and annotation) and a 'Clear' button. At the bottom are buttons for 'Auto Tuning', 'Tool', 'Monitor', 'Update', and 'System Information'. A red box around the 'Auto Tuning' button is annotated as 'Multiple system operating modes'. A red box around the 'Tool' button is annotated as 'Displays the system properties of each mode'. A red box around the 'Update' button is annotated as 'Advanced settings for each mode'.

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

Multiple system operating modes

Displays the system properties of each mode

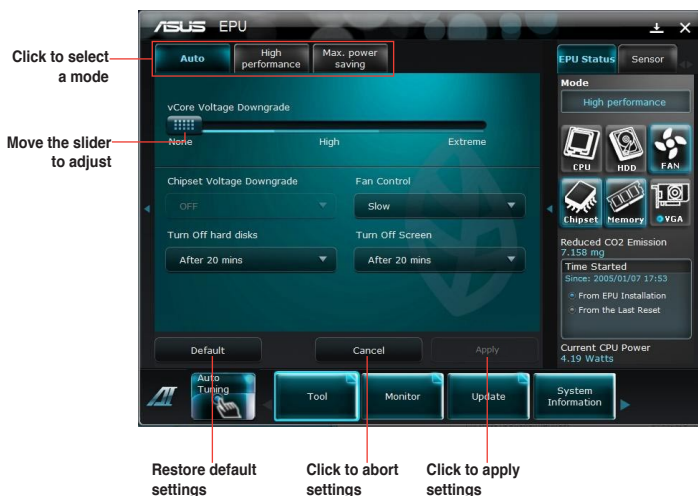
Advanced settings for each mode



- * 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

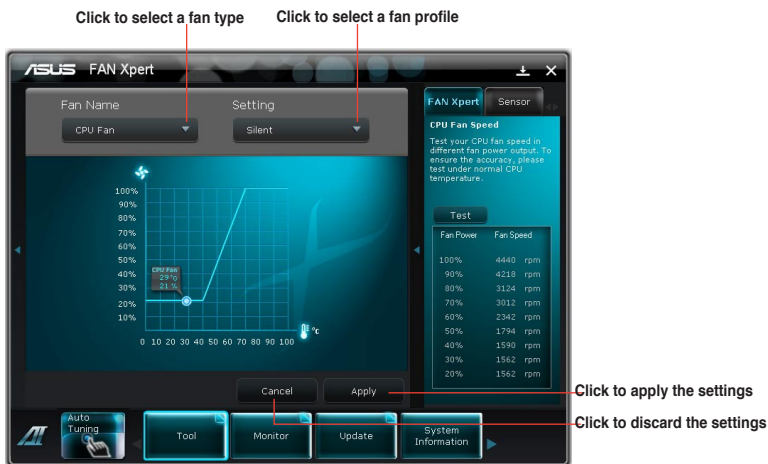
Fan Xpert intelligently allows you to adjust both the CPU and chassis fan speeds according to different ambient temperatures caused by different climate conditions in different geographic regions and your PC's system loading. The built-in variety of useful profiles offer flexible controls of fan speed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

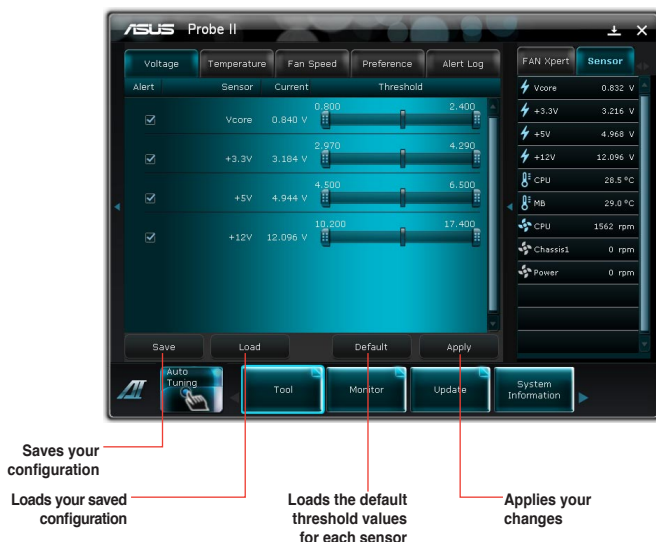
Probe II is a utility that monitors the computer's vital components, and detects and alerts you of any problem with these components. Probe II senses fan rotations, CPU temperature, and system voltages, among others. With this utility, you are assured that your computer is always at a healthy operating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

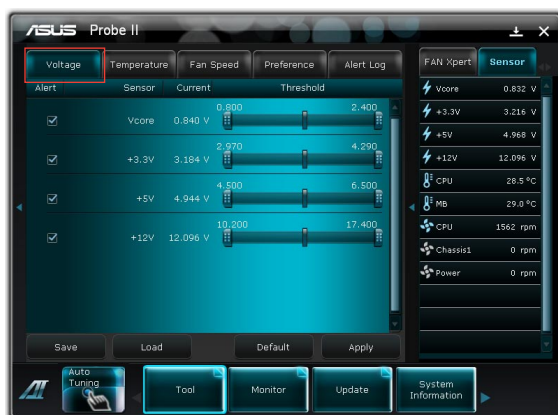
Configuring Probe II

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.



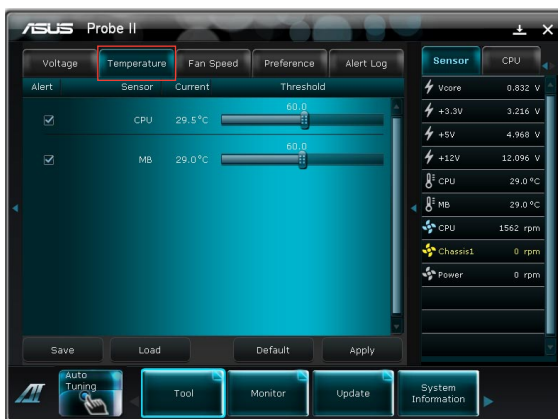
Voltage

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.



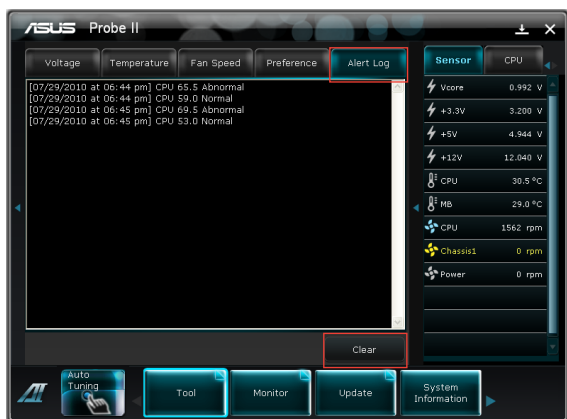
Pop-up Window A message box appears on the screen when the sensor detects a breach on the threshold value.

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

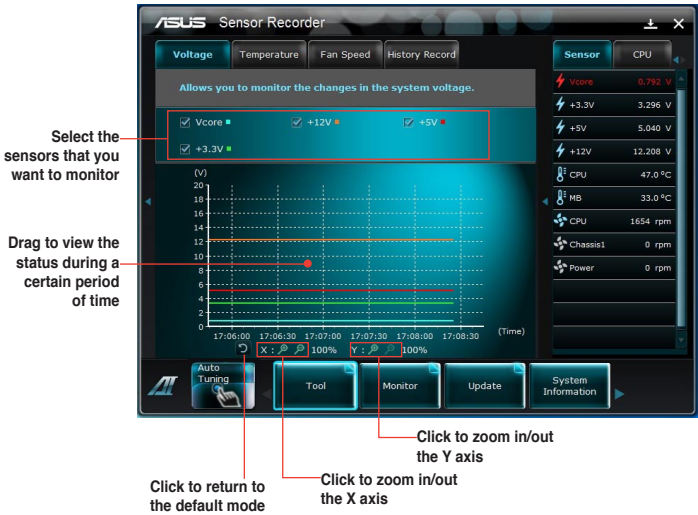
Sensor Recorder allows you to monitor the changes in the system voltage, temperature, and fan speed, as well as recording the changes.

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.



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.



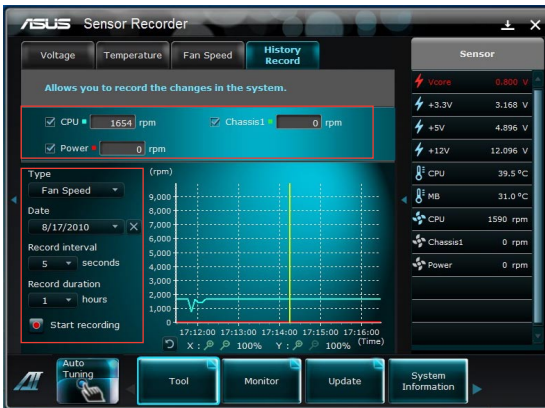
Fan Speed

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

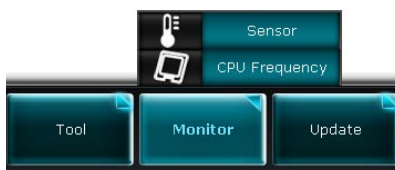
1. Select the sensor type, and then select the sensors whose changes you want to record.
2. Select the record interval and duration.
3. Click **Start recording**. To stop, click **Recording** while the recording is in progress.

To edit the recorded history

- Select a date to view a certain recorded history.
- If you want to delete a recorded history, click  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.

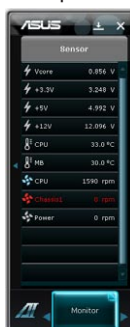
CPU Frequency

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



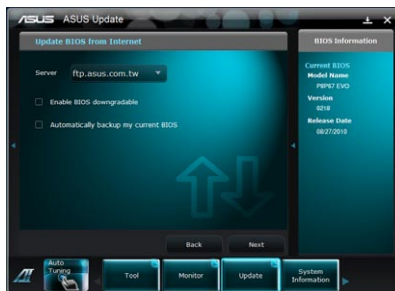
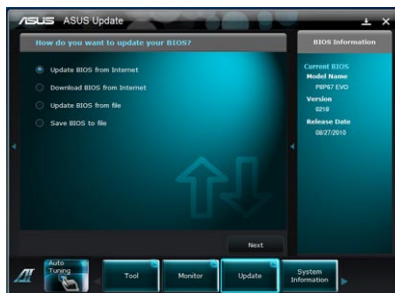
ASUS Update requires an Internet connection either through a network or an Internet Service Provider (ISP).

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.

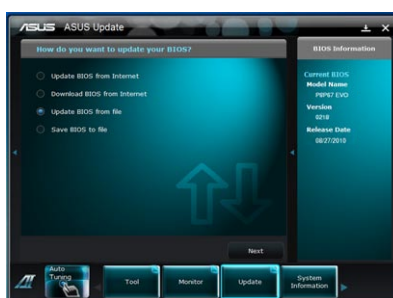


- c) Select the BIOS version that you want to download and click **Next**.

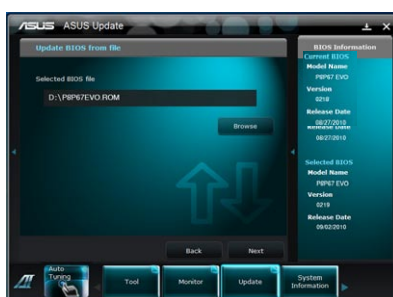


To update the BIOS from a BIOS file

- 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**.



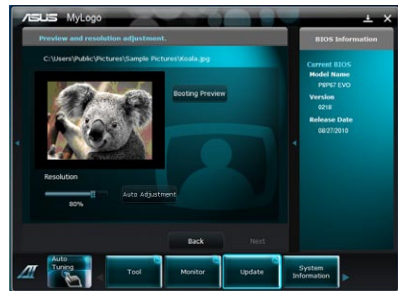
3. Click **Yes** if you want to change BIOS boot logo, which is the image appearing on the screen during the Power-On Self-Tests (POST). Click **No** to continue.

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

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



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



- e) 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**.



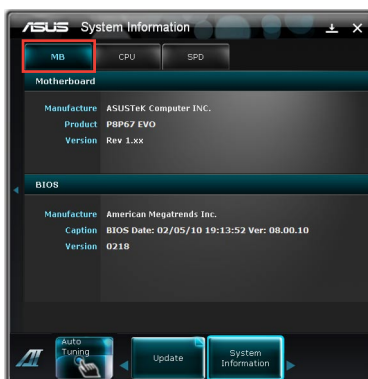
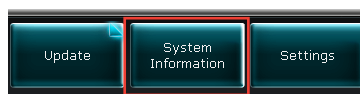
4. Move the **Resolution** slider or click **Auto Adjustment** for the system to automatically adjust the screen resolution.
5. Click the **Booting Preview** button to preview the way the picture is displayed during the POST. Left-click the mouse to return to the setting screen.
6. Click **Next** when 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.

