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AI Suite 3

AI Suite 3 is an all-in-one interface that integrates several ASUS utilities and allows you to launch and operate these utilities simultaneously.

Installing AI Suite 3

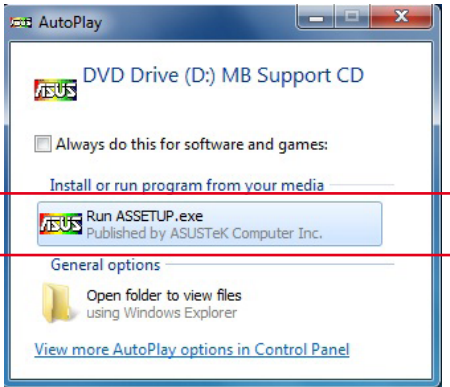


- Ensure that you have an Administrator account before installing AI Suite 3 in Windows® 7 or Windows® 8 OS.
- To install the Wi-Fi-enabled features of AI Suite 3, ensure that you install the Wi-Fi module driver from the bundled support DVD. To do this, go to **Drivers** tab > **ASUS Bluetooth 4.0 Wi-Fi Driver** and follow the succeeding onscreen instructions.

To install AI Suite 3 on your computer:

Windows® 7 OS

1. Place the Support DVD into the optical drive.
2. In the **AutoPlay** dialog box, click **Run ASSETUP.exe** then select the **Utilities** tab.




3. From the **Utilities** tab, click **AI Suite 3** then follow the succeeding onscreen instructions.

Windows® 8 OS

1. Place the Support DVD into the optical drive then follow the onscreen instructions.
2. From the **ASUS motherboard support DVD** main menu, select the **Utilities** tab and click or tap **AI Suite 3**.
3. Follow the succeeding onscreen instructions.

If the **ASUS motherboard support DVD** main menu does not appear, try the following steps:

- a. Go to the Start screen then click or tap the **Desktop** app.
- b. From the taskbar, click or tap **File Explorer**  then select your DVD drive and double-click or tap the **Setup** application.

Launching AI Suite 3

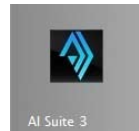
Windows® 7 OS

From the Desktop, click **Start > All Programs > ASUS > AI Suite 3 > AI Suite 3**.

You can also launch AI Suite 3 in Windows® 7 by clicking  on the Notification area.

Windows® 8 OS

To launch AI Suite 3 in Windows® 8, tap the **AI Suite 3** app on the Start screen (or if you're using a mouse, click the **AI Suite 3** app on the Start screen).



AI Suite 3 Main menu

The AI Suite 3 main menu gives you easy-access controls and insight to what's going on with your computer - allowing you to optimize performance settings while at the same time ensuring system stability.

The AI Suite main menu includes a quick-access menu bar that allows you to swiftly launch any of the integrated ASUS utilities. Click or tap  on the top-right corner of the menu to launch the menu bar.

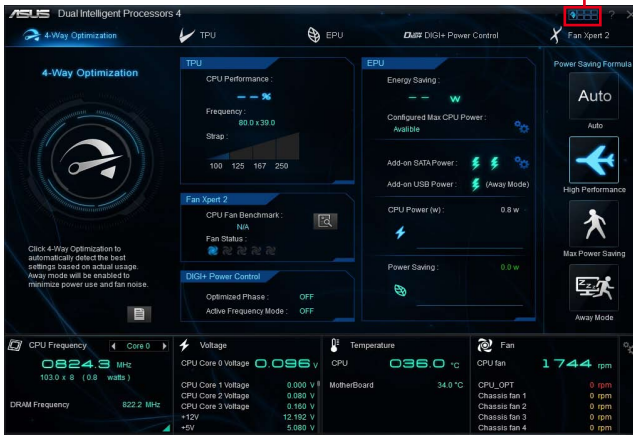
You can access the ASUS utilities from any of these two AI Suite 3 main menu bars: Dual Intelligent Processors 4 with 4-Way Optimization and Dual Intelligent Processors 2 with Performance and Power Saving Utilities.



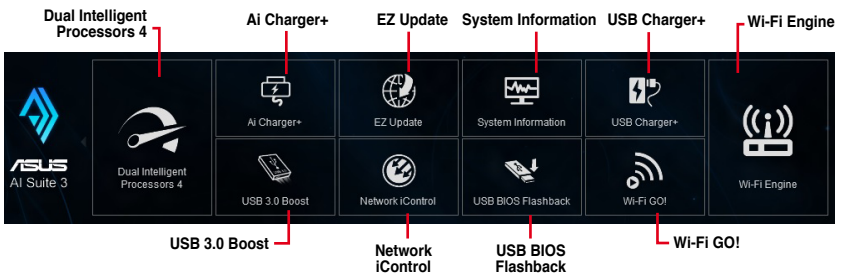
The AI Suite 3 screenshots in this section are for reference only and can vary depending on motherboard model.

Dual Intelligent Processors 4

Click or tap to launch AI Suite 3 menu bar

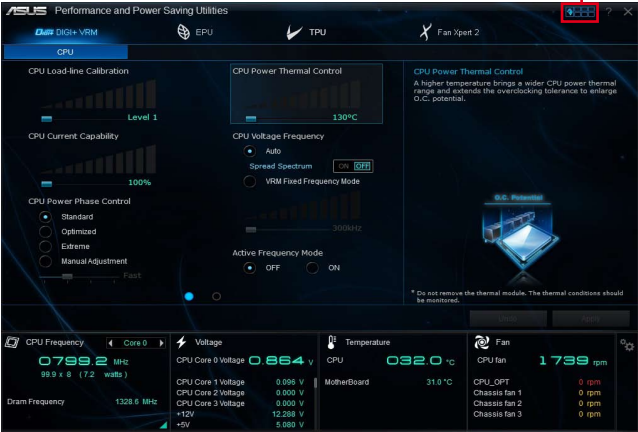


Dual Intelligent Processors 4 main menu bar

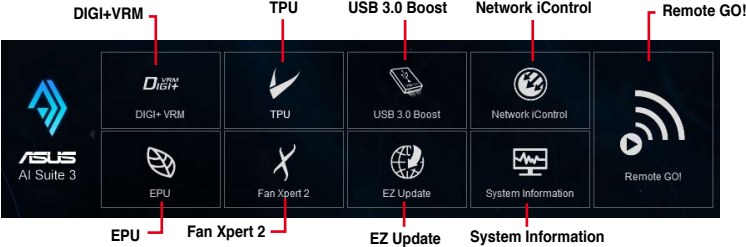


Dual Intelligent Processors 2

Click or tap to launch AI Suite 3 menu bar



Dual Intelligent Processors 2 main menu bar



- The AI Suite 3 features may vary depending on the motherboard model.
- Visit the ASUS website at www.asus.com for more information.

AI Suite 3 Utilities

Dual Intelligent Processors 4 with 4-Way Optimization

Dual Intelligent Processors 4 with 4-Way Optimization comes with these five utilities in one interface: 4-Way Optimization, TurboV Processing Unit (TPU), Energy Processing Unit (EPU), DIGI+ Power Control, and Fan Xpert 2.

4-Way Optimization

The 4-Way Optimization utility allows you to automatically tweak the TPU, EPU, DIGI + Power Control and Fan Xpert 2 to their optimal settings.



The Dual Intelligent Processors 4 is only available in selected Z87 motherboard models.

4-Way Optimization screen

The screenshot shows the 4-Way Optimization utility interface. It features several sections: TPU (CPU Performance, Frequency: 80.0 x 39.0, Strap: 100 125 167 250), Fan Xpert 2 (CPU Fan Benchmark: N/A, Fan Status: [icons]), DIGI+ Power Control (Optimized Phase: OFF, Active Frequency Mode: OFF), EPU (Energy Saving: [icon], Configured Max CPU Power: Available, Add-on SATA Power, Add-on USB Power (Away Mode), CPU Power (w): 0.0 w, Power Saving: 0.0 w), and Power Saving Formats (Auto, High Performance, Max Power Saving, Away Mode). Red callouts point to various elements: a large red circle around the 4-Way Optimization button; a red box around the 'Auto' power saving mode; a red box around the 'Configured Max CPU Power' and 'Add-on SATA Power' settings; and a red box around the '4-Way Optimization Report' button.

Click or tap to enable or disable the SATA ports' power

Click or tap to enable or disable the Configured Max CPU Power

Click or tap this 4-Way Optimization button to auto-detect and tune the best settings for your system

Click or tap to view the 4-Way Optimization report

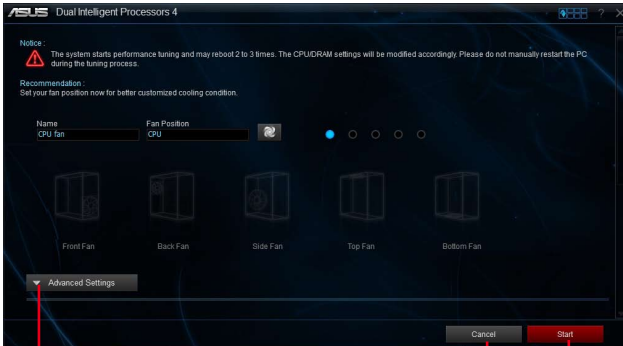
Select an advanced power saving mode



DO NOT remove your fan during the tuning process.

Using 4-Way Optimization

Click or tap the 4-Way Optimization button then click or tap **Start** to auto-detect the best settings based on actual usage.



Click or tap to view more settings

Click or tap to go back to the 4-Way Optimization main screen

Click or tap to start auto-tuning



- The system may reboot two or three times during the auto-tuning process.
- For Windows® 8 OS, click or tap **Desktop** app to monitor the auto-tuning process after every system reboot.

TurboV Processing Unit (TPU)

TPU allows you to manually adjust the CPU frequency, CPU cache, core frequencies, DRAM frequency, and related voltages for an enhanced system stability and a performance boost.



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 lead to an unstable system.



For system stability, the TPU settings are not saved in the BIOS and are not loaded during system bootup. Save your overclocking settings as a TPU profile and manually load this profile after system bootup.

Using TPU

CPU Frequency

Tick to enable Group Tuning

Click or tap < or > to adjust the Base Clock Frequency, CPU Ratio, and CPU Cache Ratio

Click or tap < or > to select the number of cores to adjust

Scroll down then adjust the CPU voltages and DRAM voltages

Click or tap to load the saved profile

Click or tap to save the adjustment into a profile

Click or tap to undo the adjustments

Click or tap to apply the adjustments



- Set the CPU Core Ratio item in BIOS to **[Auto]** before using the CPU Frequency in TPU. Refer to section **Ai Tweaker menu** in the BIOS chapter of your motherboard user manual for details.
- The CPU Frequency bars show the status of the CPU cores, which vary with your CPU model.

GPU Boost

The screenshot shows the ASUS Dual Intelligent Processors 4 software interface, specifically the GPU Boost section. The interface includes a top navigation bar with options like 4-Way Optimization, TPU, EPU, DIGI + PowerControl, and FAN Expert 2. The main area features a GPU Boost logo, a graph showing Voltage 02 vs. rpm, and a control panel with Function 001, Function 002, and Max Voltage sliders. A CPU VCCSA Voltage slider is also present. At the bottom, there are buttons for Load Profile, Save Profile, Default, Undo, and Apply. Red boxes and arrows highlight these elements, with text annotations explaining their functions.

Click or tap to load the saved profile

Click or tap to save the adjustment into a profile

Click or tap to enable the default settings

Use the ▲ to adjust the iGPU Max Voltage

Click or tap ◀ or ▶ to adjust the CPU VCCSA voltage

Click or tap to apply the adjustments

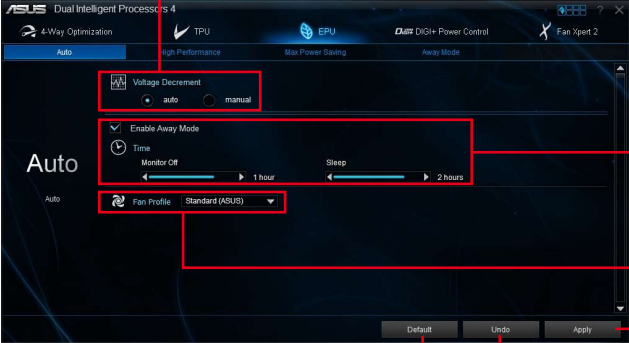
Click or tap to undo the adjustments

Energy Processing Unit (EPU)

EPU is an energy-processing utility that allows you to adjust the CPU, GPU, and Fan Control settings to their power-saving conditions.

Using EPU

Auto

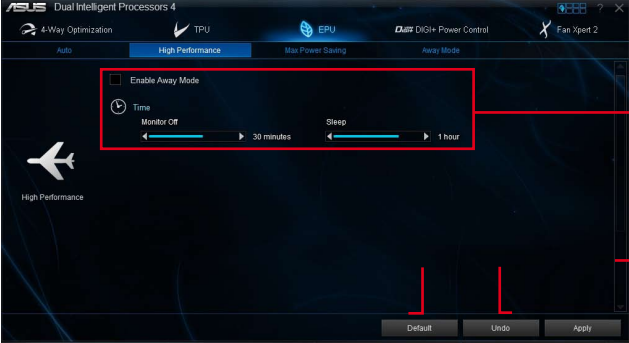


The screenshot shows the ASUS EPU interface in 'Auto' mode. The 'Voltage Decrement' section has the 'auto' radio button selected. The 'Enable Away Mode' section is checked, with 'Monitor Off' set to 1 hour and 'Sleep' set to 2 hours. The 'Fan Profile' is set to 'Standard (ASUS)'. At the bottom, there are 'Default', 'Undo', and 'Apply' buttons.

Annotations:

- Tick to select Voltage Decrement setting
- Tick to enable Away Mode and move the sliders to adjust monitor and system sleep time
- Click or tap to select a fan profile
- Click or tap to apply the adjustments
- Click or tap to apply the default settings
- Click or tap to undo the adjustments

High Performance



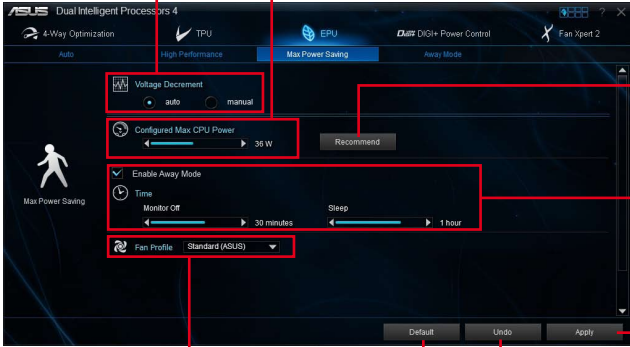
The screenshot shows the ASUS EPU interface in 'High Performance' mode. The 'Enable Away Mode' checkbox is unchecked. The 'Monitor Off' slider is set to 30 minutes and the 'Sleep' slider is set to 1 hour. At the bottom, there are 'Default', 'Undo', and 'Apply' buttons.

Annotations:

- Tick to enable Away Mode and move the sliders to adjust monitor and system sleep time
- Click or tap to apply the default settings
- Click or tap to undo the adjustments

Max Power Saving

Tick to select Voltage
Decrement setting



Move the
slider to adjust
the maximum
CPU power

Click or tap
to select a
Configured Max
CPU Power
value

Tick to enable
Away Mode
then move
the sliders to
adjust monitor
and system
sleep time

Click or tap
to apply the
adjustments

Click or tap to select a
fan profile

Click or tap to apply the
default settings

Click or tap to undo the
adjustments



- When you enable the Configured Max CPU Power to boost the energy saving condition, the CPU frequency is displayed at 800 MHz in the Windows® OS information of your computer. However, the actual CPU frequency varies depending on the wattage that you manually set. You can adjust the CPU wattage from the lowest point to your preferred value.
- Configured Max CPU Power may decrease the total power delivery to the CPU and affects the CPU performance under a heavy system. To restore your system to its default settings, reboot your computer.

Away Mode

The screenshot shows the 'Away Mode' settings in the ASUS BIOS/UEFI. The interface includes sections for 'Voltage Decrement', 'Configured Max CPU Power', 'Fan Profile', 'Mute', and 'Add-on USB Controller Power'. Red boxes highlight these settings, with red lines pointing to descriptive text labels on the left and right sides of the image.

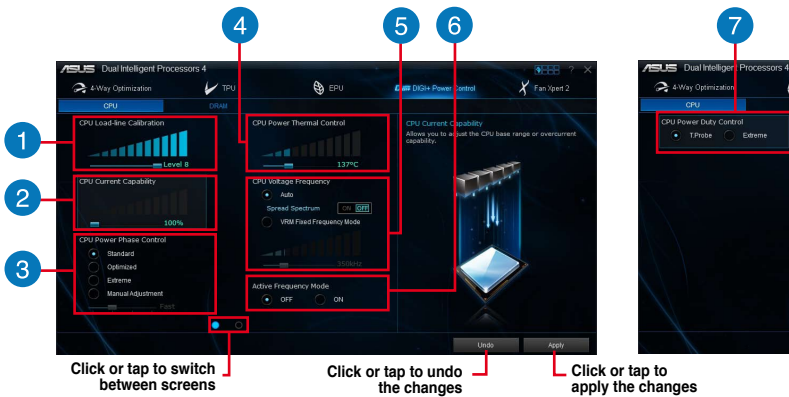
Annotations:

- Tick to select Voltage Decrement setting** (points to the 'manual' radio button)
- Move the slider to adjust the maximum CPU power** (points to the 'Configured Max CPU Power' slider)
- Click or tap to select a Configured Max CPU Power value** (points to the 'Recommend' button)
- Click or tap to select a fan profile** (points to the 'Fan Profile' dropdown menu)
- Tick to select a USB controller power setting** (points to the 'Disable' radio button)
- Click or tap to apply the adjustments** (points to the 'Apply' button)
- Click or tap to undo the adjustments** (points to the 'Undo' button)
- Click or tap to apply the default settings** (points to the 'Default' button)
- Tick to mute the system's sound** (points to the 'Mute' checkbox)

DIGI+ Power Control

DIGI+ Power Control utility allows you to adjust the CPU and DRAM power settings for optimal system efficiency, and overall system stability and performance.

Adjusting the CPU Power



1

CPU Load-line Calibration

It allows you to adjust the voltage range to control the CPU Load-line. Adjust to a high value for system performance or to a low value for power efficiency.

2

CPU Current Capability

CPU Current Capability provides a wider total power range for overclocking. A higher value brings a wider total power range and extends the overclocking frequency range simultaneously.

3

CPU Power Phase Control

Increase the phase number under a heavy system load to get more transient and better thermal performance. Reduce the phase number under a light system load to increase the VRM efficiency.

* The system automatically sets the default to [Extreme] when using the Intel® iGPU.

4

CPU Power Thermal Control

A higher temperature brings a wider CPU power thermal range and extends the overclocking tolerance to enlarge the overclocking potential.

-
- 5 **CPU Voltage Frequency**
CPU Voltage Frequency affects the VRM transient response and thermal conditions. Higher VRM frequency gets a quicker transient response.

 - 6 **Active Frequency Mode**
Active Frequency Mode allows you to enhance the power saving condition of the CPU. Tick **ON** to get a quicker transient response while saving the CPU power.

 - 7 **CPU Power Duty Control**
CPU Power Duty Control adjusts the current of every VRM phase and the thermal conditions of every phase component.
-

Adjusting the DRAM Power

Click or tap to undo the changes Click or tap to apply the changes

-
- 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 to stabilize the system or to increase the overclocking 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 the DRAM power efficiency.
-



- The actual performance boost may vary depending on your CPU specification.
 - Ensure that the cooling modules are properly installed in your motherboard to monitor the thermal conditions.
-

Fan Xpert 2

Fan Xpert 2 automatically detects and tweaks the fan speeds and provides you with optimized fan settings based on the fans' specifications and positions.

Using Fan Xpert 2

The screenshot shows the ASUS Fan Xpert 2 interface. At the top, there are tabs for 4-Way Optimization, TPU, EPU, DIGI+ Power Control, and Fan Xpert 2. The main area is divided into three sections: 'Chassis Fan 1', 'CPU Fan', and 'Chassis Fan 2'. Each section has a graph and a fan icon. Below these are four fan speed modes: Silent, Standard, Turbo, and Full Speed. At the bottom, there are buttons for 'Fan Tuning', 'Load Profile', and 'Save Profile'. Red lines and boxes connect various parts of the interface to descriptive text annotations.

Click or tap to set the fan's speed to silent mode

Select a screen to select the type of fan that you want to customize

Click or tap to increase the fan's speed for a high cooling capability

Click or tap to maximize the fan speed

Click or tap to auto-tune the fans to their best settings

Click or tap to set the balanced configuration between the fan's noise level and speed

Click or tap to load a profile

Click or tap to save the settings into a profile

Click or tap to switch between fan screens



DO NOT remove your fan during the Fan Auto Tuning process.

Customizing the fan settings

Smart Mode

Smart Mode allows you to customize the fans' rotation speeds and responses based on your system's temperature.

Click and drag to set the fan's rotation speed

Click and drag the sliders to adjust the fan's response

Click or tap to undo the changes

Click or tap to apply the changes

Click or tap to go back to the previous screen

Click or tap to switch between the CPU and chassis fan screens

Fan Profile	Fan Speed
100 %	4507 rpm
95 %	4205 rpm
90 %	3903 rpm
75 %	2445 rpm
50 %	1500 rpm
25 %	1073 rpm
0 %	1077 rpm

Minimum Speed: 4097 ± 0 (RPM)
Maximum Speed: 1577 (RPM)
Customize Range: 41% - 100%

RPM Mode

RPM Mode allows you to set the fan speed at its fixed value when the CPU temperature drops 75°C and below.

Drag the slider up or down to adjust the fan's speed

Fan Power	Fan Speed
100 %	4597 rpm
94 %	4235 rpm
88 %	3873 rpm
82 %	3511 rpm
76 %	3149 rpm
70 %	2787 rpm
64 %	2425 rpm
58 %	2063 rpm
52 %	1701 rpm
46 %	1339 rpm
40 %	977 rpm
34 %	615 rpm
28 %	253 rpm
22 %	117 rpm
16 %	153 rpm
10 %	153 rpm
4 %	153 rpm

Click or tap to go back to the previous screen

Click or tap to switch between the CPU and chassis fan screens

Click or tap to undo the changes

Click or tap to apply the changes



- When the CPU temperature reaches 75° C, the fan automatically runs at full speed to protect the CPU.
- Fan Xpert 2 may not be able to detect the fan speed if you install the fan with an external control kit for rotation speed.
- Fan Xpert 2 only supports fans with 4-pin and 3-pin connectors. If you install a 2-pin fan, it can only run at its full speed.
- If you change the CPU or chassis fans, you must repeat the Fan Auto Tuning process.

Dual Intelligent Processors 2 with Performance and Power Saving Utilities

Dual Intelligent Processors 2 with Performance and Power Saving Utilities application comes with these four utilities in one interface: DIGI+ VRM, Energy Processing Unit (EPU), TurboV Processing Unit (TPU), and Fan Xpert 2.



The Performance and Power Saving Utilities are only available in selected Z87 motherboard models.

DIGI+ VRM

DIGI+ VRM allows you to adjust the power settings of the CPU for an optimal system efficiency, and system stability and performance.

Using the DIGI+VRM



1

CPU Load-line Calibration

It allows you to adjust the voltage range to control the CPU Load-line. Adjust to a high value for system performance or to a low value for power efficiency.

2

CPU Current Capability

CPU Current Capability provides a wider total power range for overclocking. A higher value brings a wider total power range and extends the overclocking frequency range simultaneously.

3

CPU Power Phase Control

Increase the phase number under a heavy system load to get more transient and better thermal performance. Reduce the phase number under a light system load to increase VRM efficiency.

* The system automatically sets the default to [Extreme] when using the Intel® iGPU.

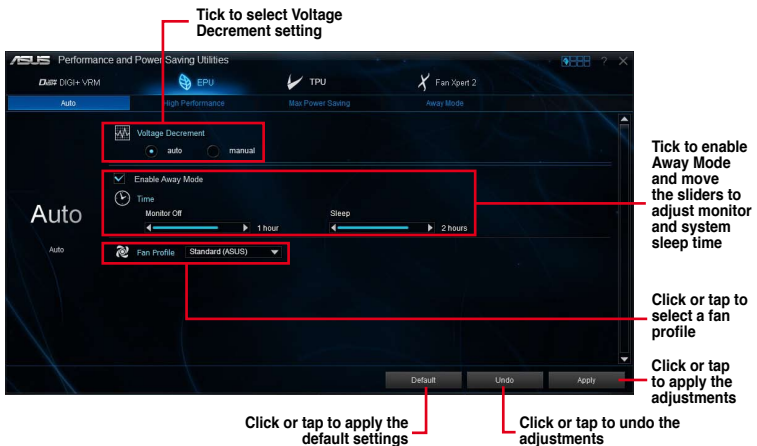
- 4 **CPU Power Thermal Control**
A higher temperature brings a wider CPU power thermal range and extends the overclocking tolerance to enlarge the overclocking potential.
- 5 **CPU Voltage Frequency**
CPU Voltage Frequency affects the VRM transient response and thermal conditions. Higher VRM frequency gets a quicker transient response.
- 6 **Active Frequency Mode**
Active Frequency Mode allows you to enhance the power saving condition of the CPU. Tick **ON** to get a quicker transient response while saving the CPU power.
- 7 **CPU Power Duty Control**
CPU Power Duty Control adjusts the current of every VRM phase and the thermal conditions of every phase component.

Energy Processing Unit (EPU)

EPU is an energy-processing utility that allows you to adjust the CPU, GPU, and Fan Control settings to their power-saving conditions.

Using EPU

Auto



High Performance

ASUS Performance and Power Saving Utilities

High Performance

Enable Away Mode

Time

Monitor Off 30 minutes Sleep 1 hour

Default Undo Apply

Tick to enable Away Mode and move the sliders to adjust monitor and system sleep time

Click or tap to apply the default settings

Click or tap to undo the adjustments

Click or tap to apply the adjustments

Max Power Saving

ASUS Performance and Power Saving Utilities

Max Power Saving

Voltage Decrement auto manual

Configured Max CPU Power 25 W

Enable Away Mode

Time

Monitor Off 30 minutes Sleep 1 hour

Fan Profile Standard (ASUS)

EPU Calibration Default Undo Apply

Tick to select Voltage Decrement setting

Move the slider to adjust the maximum CPU power

Click or tap to enable or disable the Configured Max CPU Power

Tick to enable Away Mode then move the sliders to adjust monitor and system sleep time

Click or tap to auto-tune the EPU

Click or tap to select a fan profile

Click or tap to apply the default settings

Click or tap to undo the adjustments



- When you enable the Configured Max CPU Power to boost the energy saving condition, the CPU frequency is displayed at 800 MHz in the Windows® OS information of your computer. However, the actual CPU frequency varies depending on the wattage that you manually set. You can adjust the CPU wattage from the lowest point to your preferred value.
- Configured Max CPU Power may decrease the total power delivery to the CPU and affects the CPU performance under a heavy system. To restore your system to its default settings, reboot your computer.

Away Mode

Tick to select Voltage Decrement setting

Move the slider to adjust the maximum CPU power

Click or tap to enable or disable the Configured Max CPU Power

Click or tap to select a Configured Max CPU Power value

Click or tap to select a fan profile

Tick to mute system's sound

Click or tap to auto-tune the EPU

Click or tap to apply the default settings

Click or tap to undo the adjustments

Click or tap to apply the adjustments

The screenshot displays the ASUS Performance and Power Saving Utilities interface. At the top, there are tabs for 'Auto', 'High Performance', 'Max Power Saving', and 'Away Mode'. The 'Away Mode' tab is selected. Below the tabs, there are several settings: 'Voltage Decrement' with 'auto' and 'manual' radio buttons; 'Configured Max CPU Power' with a slider set to '25 W' and a 'Recommend' button; 'Fan Profile' with a dropdown menu set to 'Silent (ASUS)'; and 'Mute' with a checkbox. At the bottom, there are buttons for 'EPU Calibration', 'Default', 'Undo', and 'Apply'. Red lines connect text labels to specific UI elements: 'Tick to select Voltage Decrement setting' points to the 'manual' radio button; 'Move the slider to adjust the maximum CPU power' points to the slider; 'Click or tap to enable or disable the Configured Max CPU Power' points to the 'Recommend' button; 'Click or tap to select a Configured Max CPU Power value' points to the '25 W' text; 'Click or tap to select a fan profile' points to the 'Fan Profile' dropdown; 'Tick to mute system's sound' points to the 'Mute' checkbox; 'Click or tap to auto-tune the EPU' points to the 'EPU Calibration' button; 'Click or tap to apply the default settings' points to the 'Default' button; and 'Click or tap to undo the adjustments' points to the 'Undo' button. 'Click or tap to apply the adjustments' points to the 'Apply' button.

TurboV Processing Unit (TPU)

ASUS TPU allows you to manually adjust the CPU frequency, CPU cache, core frequencies, DRAM frequency, and related voltages for an enhanced system stability and a performance boost. TPU also allows you to auto-tune the overclocking settings based on the CPU installed in your motherboard.



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 lead to an unstable system.



For system stability, the TPU settings are not saved in the BIOS and are not loaded during system bootup. Save your overclocking settings as a TPU profile and manually load this profile after system bootup.

Using TPU

CPU Frequency

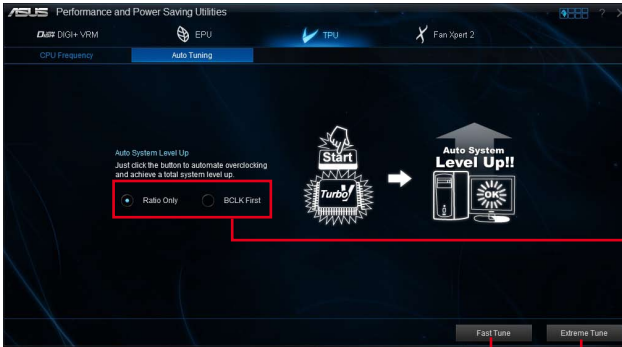
The screenshot shows the ASUS Performance and Power Saving Utilities interface, specifically the TPU (TurboV Processing Unit) section for CPU Frequency. The interface is dark-themed and contains several adjustable settings. Red boxes and arrows highlight specific areas with instructions:

- Tick to enable Group Tuning**: A red box highlights the "Group Tuning" checkbox, which is currently checked.
- Click or tap < or > to adjust the Base Clock Frequency, CPU Ratio, and CPU Cache Ratio**: A red box highlights the "Base Clock Frequency" (30.0 MHz), "Ratio" (3120 MHz), and "CPU Cache Ratio" (37 X) settings, each with left and right arrow controls.
- Click or tap < or > to select the number of cores to adjust**: A red box highlights the "All Cores" and "Group Tuning" options, with arrows indicating the selection of the number of cores.
- Scroll down then adjust the CPU and DRAM voltages**: A red box highlights the "CPU Core Voltage" and "CPU Cache Voltage" sections, which include "Offset Mode" (set to "Manual") and "Offset Voltage" (set to 0.025 V) controls.
- Click or tap to load the saved profile**: A red box highlights the "Load Profile" button at the bottom left.
- Click or tap to save the adjustment into a profile**: A red box highlights the "Save Profile" button at the bottom center.
- Click or tap to undo the adjustments**: A red box highlights the "Undo" button at the bottom right.
- Click or tap to apply the adjustments**: A red box highlights the "Apply" button at the bottom right.



- Set the CPU Core Ratio item in BIOS to **[Auto]** before using the CPU Frequency in TPU. Refer to section **Ai Tweaker menu** in the BIOS chapter of your motherboard user manual for details.
- The CPU Frequency bars show the status of the CPU cores, which vary with your CPU model.

Auto Tuning



Tick to auto-tune an overclocking setting

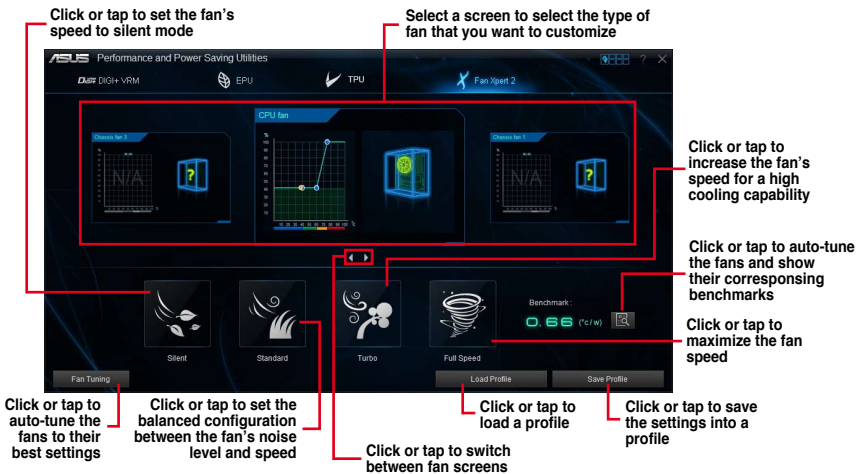
Click or tap to fast-tune the selected setting

Click or tap to auto-tune the EPU, TPU and Fan settings

Fan Xpert 2

Fan Xpert 2 automatically detects and tweaks the fan speeds and provides you with optimized fan settings based on the fans' specifications and positions.

Using Fan Xpert 2



Customizing the fan settings

Smart Mode

Smart Mode allows you to customize the fans' rotation speeds and responses based on your system's temperature.

Click and drag to set the fan's rotation speed

Fan Speed	Fan Speed
100 %	4500 rpm
95 %	4115 rpm
90 %	3730 rpm
85 %	3345 rpm
80 %	2960 rpm
75 %	2575 rpm
70 %	2190 rpm
65 %	1805 rpm
60 %	1420 rpm
55 %	1035 rpm
50 %	650 rpm
45 %	265 rpm
40 %	100 rpm
35 %	0 rpm
30 %	0 rpm
25 %	0 rpm
20 %	0 rpm
15 %	0 rpm
10 %	0 rpm
5 %	0 rpm
0 %	0 rpm

Click and drag the sliders to adjust the fan's response

Click or tap to go back to the previous screen

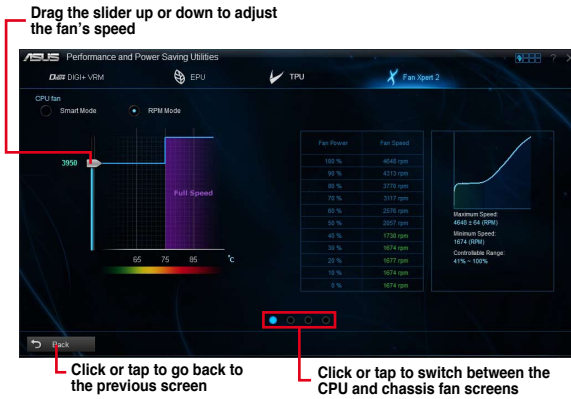
Click or tap to switch between the CPU and chassis fan screens

Click or tap to undo the changes

Click or tap to apply the changes

RPM Mode

RPM Mode allows you to set the fan speed at its fixed value when the CPU temperature drops 75°C and below.



- When the CPU temperature reaches 75° C, the fan automatically runs at full speed to protect the CPU.
- Fan Xpert 2 may not be able to detect the fan speed if you install the fan with an external control kit for rotation speed.
- Fan Xpert 2 only supports fans with 4-pin and 3-pin connectors. If you install a 2-pin fan, it can only run at its full speed.
- If you change the CPU or chassis fans, you must repeat the Fan Auto Tuning process.

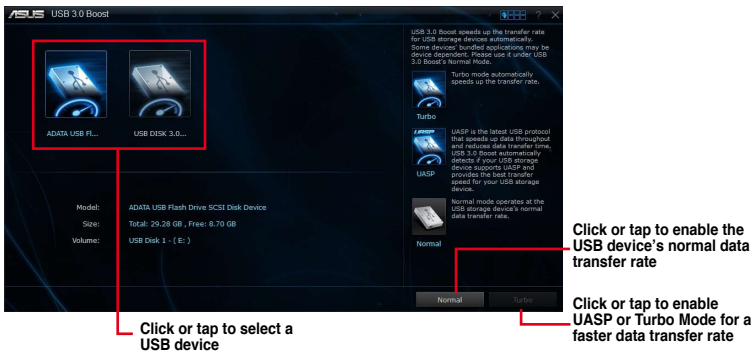
USB 3.0 Boost

USB 3.0 Boost technology supports UASP (USB Attached SCSI Protocol) that automatically speeds up the transfer rates of your USB storage devices.

Launching USB 3.0 Boost

To launch USB 3.0 Boost, click or tap  on the top-right corner of the AI Suite 3 main menu, then select **USB 3.0 Boost**.

Using the USB 3.0 Boost



Ensure to connect your USB 3.0 device to the USB 3.0 ports that support USB 3.0 Boost. Refer to section **Rear I/O connection** of your user manual for more details.




- USB 3.0 Boost automatically detects the USB 3.0 devices that support UASP. For a list of UASP-supported USB 3.0 devices, visit the ASUS website at www.asus.com.
- The data transfer speed varies with USB devices. For a higher data transfer performance, use a USB 3.0 device.

USB BIOS Flashback

USB BIOS Flashback allows you to check and save the latest BIOS version to a USB storage device. Use this utility to quickly check for the latest available BIOS and set the BIOS download schedule.

Launching USB BIOS Flashback


To launch USB BIOS Flashback, click or tap  on the top-right corner of the AI Suite 3 main menu, then select **USB BIOS Flashback**.



USB BIOS Flashback is available only in selected motherboard models.

Using USB BIOS Flashback

Set a schedule for the BIOS Update download



Click or tap to check for a new BIOS update available for download

Click or tap to cancel the download schedule setting

Click or tap to apply the download schedule setting

Scheduling the BIOS download

1. In the Download Setting field, tick **Schedule (days)** then select the number of days for the BIOS download schedule.
2. Click or tap **Apply** to save the BIOS download schedule. Click or tap **Cancel** to cancel the download schedule.

Downloading the latest BIOS

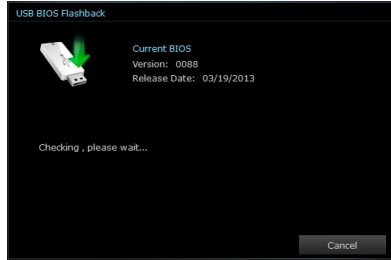



Before you start downloading, ensure that you have installed the USB storage device to your computer's USB port that supports USB BIOS Flashback. Refer to section **Rear I/O connection** of your user manual for more details.

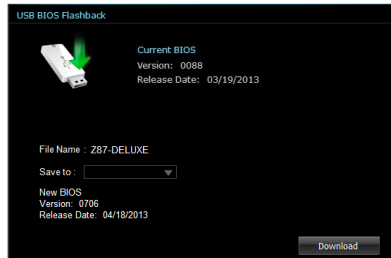
To download the updated BIOS:

1. From the USB BIOS Flashback screen, click or tap **Check for New BIOS Update**.

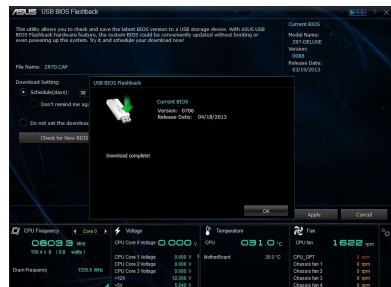
Wait for the system to check the latest BIOS version.



2. After the utility detects a new BIOS, click or tap  from the **Save to:** field, select the USB flash drive, then click or tap **Download**.



3. After the download is complete, click or tap **OK**.



USB Charger+

USB Charger+ allows you to quick-charge your portable USB devices even if your computer is off, in sleep mode or hibernate mode.



Before using USB Charger+, ensure to disable the ErP Ready item in the BIOS. To do this, go to **Advanced > APM > ErP Ready** in the Advanced mode then set this item to [Disabled].

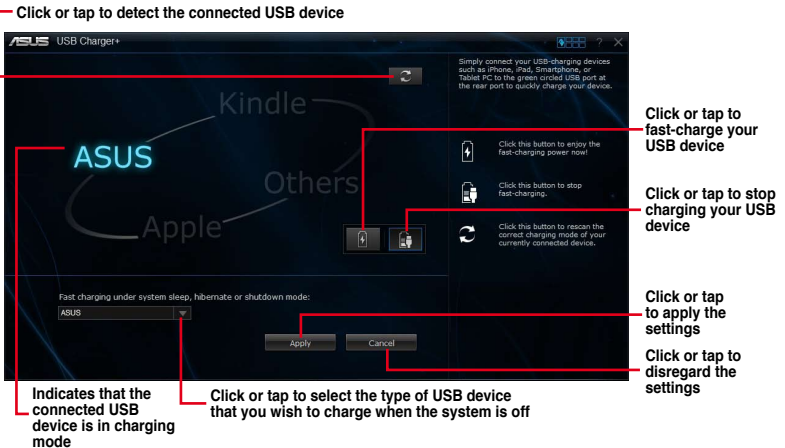


USB Charger+ is available only in selected motherboard models.

Launching USB Charger+

To launch USB Charger+, click or tap  on the top-right corner of the AI Suite 3 main menu, then select **USB Charger+**.

Using USB Charger+



Click or tap to detect the connected USB device

Click or tap to fast-charge your USB device

Click or tap to stop charging your USB device

Click or tap to rescann the correct charging mode of your currently connected device.

Click or tap to apply the settings

Click or tap to disregard the settings

Indicates that the connected USB device is in charging mode

Click or tap to select the type of USB device that you wish to charge when the system is off




Ensure to connect your USB device into the USB port that supports this utility. Refer to section **Rear I/O connection** of your user manual for more details.



- USB Charger+ does not support USB hubs, USB extension cables, and generic USB cables.
- USB Charger+ may not recognize some ASUS devices due to varying design.

Wi-Fi Engine

Wi-Fi Engine allows you to connect to a wireless network and set up your computer as an access point for Internet connection sharing among Wi-Fi enabled devices.

To use Wi-Fi Engine, click or tap  on the right edge of the AI Suite 3 main menu, then select **Wi-Fi Engine**.



Wi-Fi Engine is available only in selected motherboard models.

Using Wi-Fi Engine



Click or tap to set up your computer as a wireless access point

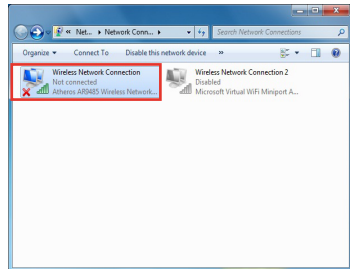
Click or tap to connect to a wireless access point

Using the Client Mode

The Client mode allows you to connect your system to a wireless network.

To use the client mode:

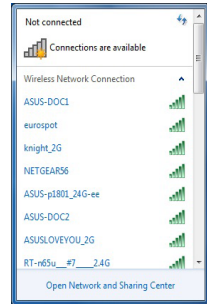
1. Click or tap **Client Mode** to launch Network Connections.
2. From the Network Connections window, select a network adapter.



3. From the list of available networks, select a network that you want to connect to.



Some networks may require you to key in a password.



Using the AP Mode

The AP mode allows you to set your system as an access point for other wireless-enabled devices.

To use AP mode, click or tap **AP Mode** on the Wi-Fi Engine menu.

Key in a network name

Key in your password

Key in your password for confirmation

Click or tap to disable AP mode

Click or tap to enable AP mode

Click or tap to go back to previous screen

Click or tap to select a network

Wi-Fi GO! and Remote GO!

Wi-Fi GO! and Remote GO! are ASUS-exclusive Wi-Fi utilities that allow you to wirelessly stream your media files to DLNA devices, control your computer using your smart device, transfer files to your smart device, and provides access to your files stored in your cloud storage.

Features	Utilities	
	Wi-Fi GO!	Remote GO!
Cloud GO!	✓	✓
Remote Desktop	✓	✓
DLNA Media Hub	✓	✓
File Transfer	✓	✓
Smart Sensor Control	✓	-
Remote Keyboard & Mouse	✓	-
Capture & Send	✓	-




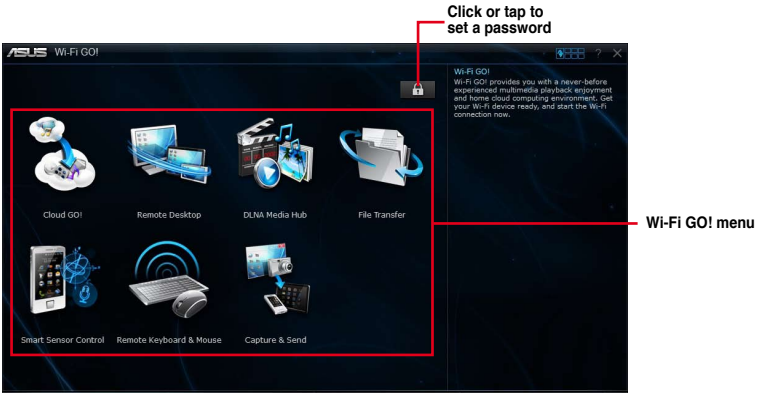
Ensure that all Wi-Fi-enabled devices are in the same Wi-Fi network.



- The user interface of your smart device may vary with the operating system and the screen resolution.
 - For details on the Wi-Fi GO! and Remote GO! system requirements, refer to section **Utilities' system requirements**.
 - Wi-Fi GO! or Remote GO! is available in selected models only.
-

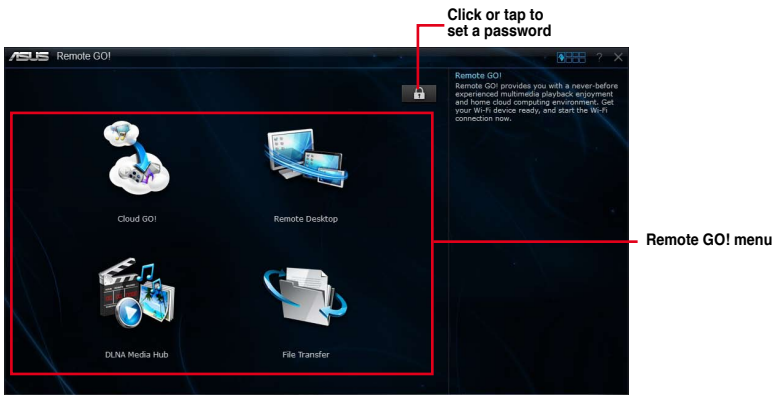
Launching Wi-Fi GO!


To launch Wi-Fi GO!, click or tap  on the top-right corner of the AI Suite 3 main menu, then select **Wi-Fi GO!**



Launching Remote GO!

To launch Remote GO!, click or tap  on the top-right corner of the AI Suite 3 main menu, then select **Remote GO!**



- To access the Wi-Fi GO! or Remote GO! features in your smart device, refer to section **Wi-Fi GO! & NFC Remote** of this user manual for more details.
- To protect your Wi-Fi utility from other smart devices, click or tap  to set your password.
- Ensure that the ASUS AI Suite 3 utility is active when using Wi-Fi GO! or Remote GO!.

Wi-Fi GO! & NFC Remote

Wi-Fi GO! & NFC Remote allows you to remotely control your computer using your smart device.



For details on the Wi-Fi GO! & NFC Remote system requirements and supported screen resolutions, refer to section **Utilities' system requirements**.

Using Wi-Fi GO! & NFC Remote

To use the Wi-Fi GO! & NFC Remote:

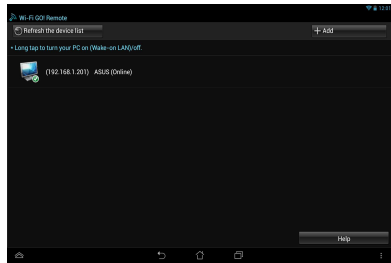
1. Connect your smart device to the same Wi-Fi network as your computer.



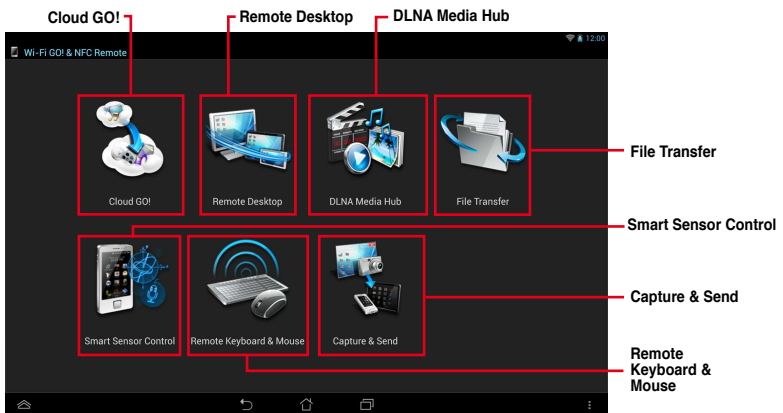
For details in connecting your smart device to a Wi-Fi network, refer to the user manual of your smart device.

2. Tap  then tap **Enter**.
3. Tap the computer that you want to connect with your smart device.

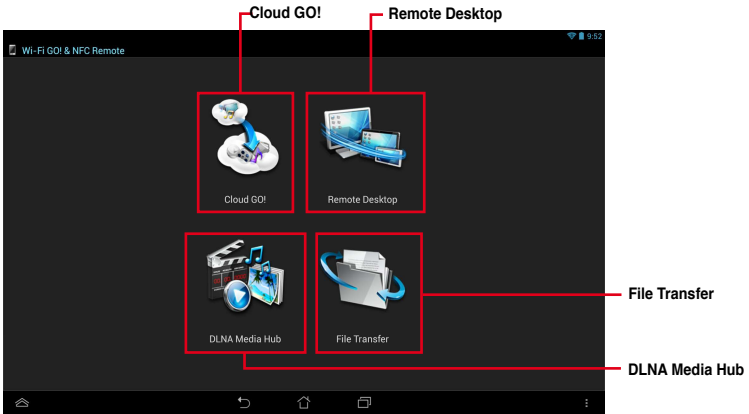
When done, the Wi-Fi GO! & NFC Remote interface appears on your smart device.



Wi-Fi GO! & NFC Remote interface of Wi-Fi GO! utility



Wi-Fi GO! & NFC Remote interface of Remote GO! utility



The screenshots are for reference only and vary with the type of smart device.

Cloud GO!

Cloud GO! allows you to control and sync your files across multiple cloud services such as ASUS WebStorage, GoogleDrive™, and DropBox®.



Ensure to set the correct system date and time of your computer and smart device when using Cloud GO!

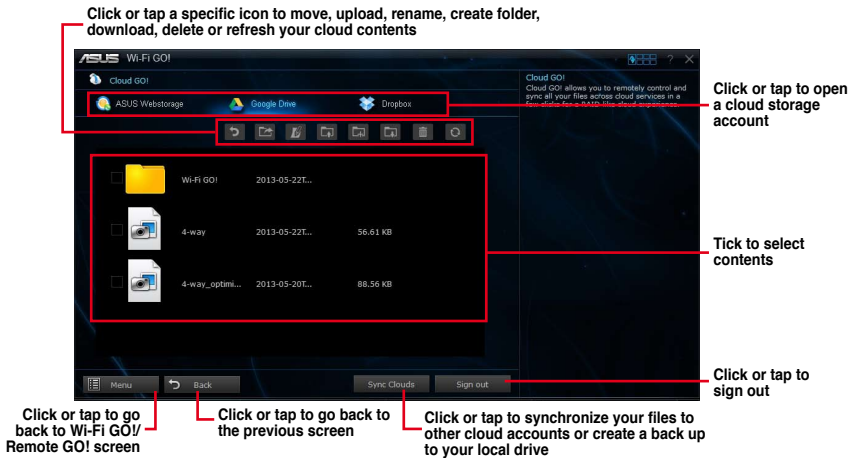
Using Cloud GO! in your computer

To use Cloud GO! in your computer:

1. Click or tap **Cloud GO!** > **Enter**.
2. Log in to your cloud accounts, then click or tap **Sign In**.



- To log in to your ASUS Webstorage account, key in your user name and password.
- To log in to your Google Drive™ or Dropbox® accounts, click or tap **Sign in**. Cloud GO! directs you to the Google Drive or Dropbox website to log in to your account.

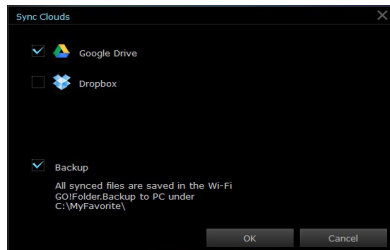


Synchronizing cloud contents

To synchronize contents:

1. Tick the contents that you want to synchronize, then click or tap **Sync Clouds**.
2. Tick the cloud storage account then click or tap **OK**.

- Tick **Backup** if you want to save a backup in your computer.
- All synced files are stored in the Wi-Fi GO! folder.

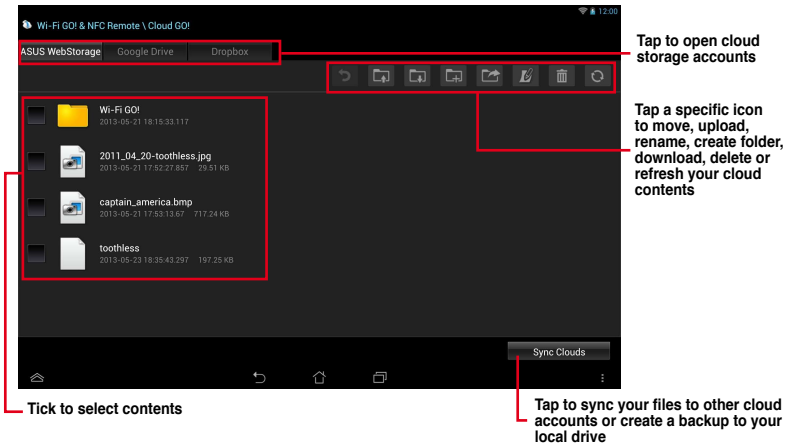


Using Cloud GO! in your smart device

To use Cloud GO! in your smart device, tap **Cloud GO! > Enter**.



You must log in to your computer first and tick **Remember me** to authorize access in your smart device.



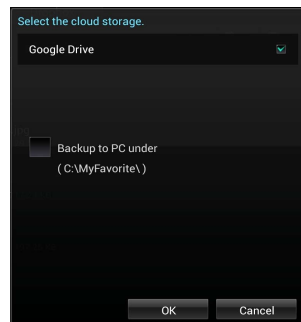
Synchronizing cloud contents

To synchronize contents:

1. Tick the contents that you want to synchronize, then tap **Sync Clouds**.
2. Tick the cloud storage account then tap **OK**.



- Tick **Backup to PC under (C:\MyFavorite)** if you want to save a backup in your computer.
- Open the **Wi-Fi GO!** folder to view all synced files.



Remote Desktop

Remote Desktop allows you to remotely control your desktop in real-time using your smart device.

Using Remote Desktop

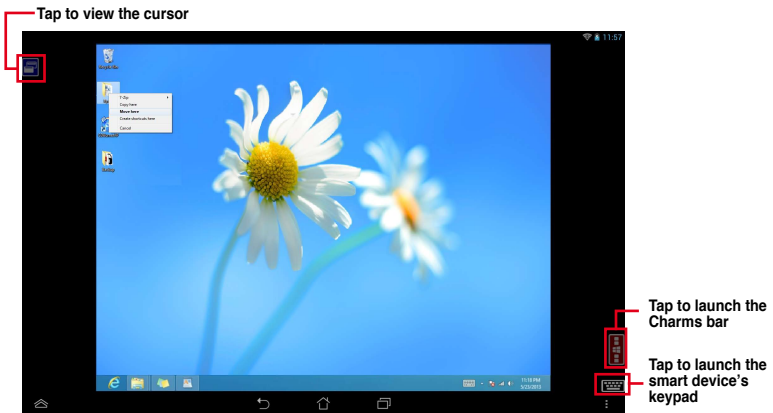
To use Remote Desktop:

1. On your smart device, tap **Remote Desktop > Enter**.
2. Wait for the smart device to connect with your computer.

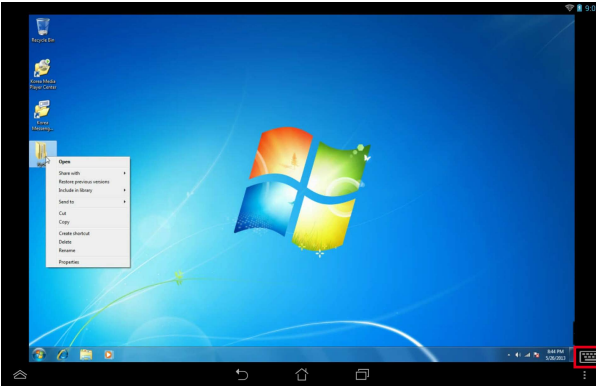


To operate Remote Desktop in Windows® 7, you can select **Extended Mode** or **Main Screen Mode** in your smart device.

Remote Desktop interface for Windows® 8



Remote Desktop interface for Windows® 7



Tap to launch the smart device's keypad

DLNA Media Hub

DLNA Media Hub allows you to stream media files to a DLNA-supported device and remotely control playback using your smart device.



- When using your computer as a receiver, ensure to launch the Windows Media Player, then enable the remote control settings of the Windows Media Player. To do this, click or tap **Stream** then tick the items **Allow remote control of my Player...** and **Automatically allow devices to play my media....**
- When using your DLNA display as a receiver (such as DLNA TV), ensure to enable the DLNA setting.

Using DLNA Media Hub in your computer

To use DLNA Media Hub in your computer, click or tap **DLNA Media Hub > Enter**.

Click or tap to refresh media files

Tick to select source location

Click or tap to select media type

Click or tap to select a receiver

Click or tap to add or delete files

Click or tap a media file to play

Click or tap to go back to Wi-Fi GO! Remote GO! screen


Click or tap to go back to the previous screen

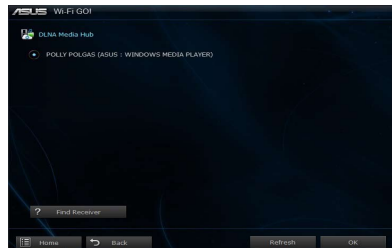
Displays the target receiver and media file in play

The screenshot shows the DLNA Media Hub interface with a list of music files and a 'Connect' button. Red lines and boxes highlight various UI elements, with callouts explaining their functions. The interface includes a top navigation bar with 'Music', 'Video', and 'Photo' tabs, and a bottom navigation bar with 'Home' and 'Back' buttons. A list of music files is displayed, including 'AC_DC - Guns for Hire', 'AC_DC - Have a drink on me', 'AC_DC - If You Want Blood (Yougussive Got It)', 'AC_DC - Rock apes/Napoo: Roll Damnation', 'AC_DC - Shoot To Thrill', 'AC_DC - The Razors Edge', 'AC_DC - Let There Be Rock', and 'Black Sabbath - Iron Man'. A 'Connect' button is visible on the right side of the screen.

Selecting a receiver


To select a receiver:

1. Click or tap 
2. Tick to select a receiver, then click or tap **OK**.



Adding media files


To add media files:

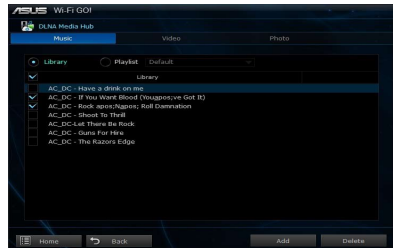
1. From the **Music**, **Video**, or **Photo** screen, click or tap .
2. Click or tap **Add** then search the files that you want to add.
3. Click or tap **OK**.



Deleting media files

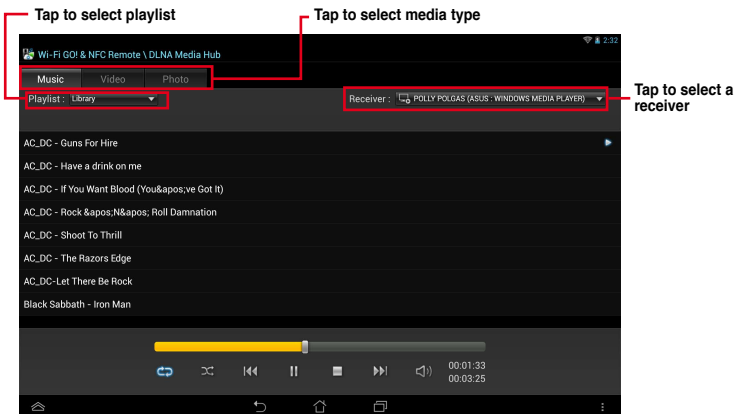
To delete media files:

1. From the **Music**, **Video**, or **Photo** screen, click or tap .
2. Tick the files that you want to delete, then click or tap **Delete**.
3. Click or tap **OK**.



Using DLNA Media Hub in your smart device

To use DLNA Media Hub in your smart device, tap **DLNA Media Hub** > **Enter**.



File Transfer

File Transfer allows you to transfer files between your computer and your smart device.



- iOS smart devices can only send files.
- Android smart devices can send and receive files.



To send files between your computer and smart device, ensure to enable the File Transfer function in your smart device.

Transferring files from computer to smart device

To transfer files from computer to smart device:

1. Click or tap **File Transfer > Enter**.
2. Click or tap **Setting** to select the destination for your transferred files.



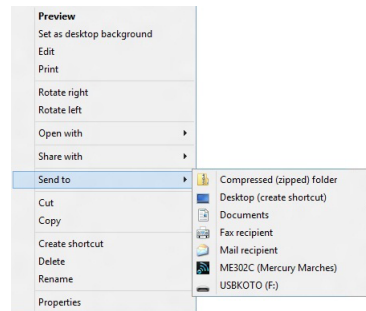
Click or tap browse to select the destination

Click or tap to go back to Wi-Fi GO! Remote GO! screen

Click or tap to go back to the previous screen

Click or tap to apply the changes

3. Right-click or long tap the file then select **Send to > [Device Name]**.
4. After the file transfer is complete, click or tap **OK**.

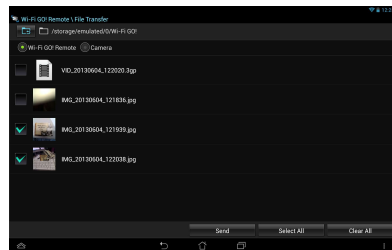


- If you are using an iOS smart device, you can only receive files in PNG, BMP, JPG, GIF, and TIFF formats.
- To receive files on your iOS device, go to **Settings > Privacy > Photos** then turn on the **Wi-Fi GO!** & **NFC Remote**.

Transferring files from smart device to computer

To transfer files from smart device to computer:

1. Tap **File Transfer > Enter**.
2. Tick the files that you want to send to your computer, then tap **Send**.



Smart Sensor Control

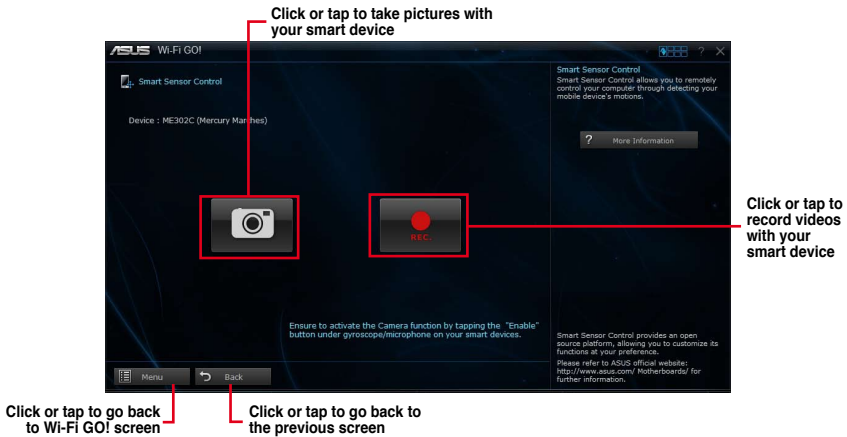
Smart Sensor Control allows you to remotely control your desktop by using your smart device's built-in sensors.



- The functions of Smart Sensor Control varies with your computer's operating system.
- For Windows® 7 OS, ensure to enable the Smart Sensor Control feature in your smart device. To do this, tap **Smart Sensor Control > Enable**.

Using Smart Sensor Control in Windows® 8

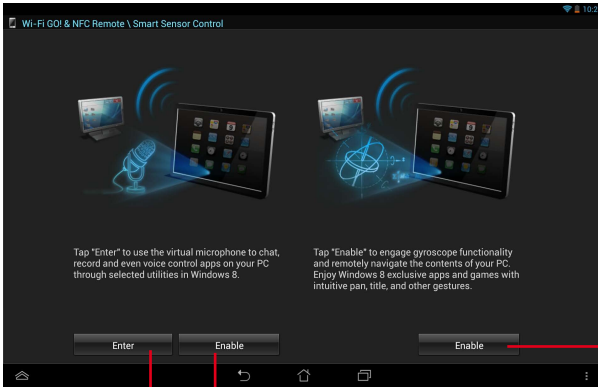
In your computer, click or tap **Smart Sensor Control > Camera**.



- Your smart device must have a camera to support this feature.
- Ensure to enable the gyroscope or microphone feature in your smart device to enable the camera and video recorder features in your computer. To do this, tap **Smart Sensor Control** then tap **Enable** on either the gyroscope or microphone function.
- This feature is also supported in Windows® 7.

The Smart Sensor Control in Windows® 8 environment features the microphone function for voice chat and recording. It also has the gyroscope function that allows you to use your smart device as a remote control for gyroscope-enabled apps.

In your smart device, tap **Smart Sensor Control > Enable** on the virtual microphone or gyroscope functions.







Tap to select voice quality

Tap to enable virtual microphone function

Tap to enable the gyroscope function

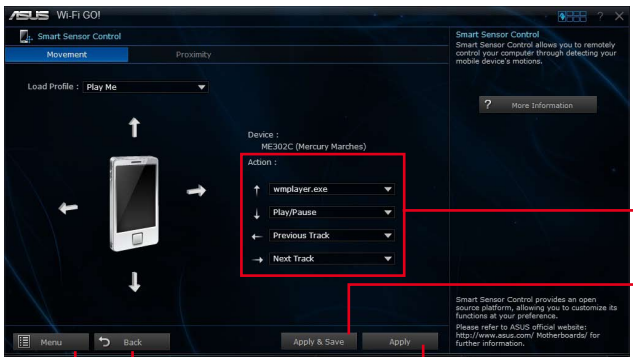
Using Smart Sensor Control in Windows® 7

To use Smart Sensor Control:

1. Click or tap **Smart Sensor Control > Setting**.
2. In the **Movement** tab, select an action from , , , and  dropdown fields.
3. To save the actions as a profile, click or tap **Apply & Save**. To apply the actions without saving as a profile, click or tap **Apply**.



You can also set the smart device's motion sensor sensitivity for a quicker response in your computer. To do this, tap **Smart Sensor Control > Setting** and set a sensitivity option.



Select actions for each movement gesture
Click or tap to apply and save the settings as a profile

Click or tap to go back to Wi-Fi GO! screen

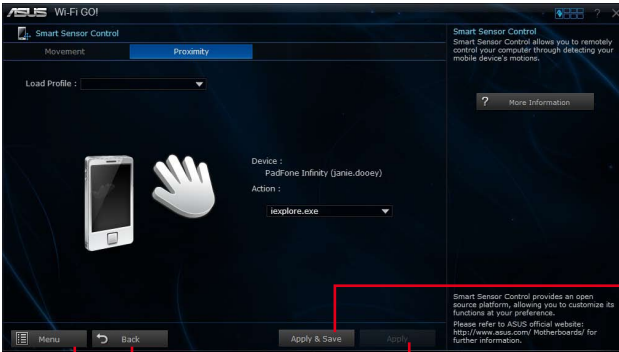
Click or tap to go back to the previous screen

Click or tap to apply the settings

4. In the **Proximity** tab, select an action from the **Action:** field.
5. To save the action as a profile, click or tap **Apply & Save**. To apply the action without saving as a profile, click or tap **Apply**.



Your smart device must have a proximity sensor function to support this feature.



Click or tap to apply and save the settings as a profile

Click or tap to go back to Wi-Fi GO! screen

Click or tap to go back to the previous screen

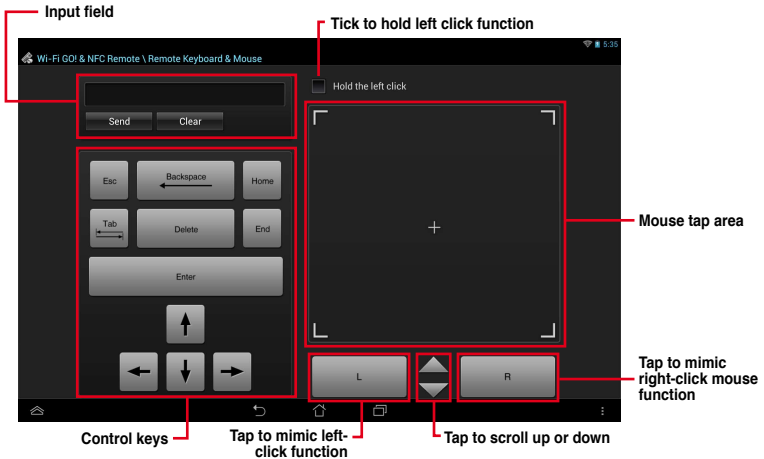
Click or tap to apply the settings

Remote Keyboard & Mouse

Remote Keyboard & Mouse allows you to use your smart device's touch panel as a remote keyboard and mouse for your computer.

Using Remote Keyboard & Mouse

To use Keyboard & Mouse, tap **Keyboard & Mouse** in your smart device then tap **Enter**.



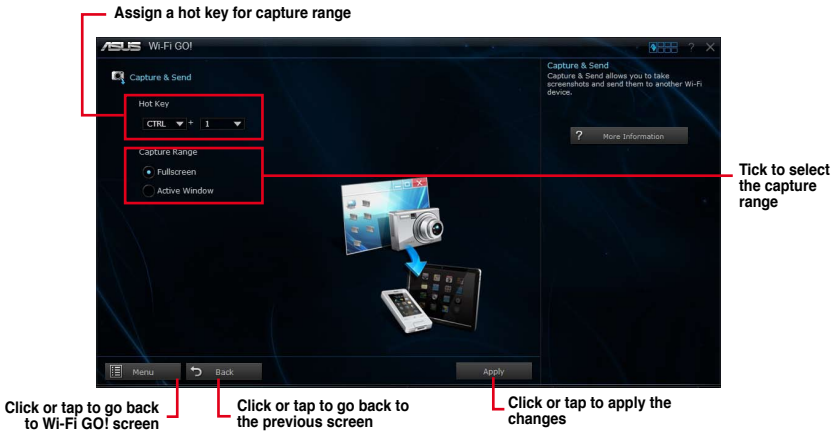
Capture & Send

Capture & Send allows you to take screenshots on your computer and send them to your smart device.

Using Capture & Send

To use Capture & Send:

1. On your computer, click or tap **Capture & Send > Setting**.
2. Assign a hot key and the capture range, then click or tap **Apply**.

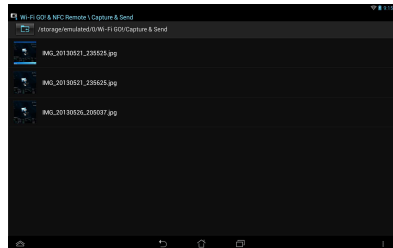


3. Capture the screenshot using the configured hot key, then tap **OK**.



Ensure to enable the Capture & Send feature in your smart device. To do this, tap **Capture & Send** then tap **Enable**.


4. In your smart device, tap **Capture & Send** then tap **Enter**.
5. Tap the file then select an app that you want to open the file with.



Ai Charger+

Ai Charger+ allows you to fast-charge your portable BC 1.1* mobile devices on your computer's USB port three times faster than the standard USB devices**.

Launching Ai Charger+

To launch Ai Charger+, click or tap  on the top-right corner of the AI Suite 3 main menu, then select **Ai Charger+**.



Ai Charger+ is available only in selected motherboard models.

Ai Charger+ screen



Tick to enable or disable Ai Charger+

Click or tap to apply the selection



- * Check the manufacturer if your USB device is a Battery Charging Specification 1.1 (BC 1.1) compliant or compatible device.
- ** Actual charging speeds may vary depending on the charging rate and specifications of your USB device.
- To ensure normal charging function, disconnect and reconnect your USB device every time you enable or disable Ai Charger+.
- Ai Charger+ does not support USB hubs, USB extension cables, and generic USB cables.

Network iControl

Network iControl is a one-stop setup network control center that allows you to manage your network bandwidth and set the bandwidth priority for your running programs.

Launching Network iControl

To launch Network iControl, click or tap  on the top-right corner of the AI Suite 3 main menu, then select **Network iControl**.

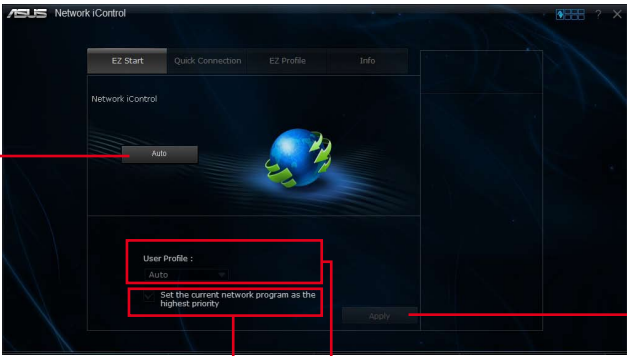


- Ensure to install the LAN drivers before using this utility.
- Network iControl only supports the onboard LAN.
- The **Quick Connection**, **EZ Profile**, and **Info** tabs are disabled when the Network iControl is off.

Using Network iControl

EZ Start screen

Click or tap to enable Network iControl



Tick to set the current network program as the highest priority

Click or tap to select a profile

Click or tap to apply the changes

Quick Connection screen

Click or tap to turn No Delay TCP on or off



EZ Profile screen

Click or tap to select a network profile

Click or tap to save the profile settings or rename the profile



Click or tap to set the program as High, Normal, or Low Priority

Tick to assign a schedule of your network programs to avoid network congestions


Select a program from this list then click or tap to add to your network profile

EZ Update

EZ Update is a utility that allows you to automatically update your motherboard's software, drivers and BIOS easily.

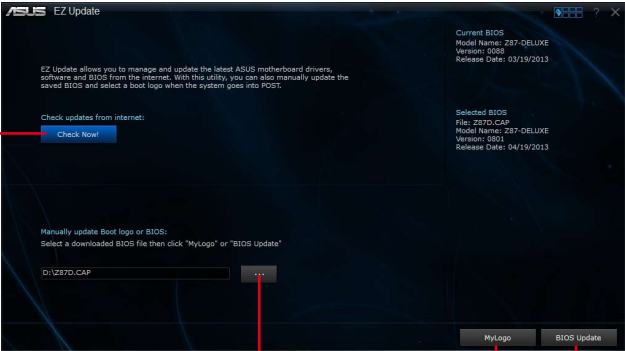
With this utility, you can also manually update the BIOS and select the boot logo that displays during POST.

Launching EZ Update

To launch EZ Update, click or tap  on the top-right corner of the AI Suite 3 main menu, then select **EZ Update**.

Using EZ Update

Click or tap to automatically update your motherboard driver, software and firmware



Click or tap to search and select the BIOS file

Click or tap to select a boot logo

Click or tap to update the BIOS

ASUS EZ Update

EZ Update allows you to manage and update the latest ASUS motherboard drivers, software and BIOS from the internet. With this utility, you can also manually update the saved BIOS and select a boot logo when the system goes into POST.

Check updates from internet:

Check Now!

Manually update Boot logo or BIOS:
Select a downloaded BIOS file then click "MyLogo" or "BIOS Update"

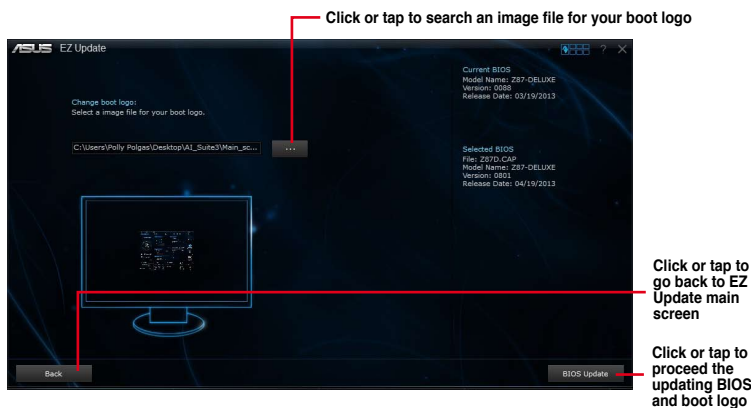
D:\Z87D_CAP

MyLogo BIOS Update

Current BIOS
Model Name: Z87-DELLUXE
Version: 0301
Release Date: 03/19/2013

Selected BIOS
File: Z87D_CAP
Model Name: Z87-DELLUXE
Version: 0301
Release Date: 04/19/2013

Manually update the BIOS and selecting a boot logo



After you click or tap **BIOS Update** button, click or tap **Flash** to update the BIOS and upload the boot logo in your system.

System Information

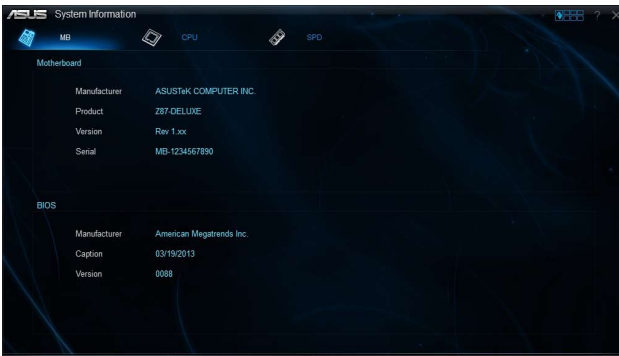
This utility allows you get the detailed information of the motherboard, CPU, and memory settings.

Launching the System Information

To launch System Information, click or tap  on the top-right corner of the AI Suite 3 main menu, then select **System Information**.

Viewing the motherboard information

Click or tap the **MB** tab to view the motherboard's information.



Viewing the CPU information

Click or tap the **CPU** tab to view the processor's information.



Viewing the SPD information

Click or tap the **SPD** tab to view the memory's information.



System requirements

Wi-Fi GO! and Remote GO!

System requirements	PC	Smart device
OS	Windows® 7/Windows® 8	Android 2.3 or higher versions iOS5 or later versions
Utilities	ASUS AI Suite 3	ASUS Wi-Fi GO! & NFC Remote



If you're using an Android smart device, download the ASUS Wi-Fi GO! & NFC Remote from Google Play. If you're using an iOS smart device, download the ASUS Wi-Fi GO! & NFC Remote from Apple Store.

Wi-Fi GO! & NFC Remote app for smart device

Smart device supported screen resolutions

Wi-Fi GO! & NFC Remote supports the following screen resolutions of smart devices:

Screen type	Low density (120 ldpi)	Medium density (160 mdpi)	High density (240 hdpi)	Extra high density (320 xhdpi)
Screen Resolution	1024 x 600	WXGA (1280 x 800)	1536 x 1152	2048 x 1536
		1024 x 768	1920 x 1152	2560 x 1536
		1280 x 768	1920 x 1200	2560 x 1600

