

PREDATOR ORION
X 650 / X 950
USER'S MANUAL



Important

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Register your Predator product

If your new device runs on Windows OS, you may have had your product registered automatically while you start up your device with Windows OS.

Log in at <http://www.acer.com/myproducts> with the email address you registered for Windows OS to review your product record. (Reset your password if you do not know it.)

If the record is not found, please follow the steps below to register.

1. Ensure you are connected to the Internet.
2. Go to www.acer.com/register-product.
3. Sign in or sign up for an Acer ID.
4. Enter S/N or SNID of your device to register it.

Model number: _____

Serial number: _____

Date of purchase: _____

Place of purchase: _____



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Upgrading your Computer

In this section, you will find:

- Instructions on how to replace a hardware component

UPGRADING YOUR COMPUTER

Installation precautions

Before you install any computer component, we recommend that you read the following sections. These sections contain important ESD precautions along with pre-installation and post-installation instructions.

ESD precautions

Electrostatic discharge (ESD) can damage your processor, disk drives, expansion boards, and other components. Always observe the following precautions before you install a computer component:

1. Do not remove a component from its protective packaging until you are ready to install it.
2. Wear a wrist grounding strap and attach it to a metal part of the computer before handling components. If a wrist strap is not available, maintain contact with the computer throughout any procedure requiring ESD protection.

The EMI Core on the power cord is used to reduce electromagnetic interference, please refer to the following photos, and it must be installed before using the product.



Required tools

In performing the component replacement process, you will need the following tools:

- Philips screwdriver
- Hex screwdriver
- Flat screwdriver
- Scissors



Note

The screws for the different components vary in size. During the disassembly process, group the screws with their corresponding components to avoid mismatches when putting back the components.

Pre-installation instructions

Always observe the following before you install any component:

1. Make sure that the ODD and card reader slot is empty.
2. Turn off the power to the computer and all peripherals.
3. Unplug the power cord from the computer.
4. Unplug the network cable and all connected peripheral devices from the computer.
5. Place the computer on a flat, steady surface.



Warning: HOT PARTS!!! Fingers will get burned when handling the parts! Allow the computer to cool off for ONE HOUR before handling parts.

6. Open your computer according to the instructions on [removing the left side system cover on page 3](#).
7. See the following sections for specific instructions on the component you wish to install.



Warning

Not turning off the computer properly before you start installing the components may cause serious damage. Do not attempt the procedures described in the following sections unless you are a qualified service technician.

Post-installation instructions

Observe the following after installing a computer component:

1. See to it that the components are installed according to the step-by-step instructions in their respective sections.
2. Replace any expansion boards or peripherals that you removed earlier.
3. Replace the system covers. See [installing the left side system cover on page 4](#).
4. Connect the necessary cables.
5. Turn on your computer.

Accessories

Removing the front magnetic transparent cover

1. Before you proceed, make sure that you have turned off your computer and all peripherals connected to it. Read the [Pre-installation instructions on page 2](#).
2. Detach the front magnetic transparent cover from the chassis.



3. Set the front magnetic transparent cover aside for re-installation later.

Installing the front magnetic transparent cover

1. Place the front magnetic transparent cover into the front of the bezel until the magnet locks the cover into place.



2. Observe the [Post-installation instructions on page 2](#).

Removing the headphone stand assembly

NOTE: The maximum loading capacity of the headphone stand assembly is 3kg.

1. Before you proceed, make sure that you have turned off your computer and all peripherals connected to it. Read the [Pre-installation instructions on page 2](#).
2. Detach the headphone stand assembly from the chassis.



3. Set the headphone stand assembly aside for re-installation later.

Installing the headphone stand assembly

1. Place the headphone stand assembly into the top of the chassis and press it down until it latches into place.



2. Observe the [Post-installation instructions on page 2.](#)

System Covers

Removing the left side system cover

1. Before you proceed, make sure that you have turned off your computer and all peripherals connected to it. Read the [Pre-installation instructions on page 2](#).
2. Remove the two screws that secure the left side system cover to the computer (1).
3. Pull the Zone O2 tab to disengage the left side system cover from the chassis (2).
4. Detach left side system cover from the chassis (3).



5. Set the left side system cover aside for re-installation later.

Installing the left side system cover

1. Align the left side system cover to the side of the computer **[1]**.
2. Press the left side system cover against the chassis until it latches into place **[2]**.
3. Secure the left side system cover to the chassis using two screws **[3]**.



4. Observe the [Post-installation instructions on page 2](#).

Removing the right side system cover

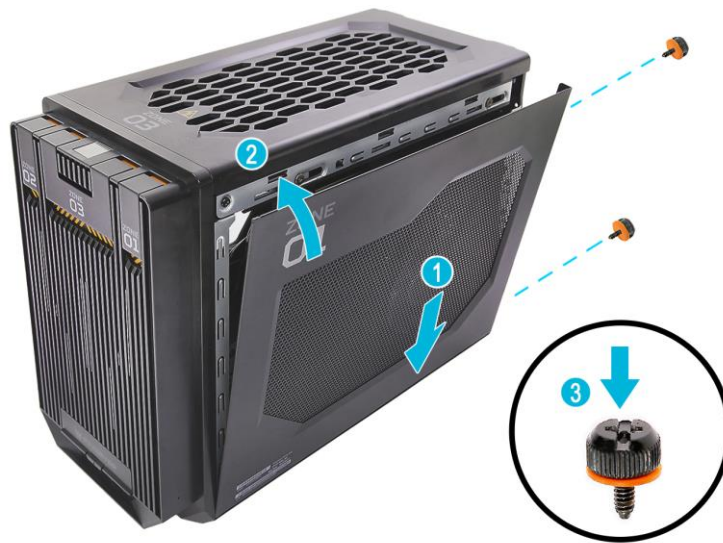
1. Before you proceed, make sure that you have turned off your computer and all peripherals connected to it. Read the [Pre-installation instructions on page 2](#).
2. Remove the two screws that secure the right side system cover to the computer (1).
3. Pull the Zone 01 tab to disengage the right side system cover from the chassis (2).
4. Detach right side system cover from the chassis (3).



5. Set the right side system cover aside for re-installation later.

Installing the right side system cover

6. Align the right side system cover to the side of the computer **(1)**.
7. Press the right side system cover against the chassis until it latches into place **(2)**.
8. Secure the right side system cover to the chassis using two screws **(3)**.



9. Observe the [Post-installation instructions on page 2](#).

Portable SSD Device

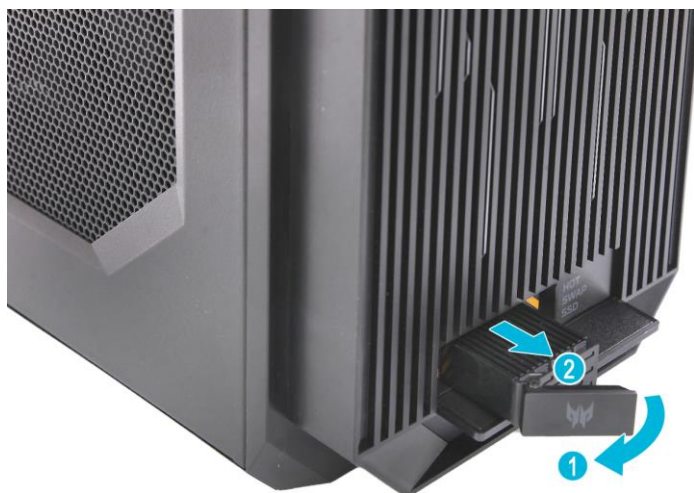
The computer supports a hot-swappable Portable SSD Device.

Removing the Portable SSD Device

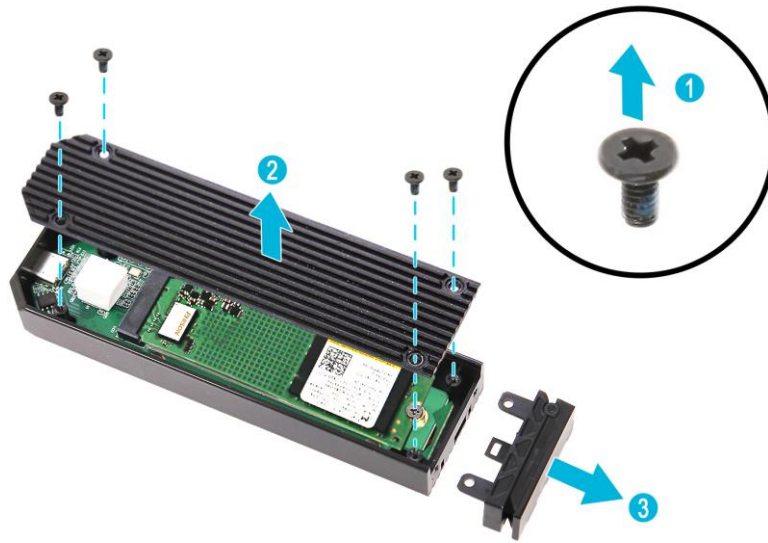
1. Perform the [Pre-installation instructions on page 2](#).
2. Open the portable SSD device cover.



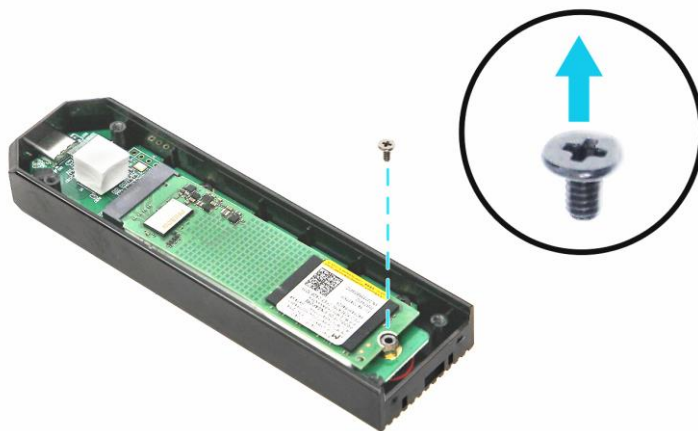
3. Pull out the portable SSD device cover.



4. Remove the four screws and detach the top and front cover from the portable SSD device.



5. Remove the screw securing the SSD module to the portable SSD device.



6. Detach the SSD module from the portable SSD device.

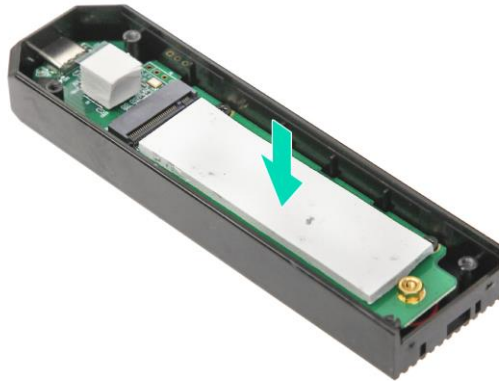


7. Remove the thermal pad from the portable SSD device.



Installing the Portable SSD Device

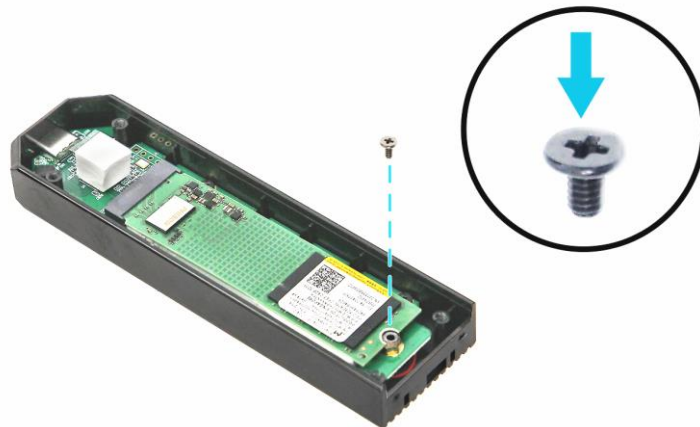
1. Remove the new SSD module from its packaging.
2. Place the thermal pad into the portable SSD device.



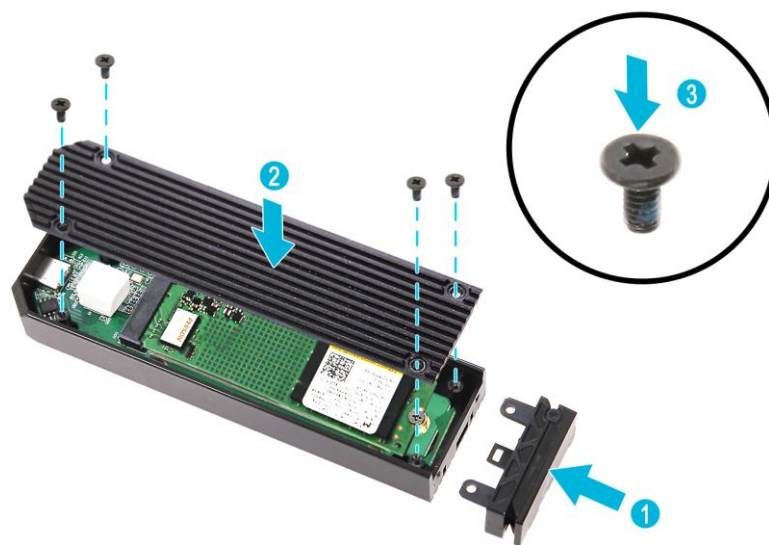
3. Insert the SSD module into the portable SSD device.



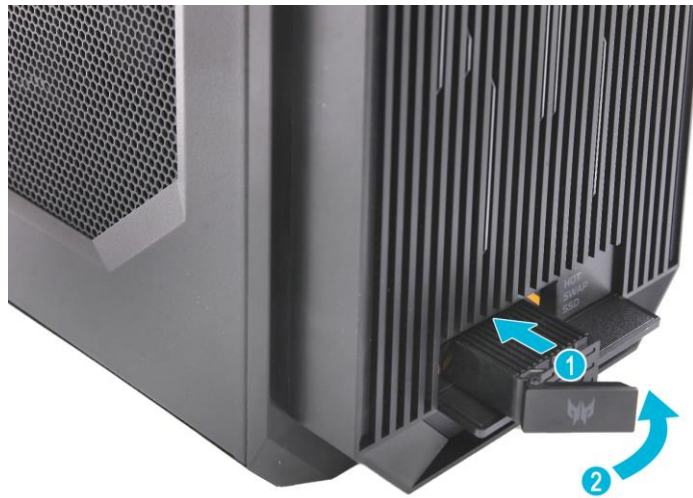
- Secure the SSD module to the portable SSD device using one screw.



- Replace the top and front cover of the portable SSD device and use four screws to secure it.



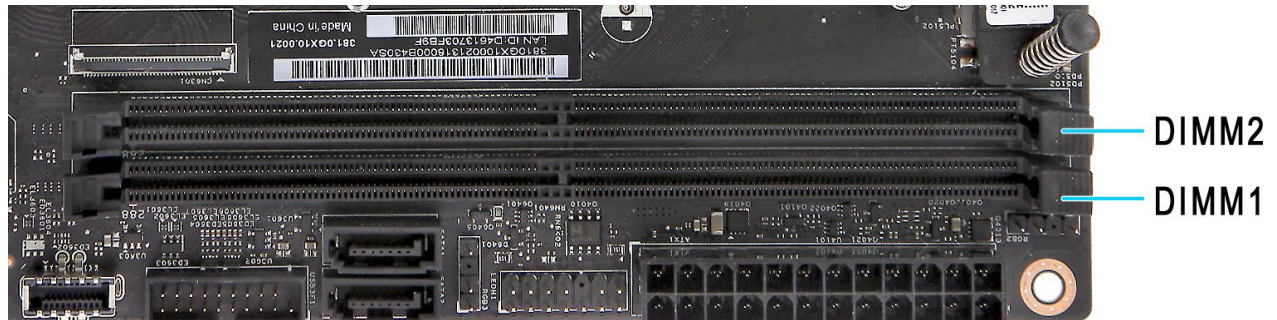
6. Insert the portable SSD device in its slot and push it in until it latches into place.



7. Observe the [Post-installation instructions on page 2.](#)

Memory

The computer has two DDR5 U-DIMM slots that support up to 64 GB maximum system memory.



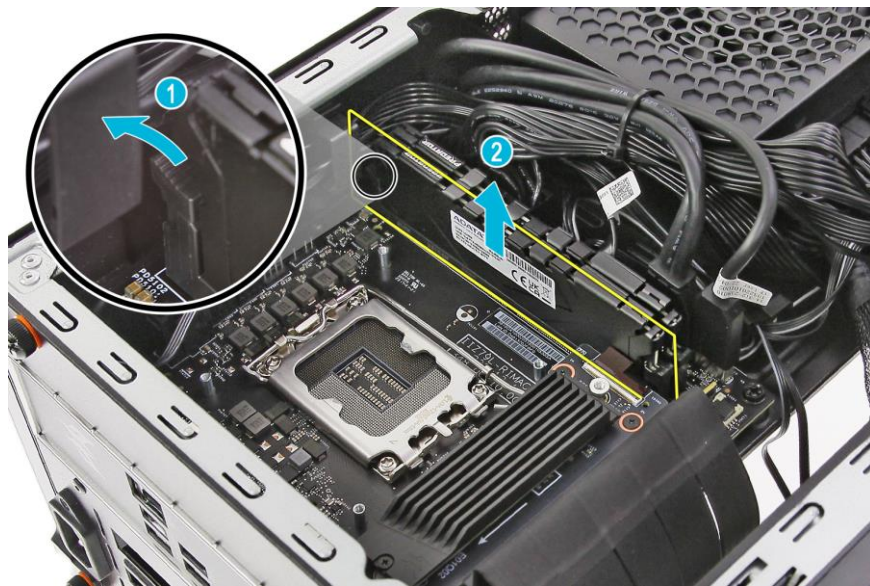
Memory configuration guidelines

- To ensure data integrity, use only Acer-approved DDR5 6000 MHz type memory modules.
- Due to RPL platform limitation, it is not recommended to mix 1R type and 2R type memory modules.
- Memory modules must be installed starting with DIMM1 slot.
- Always handle memory modules by its edges.
- When installing memory modules, populate the DIMM slots according to the table below:

Size	DIMM1	DIMM2
8GB	8GB	N/A
16GB	8GB	8GB
16GB	16GB	N/A
32GB	16GB	16GB
32GB	32GB	N/A
64GB	32GB	32GB

Removing a memory module

1. Perform the [Pre-installation instructions on page 2](#).
2. Press outward the holding clip on the left side of the DIMM slot outward to release the memory module (1).
3. Gently pull the memory module upward to remove it from the DIMM slot (2).



4. Repeat steps 3~4 to remove the other memory module.

Installing a memory module



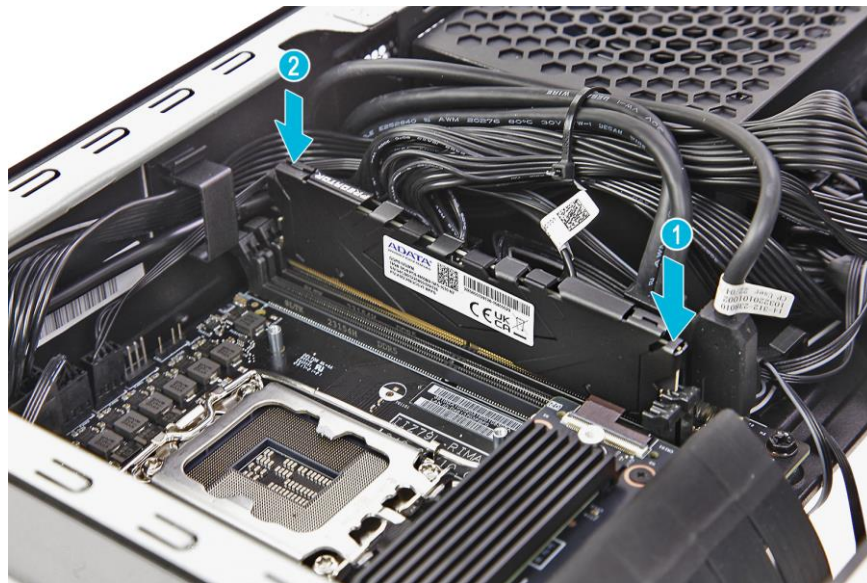
Note

DIMM slots on the mainboard must be installed only in certain configurations. Numbers next to DIMM slots correspond to installation sequence.

Be sure to install the memory module in DIMM1 slot followed by DIMM2 slot.

1. Select an empty DIMM slot.
2. Remove the new memory module from its packaging, handling it by the edges.
3. Align then insert the memory module into the DIMM slot (1).
4. Insert the memory to the slot until the retaining clip snap inward (2).

The module is keyed so it can only be inserted in one direction. If the module does not fit, make sure that the notch in the module lines up with the tab in the memory slot.



5. Repeat steps 1~4 to install the other memory module.
6. Observe the [Post-installation instructions on page 2](#).

Graphics board

The computer contains one Graphics board installed in the PCIE x16 slot.

Removing the Graphics board

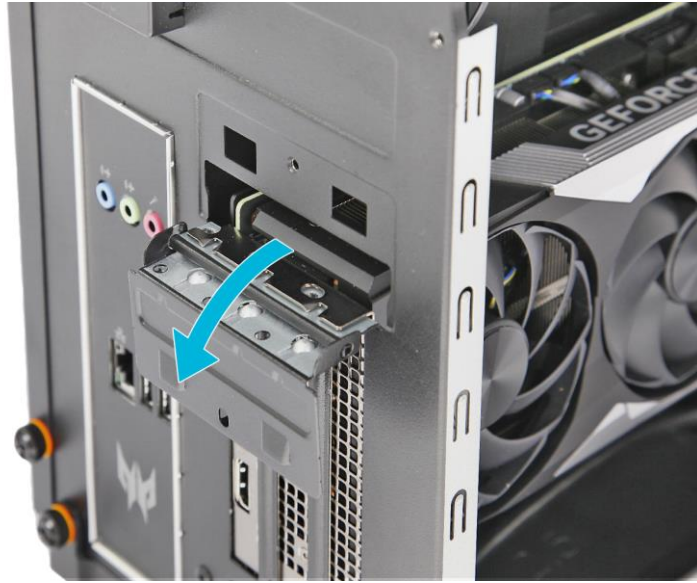
1. Perform the [Pre-installation instructions on page 2](#).
2. Disconnect the power cables from the graphics board.



3. Remove the three screws that secure the graphics board to the chassis.



4. Unlatch the metal clip that secure the graphics board to the chassis.



5. Detach the graphics board from the PCIE x16 Gen 4 cable.



Installing the Graphics board

1. Remove the new graphics board from its packaging.
2. Insert the graphics boards into the PCIE x16 Gen4 cable and press it down until it latches into place.



Note

To replace/upgrade graphic board, please check the specification of graphic board & power supply first in order to make sure the graphic board and power supply could work.



3. Press the metal clip to secure the graphics board bracket.



4. Secure the graphics board to the chassis using three screws.



5. Connect the power cables to the graphics board.



6. Observe the [Post-installation instructions on page 2.](#)

M.2 SSD modules

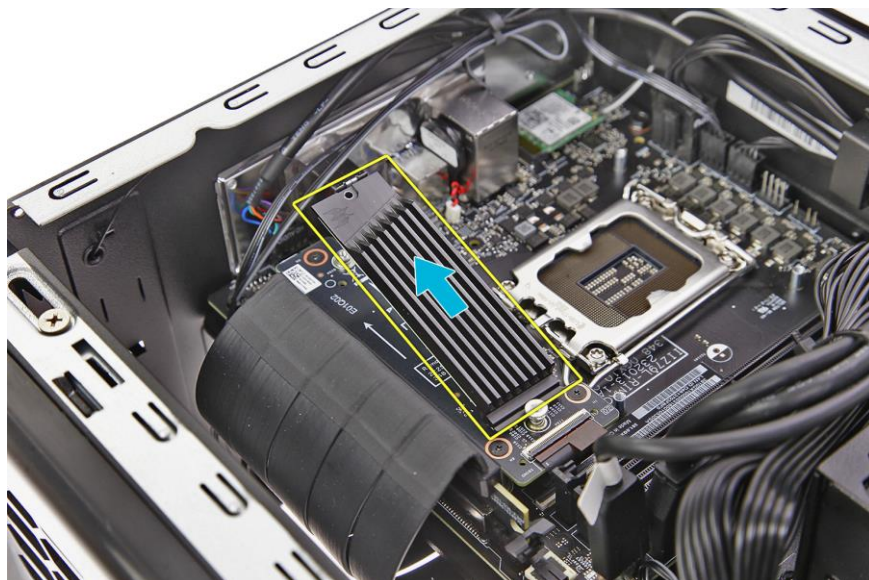
The computer contains two M.2 SSD modules installed in the M.2 PCIE slots.

Removing the M.2 SSD2 module

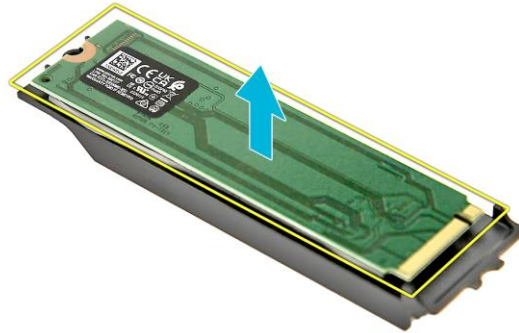
1. Perform the [Pre-installation instructions on page 2](#).
2. Remove the screw that secures the M.2 SSD2 module assembly from the SSD board.



3. Detach the M.2 SSD2 module assembly from the SSD board.



4. Remove the SSD module from the heatsink.



5. Remove the thermal pad from the heatsink.

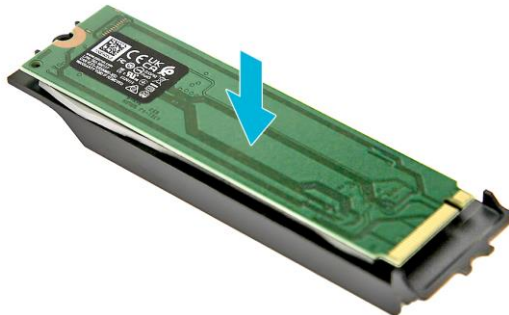


Installing the M.2 SSD2 module

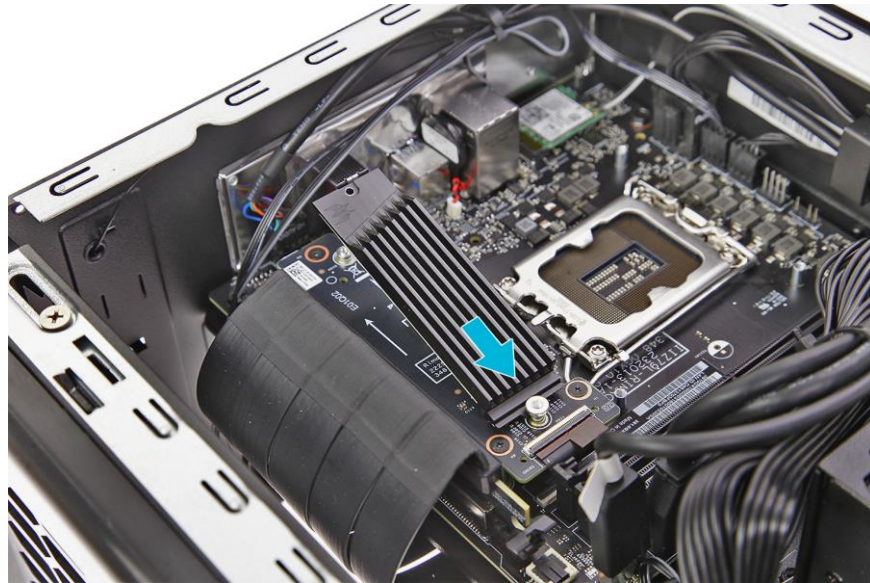
1. Remove the new M.2 SSD module from its packaging.
2. Place the thermal pad into the heatsink.



3. Place the SSD module above the thermal pad in the heatsink.



4. Insert the M.2 SSD2 module assembly into the SSD board.



5. Secure the M.2 SSD2 module assembly to the SSD board using one screw.



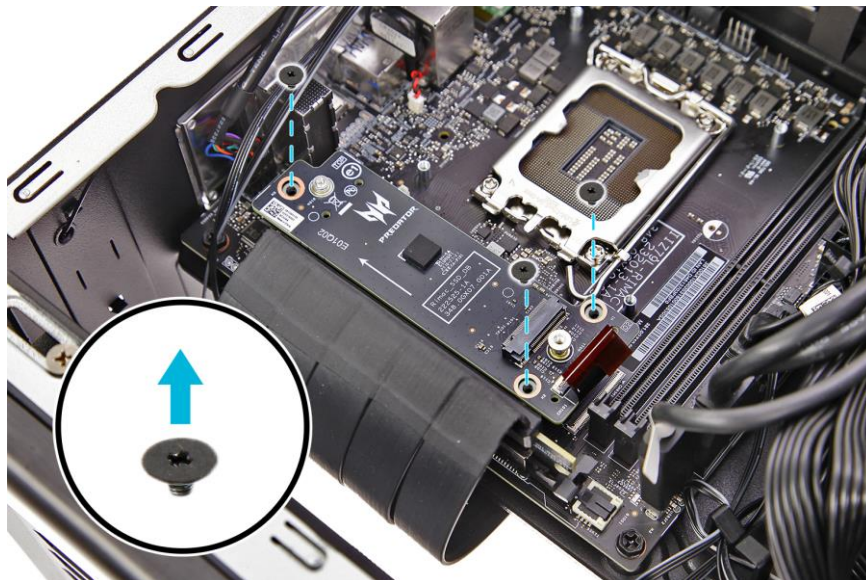
6. Observe the [Post-installation instructions on page 2](#).

Removing the SSD board

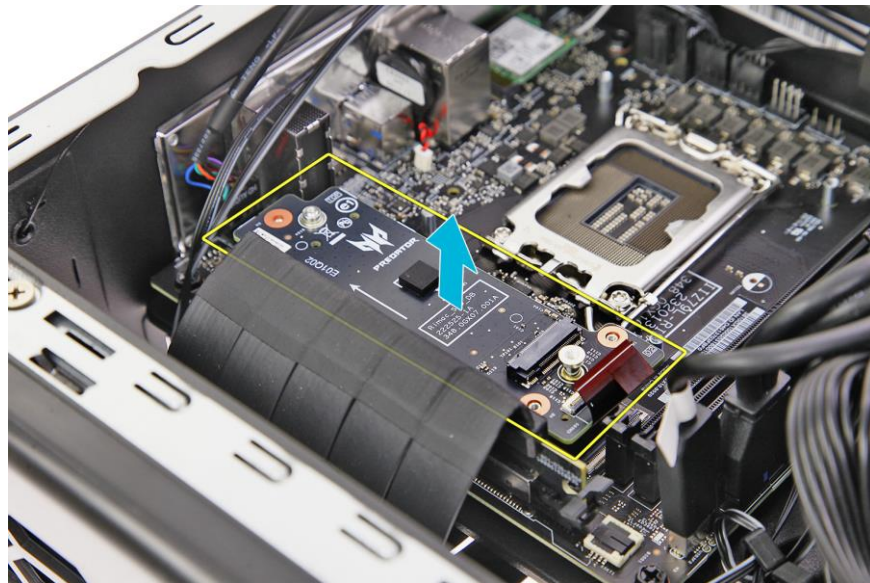
1. Perform the [Pre-installation instructions on page 2](#).
2. Remove the M.2 SSD2 module. See [Removing the M.2 SSD2 module on page 24](#).
3. Disconnect the SSD cable from the SSD board.



4. Remove the three screws that secure the SSD board to the mainboard.

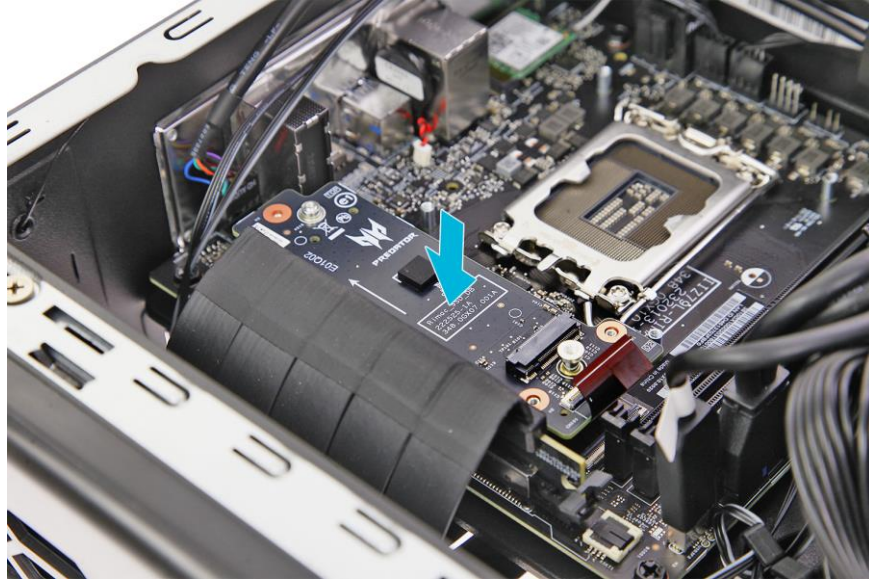


5. Detach the SSD board from the mainboard.

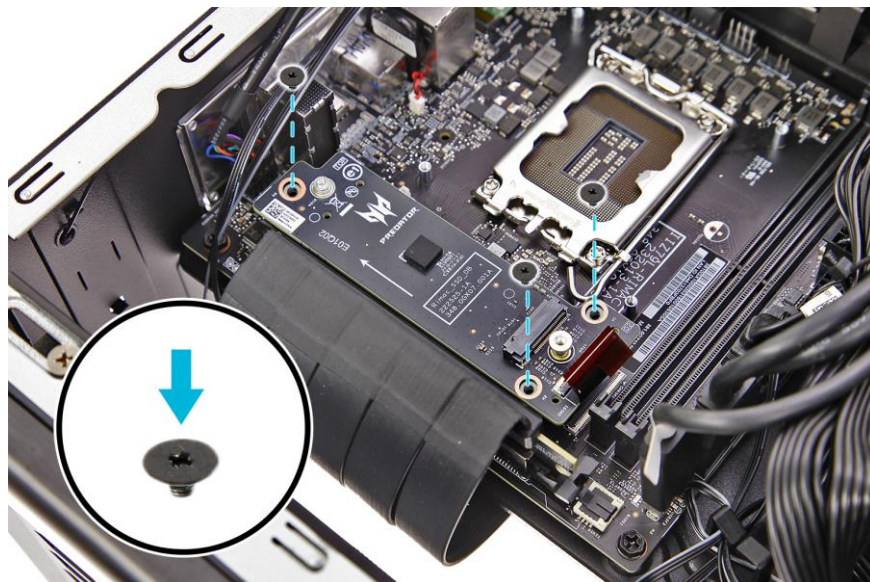


Installing the SSD board

1. Place the SSD board into the mainboard.



2. Secure the SSD board to the mainboard using three screws.



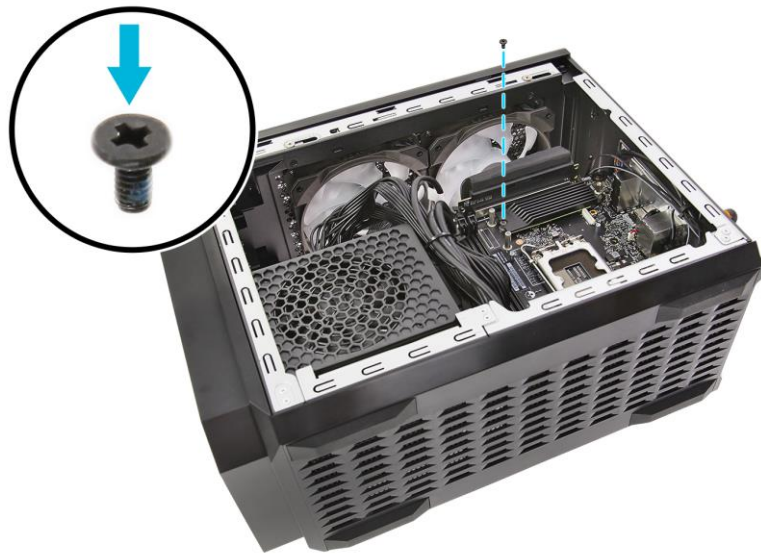
3. Connect the SSD cable to the SSD board.



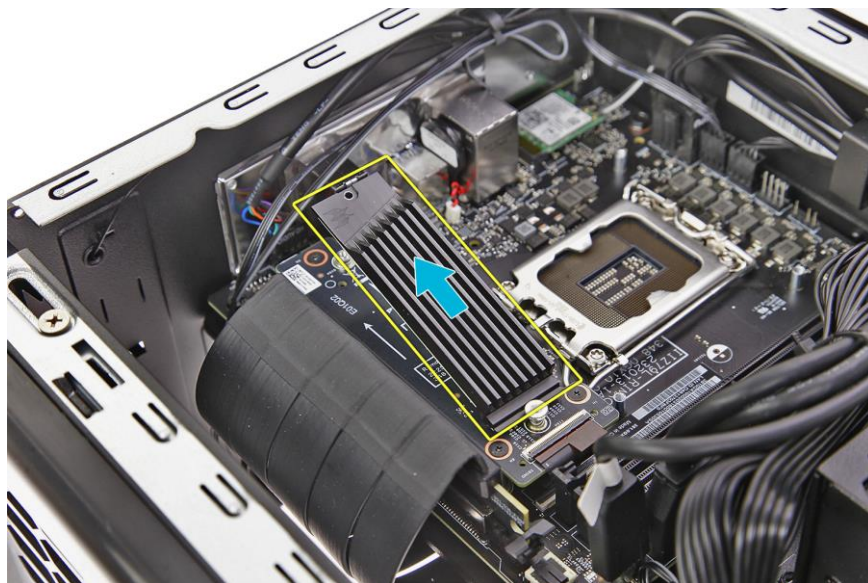
4. Replace the M.2 SSD2 module. See [Installing the M.2 SSD2 module on page 26](#).
5. Observe the [Post-installation instructions on page 2](#).

Removing the M.2 SSD1 module

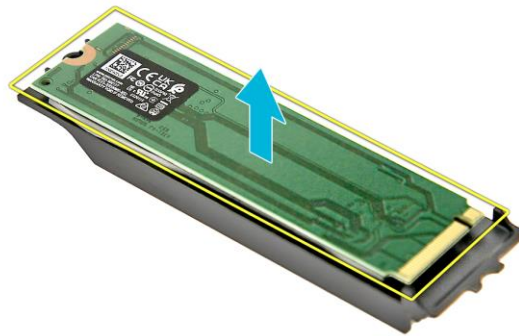
1. Perform the [Pre-installation instructions on page 2](#).
2. Remove the SSD board. See [Removing the SSD board on page 28](#).
3. Remove the screw that secures the M.2 SSD1 module assembly from the mainboard.



4. Detach the M.2 SSD1 module assembly from the mainboard.



5. Remove the SSD module from the heatsink.



6. Remove the thermal pad from the heatsink.

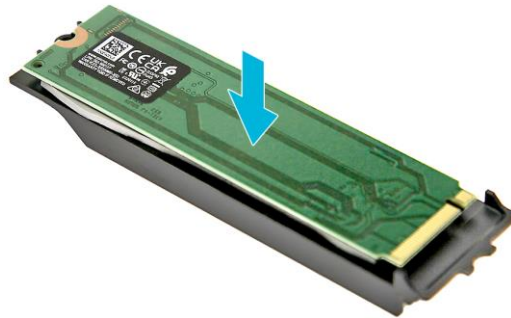


Installing the M.2 SSD1 module

1. Remove the new M.2 SSD module from its packaging.
2. Place the thermal pad into the heatsink.



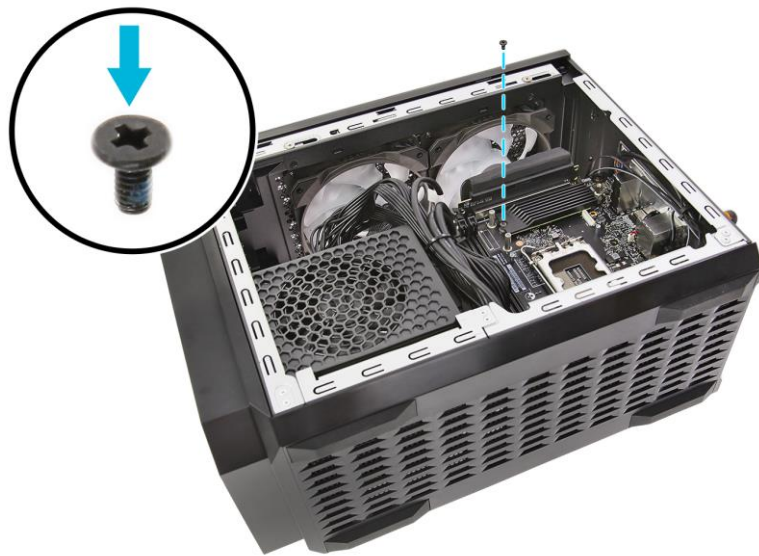
3. Place the SSD module above the thermal pad in the heatsink.



4. Insert the M.2 SSD1 module assembly into the mainboard.



5. Secure the M.2 SSD1 module assembly to the mainboard using one screw.



6. Replace the SSD board. See [Installing the SSD board on page 30](#).
7. Observe the [Post-installation instructions on page 2](#).

PredatorSense

In this section, you will find:

- Information on how to use the Predator Sense software

PREDATOR SENSE

PredatorSense (DT) V4.0 is an Acer proprietary utility that can be used to enhance the user experience of Gaming products on Microsoft Windows 11.

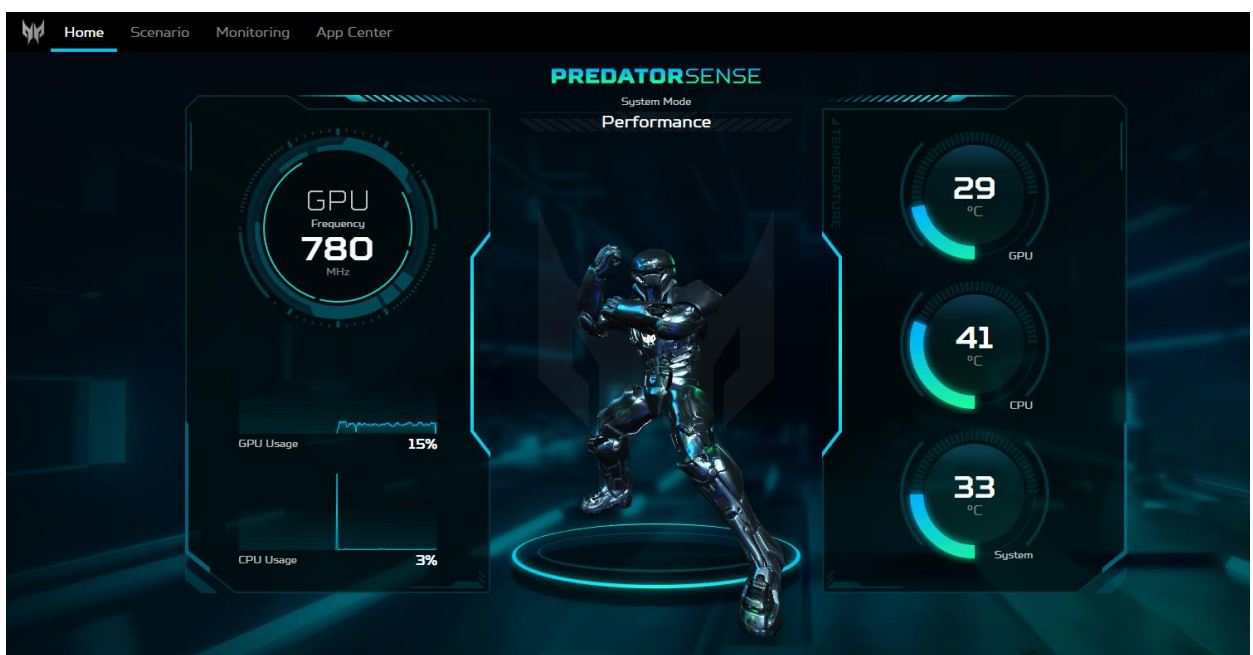
The central idea of this utility is to provide a user interface to easily control fan speed, RGB lighting effects and also monitor processor, GPU and system performance.

PredatorSense Features

- Scenario
- Monitoring
- App Center

To set up the PredatorSense application [Windows 11]:

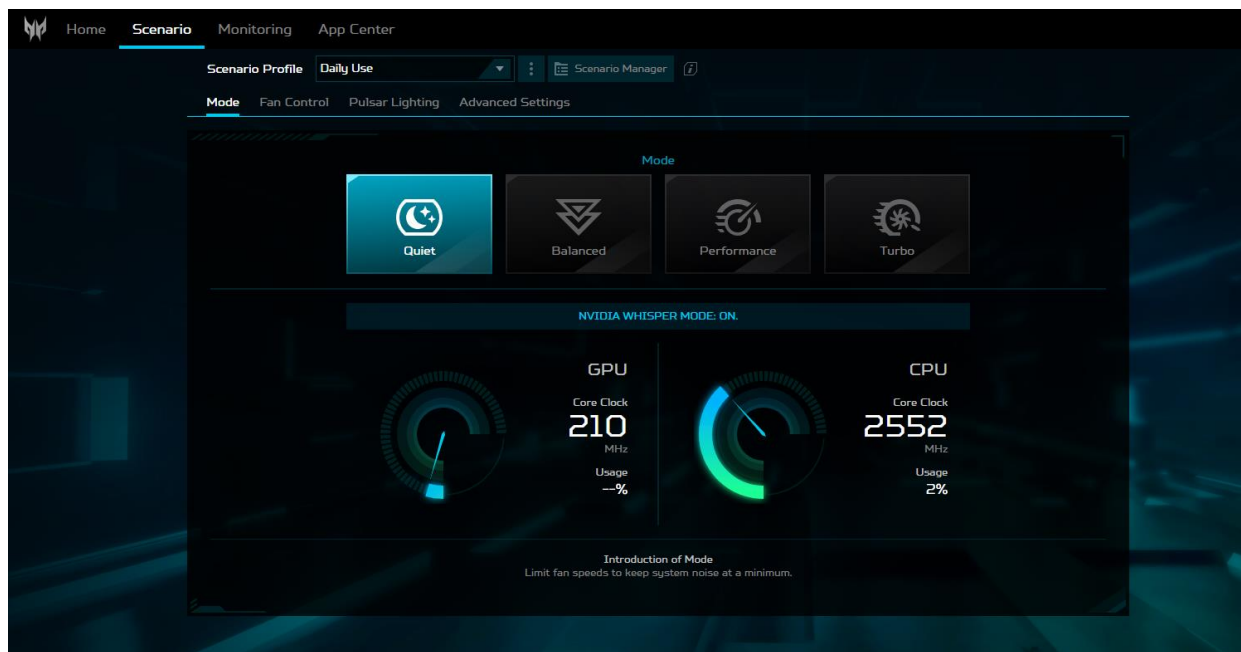
1. From the Start menu, select **All apps**.
2. Select **Acer**.
3. Select PredatorSense.



Alternatively, you can double-click the PredatorSense desktop shortcut to run the application.

Scenario

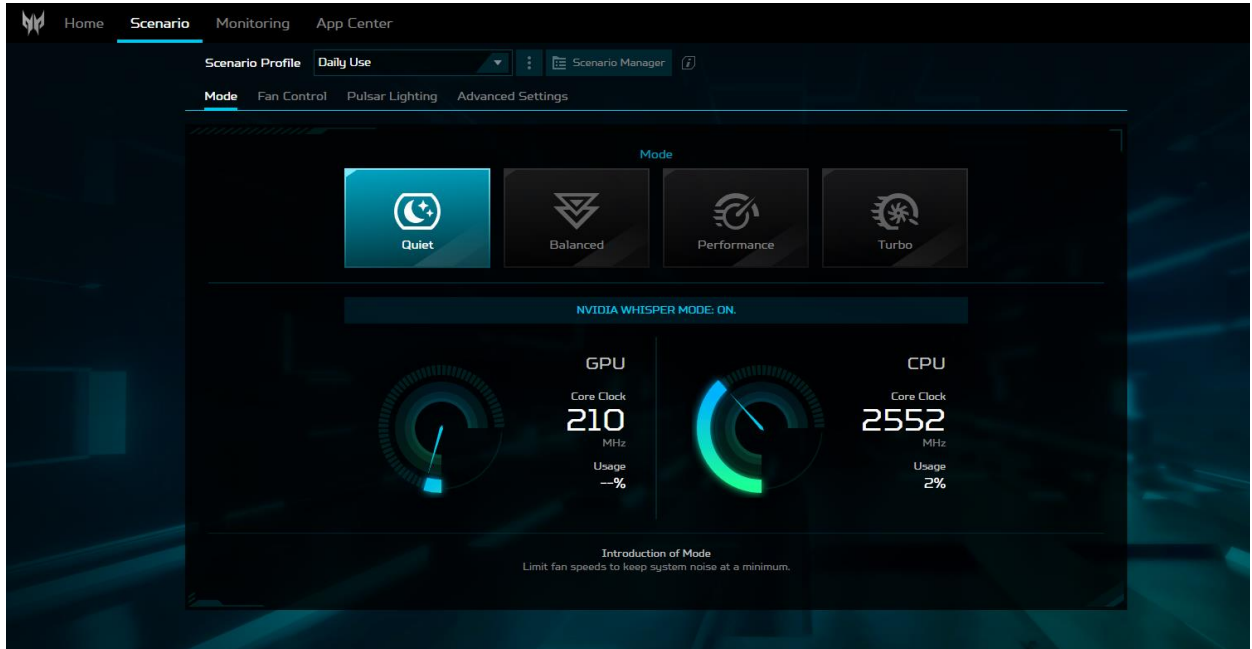
Select the Scenario tab to configure the system's operating mode, fan control, pulsar lighting and advanced [audio] settings.



Category	Description
Mode	Mode page allows the user to switch operating modes. Current GPU/CPU frequency and usage will also be displayed and updated every 5 seconds.
Fan Control	Configure fan control settings.
Pulsar Lighting	Configure the system's RGB lighting profile.
Advanced Settings	Configure the system's sound settings.

SCENARIO > MODE

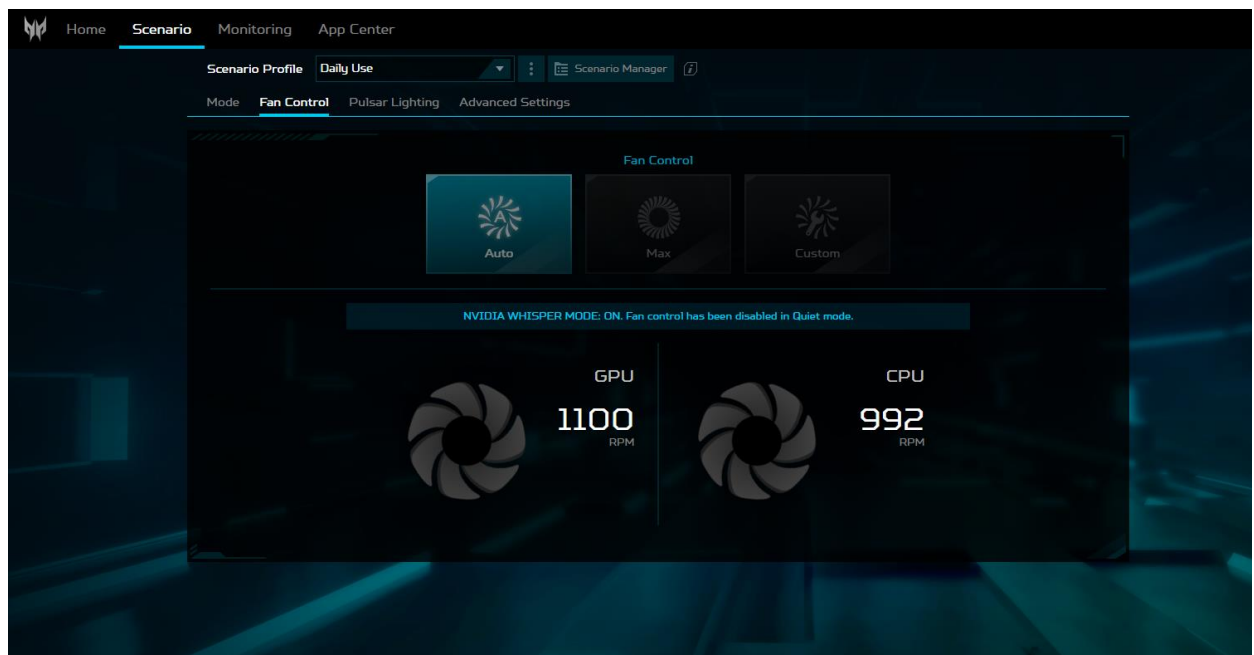
Select the Mode tab to configure the system's operating mode.



Category	Description
Quiet	Limit fan speeds to keep system noise at a minimum.
Balanced	Recommended for standard everyday use.
Performance	Intended for gaming or rendering. CPU + GPU overclocked. Fan speed remains throttled.
Turbo	All-out performance. Overclocks and fan speeds are all maxed.

SCENARIO > FAN CONTROL

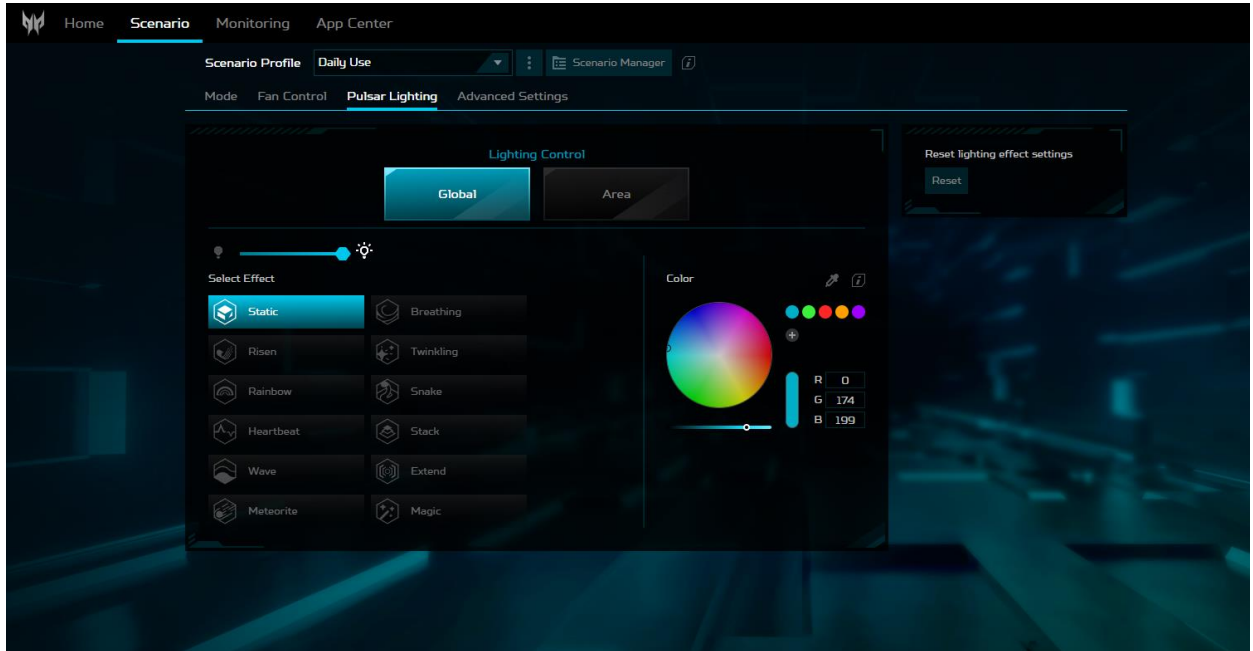
Select the Fan Control tab to adjust the fan speed.



Category	Description
Auto	Allows system to control fan speed according to actual system usage.
Gaming	Configure fan speed for gaming use.
Custom	Manually adjust fan speed to desired RPM.

SCENARIO › PULSAR LIGHTING

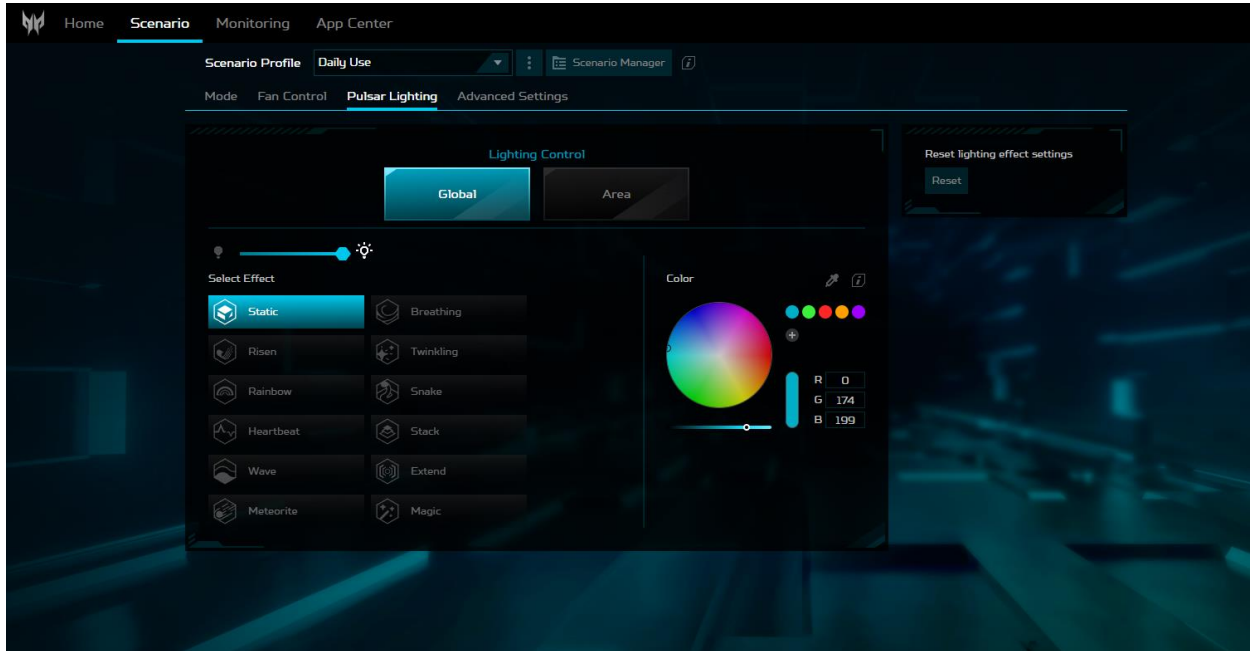
Select the Pulsar Lighting tab to adjust brightness as well as select lighting effects.



Category	Description
Global	Configure lighting for entire LED in device.
Area	Configure lighting for any specified zone.

SCENARIO > ADVANCED SETTING

Select the Advanced Setting tab to configure Acer TrueHarmony™ sound modes.

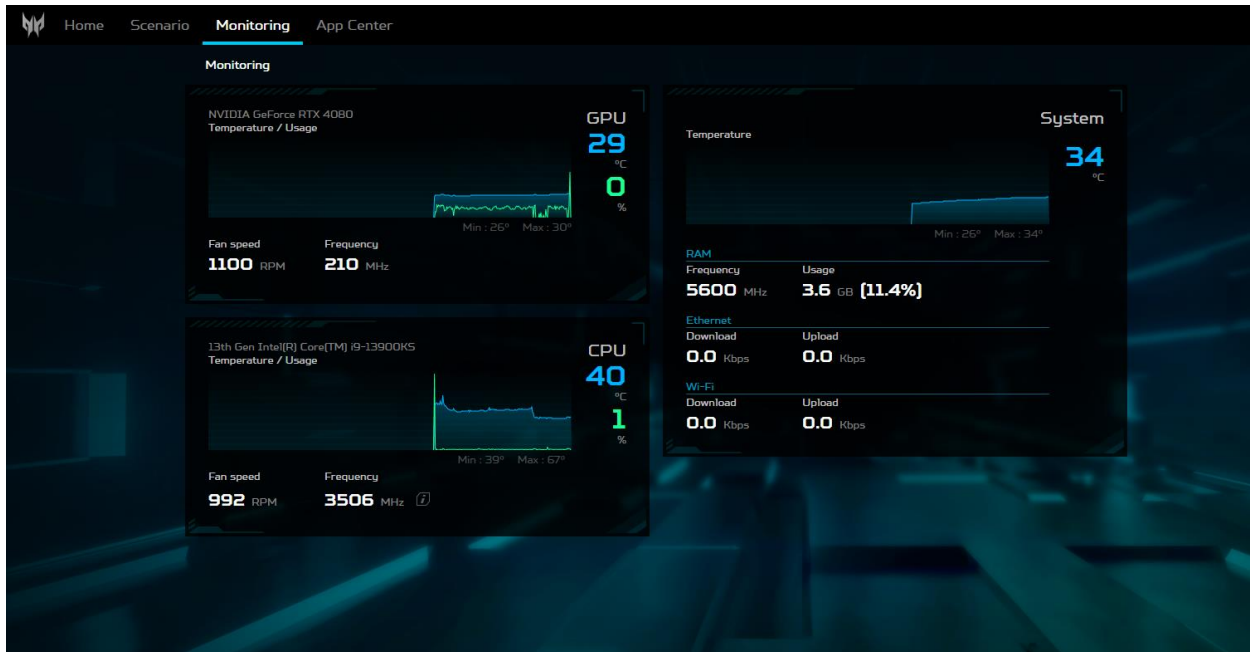


Category	Description
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Acer TrueHarmony™	<ul style="list-style-type: none">● Shooter● RPG● Strategy● Movies● Music● Voice● Automatic● Custom Audio
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Monitoring

Select the Monitoring tab to view CPU/System and GPU performance.



Category	Description
GPU	Displays GPU System temperature and loading.
CPU	Displays CPU and System temperature and loading.
System	Displays RAM, Wi-Fi and LAN usage.

App Center

Select the App Center tab to view all existing applications and games installed in the system.

App Center allows the user to browse, add, and run the apps that are installed on the system as well as link the apps to scenario profiles.

