

msi

USER GUIDE

Gaming

Content Creation

Business & Productivity



MSI

MSI CENTER
NOTEBOOK

Content

Copyright and Trademarks Notice	6
Revision History	6
Introduction	7
Login and Register	7
Create an Account.....	7
Product Registration.....	9
Settings	10
Feature Sets -- Choose Your Features	11
Features -- Use the Features Installed	12
Gaming Mode.....	13
Interface Overview	14
How to Add Games into Gaming Mode.....	14
How to Enable Gaming Mode	15
Smart Priority.....	16
Interface Overview	16
Add and Edit the SW List	17
How to Use Smart Priority.....	19
User Scenario.....	21
How to Use User Scenario	21
How to Use User Scenario with Keyboard FN keys.....	22
MSI AI Engine	23
How to Use MSI AI Engine.....	23
How to Setup Personal Intelligent Profile.....	25
How MSI AI Engine Takes Effect	27
General Settings.....	28
Game Highlights.....	29
Interface Overview	30
MSI Companion.....	31
Control tab.....	31
Display tab.....	32

Mystic Light	33
Function Overview.....	33
Customizing personal LED Light Effect.....	34
Ambient Link.....	35
Network Requirements.....	35
Philips Hue Setup (optional).....	35
Nanoleaf Setup (optional).....	35
How to reset the Light Panels	36
Enter Ambient Link Control Panel.....	36
Game Mode.....	38
Ambient Link.....	39
Smart Image Finder.....	40
How to Import Images to Smart Image Finder	40
How to Tag/ Untag an Image	42
How to Filter the Imported Images	44
True Color	45
True Color preset view modes	45
Noise Cancellation	46
How to Make Noise Cancel Take Effect.....	46
Duet Display	47
How to setup a Screen Profile.....	47
How to setup a Hotkey to launch Duet Display	51
How to use iOS Screen Mirroring.....	52
System Diagnosis.....	53
Battery Master.....	53
Battery Calibration.....	54
System Checker.....	57
Performance Analysis	59
Hardware Diagnosis.....	61
Gaming Gear.....	64

Hardware Monitoring	65
Support	66
Live Update	66
Live Update	66
Microsoft APP.....	67
System Info	68
Service	70
Trouble Shooting and Knowledge Base.....	70
MSI Recovery.....	71
Go to WinPE to Use MSI Recovery.....	71
Create a MSI Rescue USB disk	72
Create a Customize Image Backup.....	75
Recovering the System	76

Copyright and Trademarks Notice

Copyright © Micro-Star Int'l Co., Ltd. All rights reserved. The MSI logo used is a registered trademark of Micro-Star Int'l Co., Ltd. All other marks and names mentioned may be trademarks of their respective owners. No warranty as to accuracy or completeness is expressed or implied. MSI reserves the right to make changes to this document without prior notice.

Revision History

- ▶ Version: 1.2
- ▶ Date: 04, 2024

Introduction

MSI Center, the exclusive application created only for MSI's products, delivers optimized performance, and efficiency to gamers and diverse users.

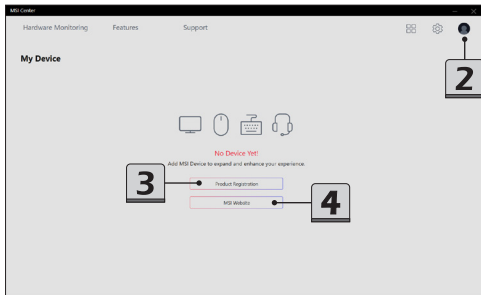
Login and Register

Before using MSI Center, it is recommended to create your own account and register your MSI product to get your full benefits from MSI Center at once.

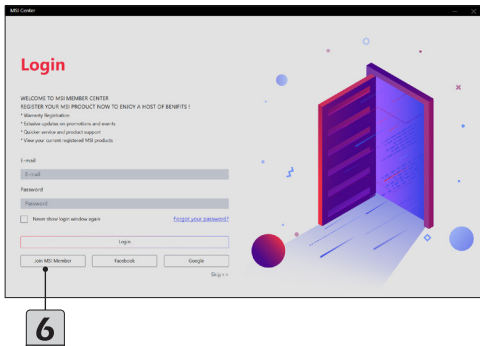
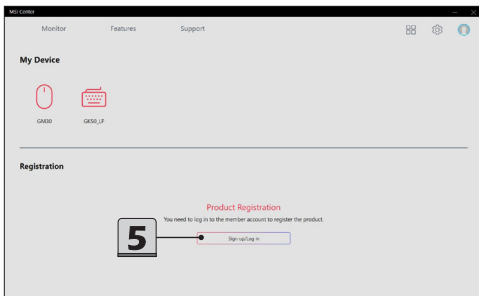
To have the complete function of MSI Center, keep the Windows system login with a single administrator account as specific functions require higher system privileges in order to work (e.g. GPU Switch for Intel 13th Gen notebook models or newer, Fn/Win Key Switch, USB PowerShare, etc...)

Create an Account

1. Make sure the Internet connection works properly.
 2. Activate MSI Center, move the mouse cursor to the profile icon at the upper right corner and click on it to enter [My Device] page
 3. Click on [Product Registration] to enter Login page.
 4. Click on [MSI Website] to link to MSI official website.
-



-
5. Connect a MSI device to your notebook, if any. You can also enter the Login page by clicking on [Sign up/ Log in].
 6. Select [Join MSI Member] to create an account, and then follow the on-screen instructions to apply a personal account and register your MSI product.
-



CREATE AN ACCOUNT

6

E-mail: mbanxxx@hotmail.com

Password: [masked]

Confirm Password: [masked]

User Name: mbanxxx

Region/Location: Taiwan

By clicking, I agree to the MSI Reward Program Terms and conditions. Become a member today to earn points, get exclusive offers, special VIP event invites and more! Join us, it's free and easy. [Learn more about the benefits of the MSI Reward Program.](#)

I have read and agree to the MSI Terms of Use and Privacy Policy. [MSI Service Center and Privacy Policy](#)

Please send me the latest product information and event information of MSI.

Prev Next

Product Registration

1. Once a personal account is created, and logged in the account, you may start to register your products.
2. The notebook you are using will be detected by MSI Center automatically, follow the on-screen instructions to complete the registration.
3. To register MSI multi-media accessories which are connected to the notebook, click [+] and then follow the on-screen instructions to complete the registration.

Monitor Utility Support

My Device

CLUTCH GM70 NUMERGE GM70 Optix M9141CQRY

Registration

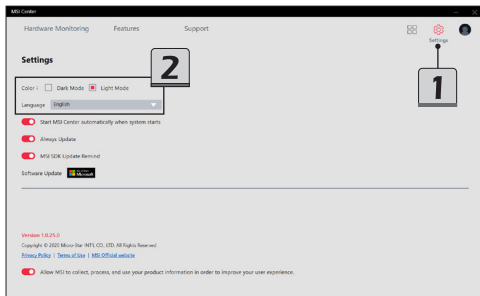
Gaming Gear	Notebook
CLUTCH GM70	GTR/VR 689 Titan SL
S/N : 681-761-64281312068287	S/N : 681-761-64281312068287
Purchased Date : [masked]	Purchased Date : 2019-04-06
Warranty Status : [masked]	Warranty Status : Standard Warranty
Product Registration	Summary Detail

[+]

Settings

Before using MSI Center, you may decide the appearance and the language of the user interface according to your personal preferences in Settings page.

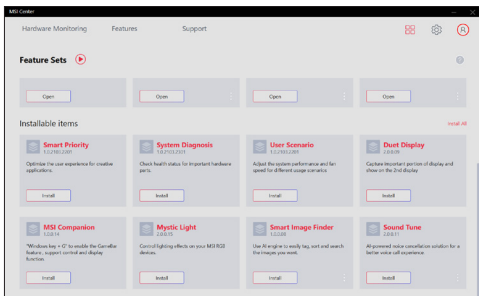
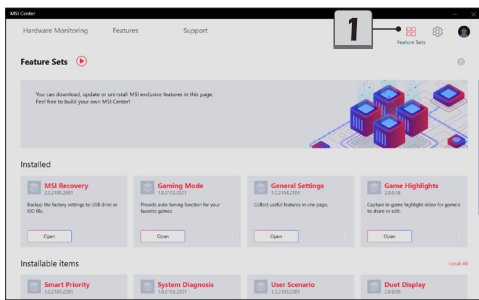
1. Move the mouse cursor to the [Setting] icon at the upper right corner and click on it.
 2. Make selections to the Color, Dark mode or Light mode; and the Language.
-



Feature Sets -- Choose Your Features

Within the latest MSI Center, you are able to choose your own style and features. Simply install or update your favorite features in Feature Sets page. Experience the convenience that MSI Center brings to you!

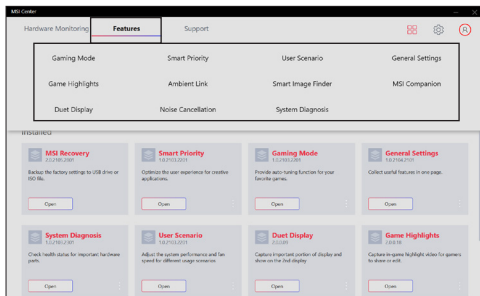
1. Move the mouse cursor to the [Feature Sets] icon at the upper right corner and click on it.
 2. In Feature Sets page, feel free to select, install or uninstall any MSI features listed to meet your personal needs.
-



Features -- Use the Features Installed

Activate MSI Center and click on Features. Find the features which are selected and installed in Feature Sets. Now, let's get familiar to these MSI exclusive features. Here comes the brief introductions to each feature, and you may read it before going any further.

Be noted that the supported features may be varied from models to models.



Gaming Mode

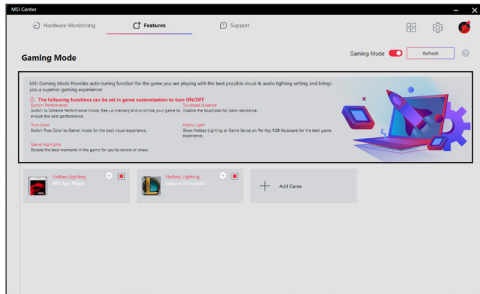
MSI Gaming Mode provides auto-tuning function for the game you are playing with the best possible visual and audio lighting setting and brings you a superior gaming experience.

The games which are installed would be detected by MSI Center and be shown in Gaming Mode page.

For each game, the following functions, may or may not be supported, can be set to ON or OFF in game customization individually.

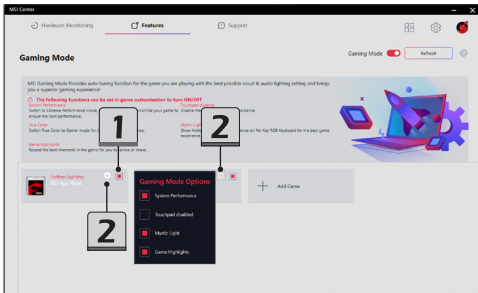
1. System Performance: Switch to Extreme Performance mode, free up memory and prioritize your game to ensure the best performance.
2. True Color: Switch True Color to Gamer mode for the best visual experience.
3. Touchpad disabled: Disable the touchpad for palm resistance.
4. Mystic Light: Show Hotkey Lighting or Game Sense on Per Key RGB Keyboard for the best game experience.
5. Game Highlights: Record the best moments in the game for you to review or share.

***Be noted, for each game, only the supported functions will be shown within the Gaming Mode options dialog box.**



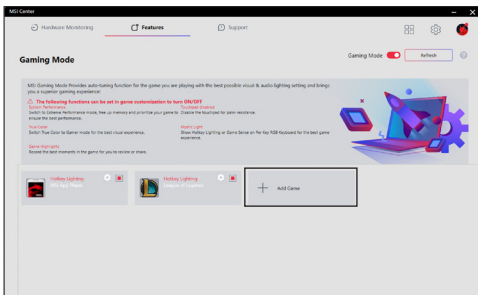
Interface Overview

1. On/Off the switch to apply Gaming mode for each game.
 2. Click to browse the Gaming Mode options dialog box.
-



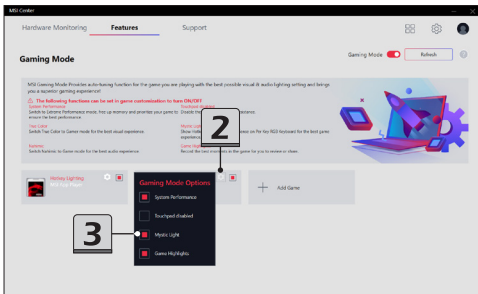
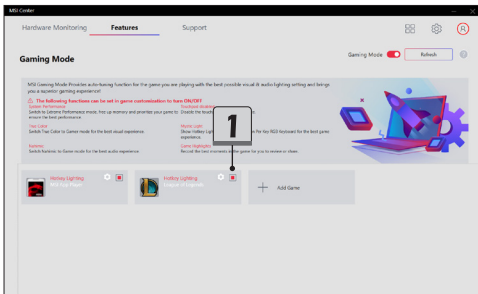
How to Add Games into Gaming Mode

Click Add Game button. Then follow the on-screen instructions to select the game's .exe file and complete the installation.



How to Enable Gaming Mode

1. Click to switch On the Gaming Mode for the selected game.
 2. Click to browse the Gaming Mode options dialog box.
 3. Find the supported functions within the Gaming Mode options dialog box.
 4. Click to switch On/ Off each function.
-

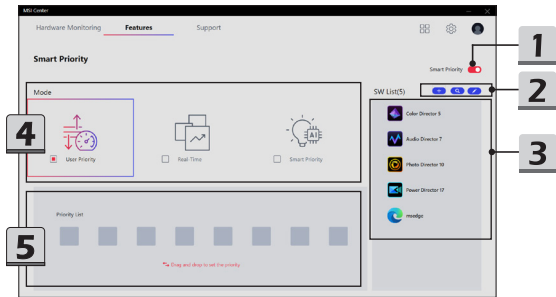


Smart Priority

Smart Priority allows users to allocate system resources manually to the specified App selected in accordance with users' needs, as long as the Apps are supported by Smart Priority.

Interface Overview

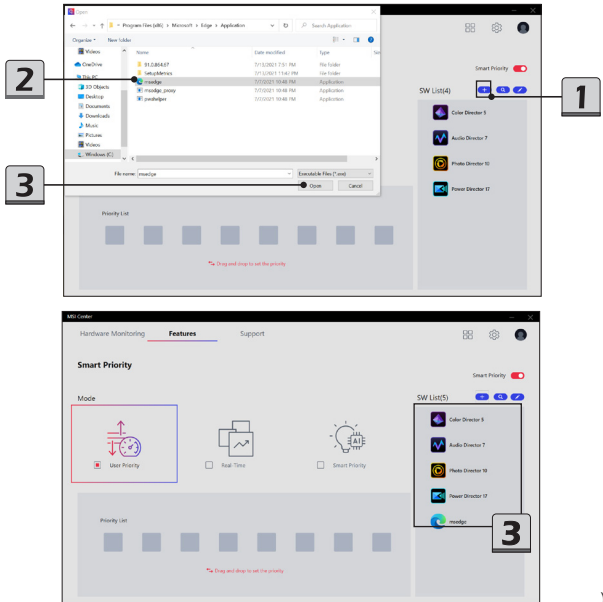
Go to MSI Center [Features > Smart Priority]

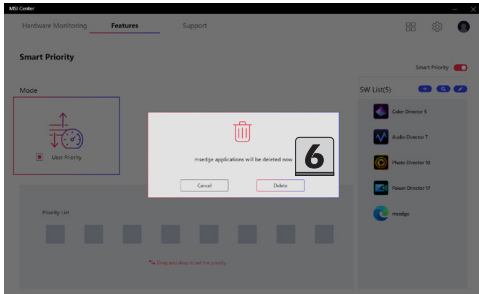
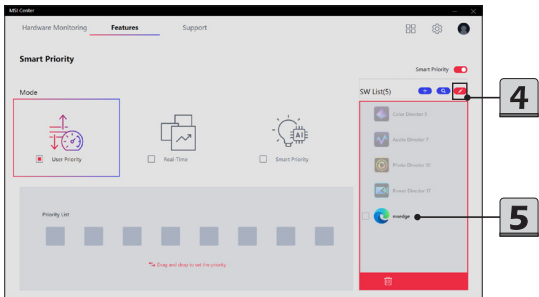


1. ON/OFF switch of Smart Priority
2. Tools (from left to right)
 - Add : add a new Apps into SW List.
 - Refresh: refresh the SW list to get the latest list.
 - Edit: edit the SW List.
3. SW List: in addition to default Apps included, users may also add other Apps into this list.
4. Mode
 - User Priority: System resources will be allocated by the system according to the sequence of Apps defined by users in the Priority List.
 - Real-Time: System resources will be allocated automatically based on the order of open windows seen on the screen.
 - Smart Priority: System resources will be allocated automatically to programs based on data collected from user's routines and habits.
5. Priority List: Apps dragged into the list from left to right will be allocated the most to lesser system resources.

Add and Edit the SW List

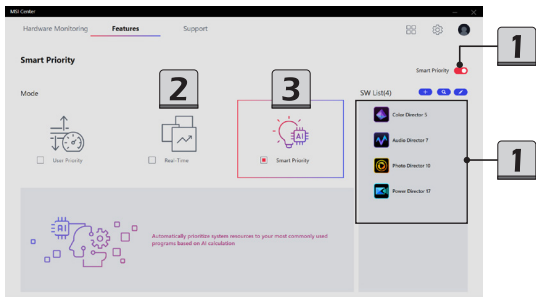
1. To add an App into SW List, move the mouse cursor to [Add] and click on it.
2. Find and select the executable file of a specified App.
3. Click [Open] to complete inserting the selected App into SW List.
4. To delete an App in SW List, move the mouse cursor to [Edit] and click on it.
5. Select the specified App, and then click the [trashcan] icon to delete.
6. Click [Delete] to delete the selected App or click [cancel] to continue.



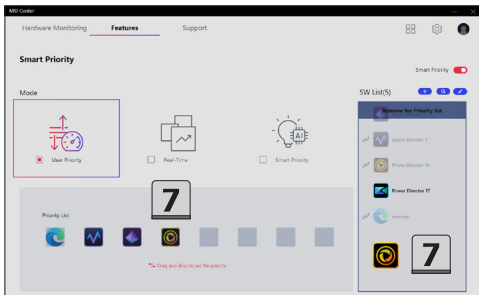
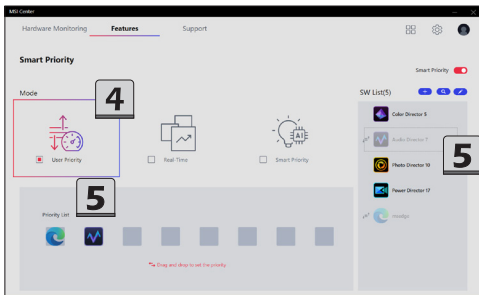


How to Use Smart Priority

1. Before using Smart Priority, make sure that the function SWITCH is set to [ON], and all the Apps shown in SW List are not activated at the background.
 2. If [Real-Time] mode is selected, the system resources will be allocated automatically. The Apps in SW List will get optimized settings.
 3. If [Smart Priority] mode is selected, the system resources will be prioritized automatically to your most commonly used programs based on AI calculation.
-



4. If [User Priority] mode is selected, users are allowed to drag a specified App from SW List into Priority List.
5. To drag an App, move the mouse cursor to the icon of the App. Left click on the icon and hold the mouse button. Drag and drop the App into the Priority List.
6. For those Apps listed in the Priority List, they will get optimized system resources.
7. To remove the Apps shown in the Priority List, move the mouse cursor to the icon of the App in the Priority List. Right click on the icon and hold the mouse button. Drag and drop the App back to the SW List.
8. Maximum 8 Apps are allowed to be selected into Priority List at one time. Follow the on-screen instructions to re-edit the Priority List.

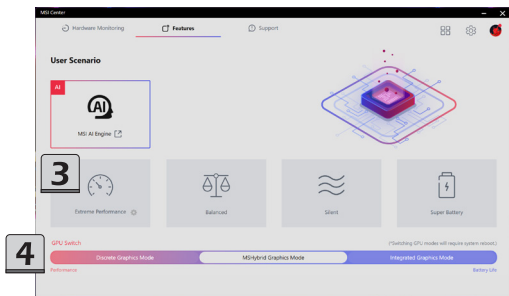


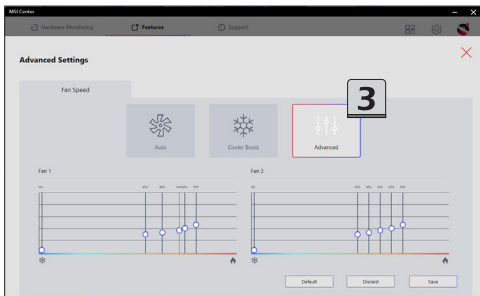
User Scenario

5 custom-made User Scenarios are available for users to choose in accordance with users' needs to increase the work efficiency.

How to Use User Scenario

1. Go to MSI Center [Features > User Scenario].
 2. Select a proper User Scenario according to your needs.
 - **MSI AI Engine**: Exclusive AI application released by MSI. Select to enhance user experience and optimize system performance automatically and intelligently. Available only for selected models, visit [MSI official website](#) for details.
 - **Extreme Performance**: A powerful mode that boosts the highest performance for AAA games. For certain CPU/GPU, you can overclock in advanced settings.
 - **Balanced**: A Balanced mode that brings a balance between performance and battery.
 - **Silent**: A Silent mode that lowers the fan noise.
 - **Super Battery**: A Super Battery mode that lowers the power consumption for basic needs.
 3. If **Extreme Performance** is selected, users are allowed to setup the Fan Speed by selecting [Advanced], and adjust the Fan Speed.
 4. Select a proper graphics mode according to your needs from MSHybrid Graphics Mode or Discrete Graphics Mode or Integrated Graphics Mode. Optionally supported for selected models.
 5. Follow the on-screen instructions to make your own settings.
-

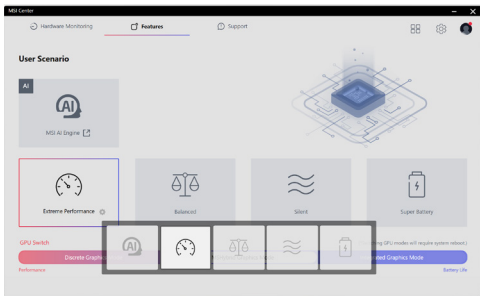




How to Use User Scenario with Keyboard FN keys

* Optionally supported for selected models.

To use User Scenario with keyboard FN keys, simply press FN and F7 keys repeatedly to switch between each scenario, and you may read the selected scenario shown on the display. Refer to the User Guide for further information about Keyboard FN keys.



MSI AI Engine

Utilize AI to learn from your behavior, providing real-time, optimize system adjustments based on the usage Context.

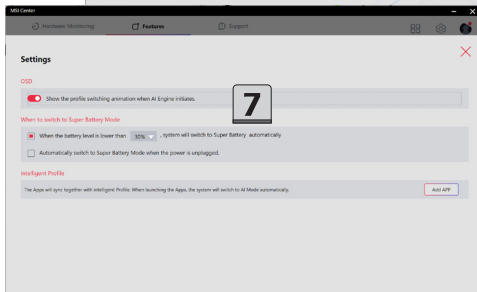
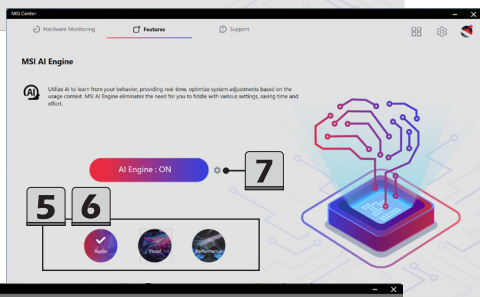
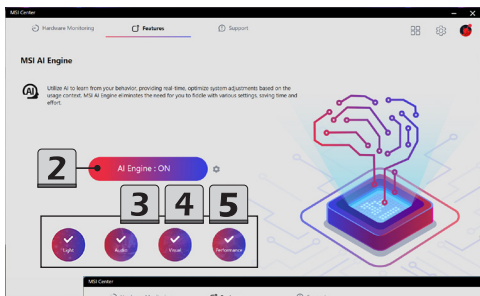
With four exclusive Intelligent AI Profiles, [Gaming](#), [Work](#), [Meeting](#), [Entertainment](#), **MSI AI Engine**, eliminates the need for you to fiddle with various settings, saving you time and effort.

This notebook may be pre-installed with the **MSI AI Engine** application, depending on the models users purchased. Users are allowed to find and install **MSI AI Engine** manually under **Feature Sets** within MSI Center. Please refer to the previous section of [Feature Sets -- Choose Your Features] for further instructions.

MSI AI Engine is available only for selected models, visit [MSI official website](#) for detailed information.

How to Use MSI AI Engine

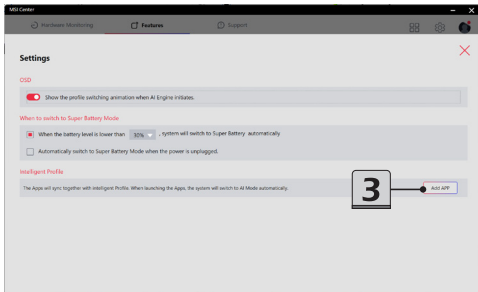
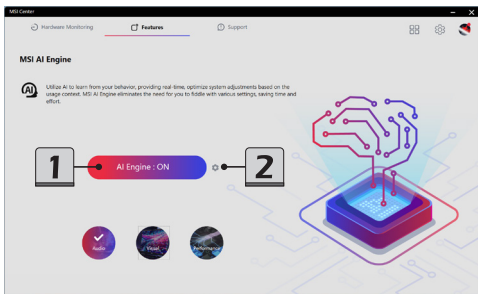
1. Go to MSI Center [Features > **MSI AI Engine**].
2. Move the mouse cursor to **MSI AI Engine** to toggle ON/OFF the function.
3. With **MSI AI Engine** toggled ON, it will optimize system performance automatically and intelligently in accordance with users' operating behavior in four functions: **Light** links to Mystic Light; **Audio** links to Nahimic Audio Effects, **Visual** links to True Color, and **Performance** links to User Scenario.
4. In order to get these four functions performing properly, make sure the associated applications are installed, such as Mystic Light, Nahimic Audio Effects, True Color, and User Scenario.
5. The related function icons will only be visible if the required applications are installed.
6. Move the mouse cursor to each function icons and click on it to enable or disable the function.
7. Click the Gear icon next to **MSI AI Engine** for advanced settings
 - OSD: Switch to enable or disable the animation when AI Engine initiates.
 - Super Battery Mode: Adjust the settings to meet the required need.

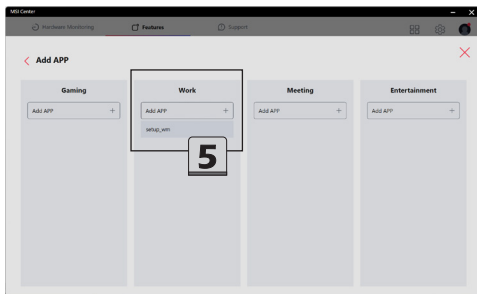
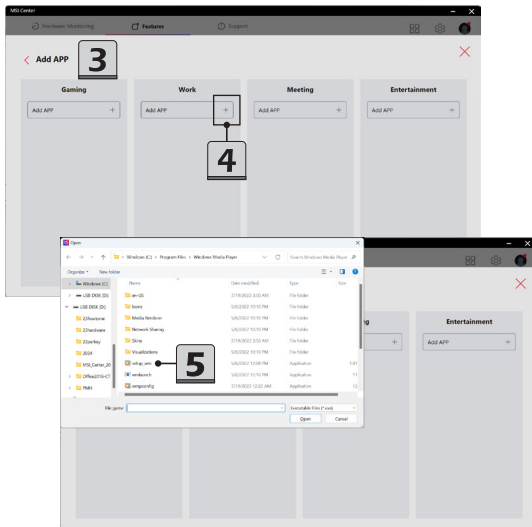


How to Setup Personal Intelligent Profile

MSI AI Engine is capable of synchronizing the Intelligent Profile when a specified application is launched, the system will switch on MSI AI Engine simultaneously.

1. Go to MSI Center [Features > **MSI AI Engine**].
2. Toggle ON **MSI AI Engine**, and click the Gear icon next to it.
3. Move the mouse cursor to Add APP under Intelligent Profile, and then click on it to open Add APP page.
4. Appoint a specified application to a particular Intelligent Profile by clicking on [+] symbol.
5. Find and appoint an EXE file of a specified application to a selected Intelligent Profile.

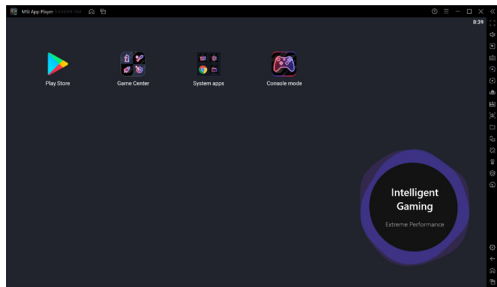
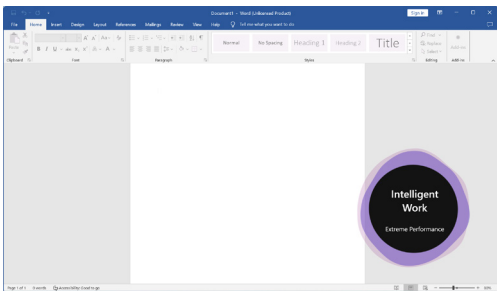




How MSI AI Engine Takes Effect

MSI AI Engine is capable of synchronizing the Intelligent Profile, Gaming, Work, Meeting, or Entertainment to a specified application to eliminate the need for you to fiddle with various settings. Once a specified application is launched, the system will switch on MSI AI Engine and the related Intelligent Profile simultaneously and automatically.

1. Refer to the previous instructions to switch ON **MSI AI Engine** or setup a personal Intelligent Profile if needed.
2. Launch a specified application, and the system will switch on MSI AI Engine simultaneously.

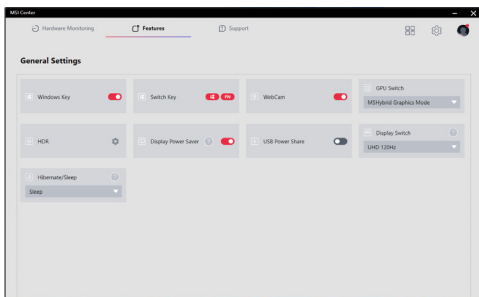


General Settings

Go to MSI Center [Features > General Settings] and you can enable/disable some general settings in this page.

Functions listed here may differ from model to model.

1. Windows Key: Enable or disable Windows Key on the keyboard.
 2. Switch Key: Click to switch the Windows key and the Fn key on the keyboard.
 3. WebCam: Enable or disable WebCam function
 4. GPU Switch: Select MSHybrid Graphics Mode or Discrete Graphics Mode or Integrated Graphics Mode.
 5. HDR: Enable or disable the steaming HDR video function.
 6. Display Power Saver: To lower the panel refresh rate when the power the in unplugged to prolong battery life.
 7. USB Power Share: Enable or disable USB Power Share function.
 8. Display Switch: Select a proper display mode as needed.
 9. Hibernate/ Sleep: Switch to hibernate or sleep when close lid or press Power button.
-

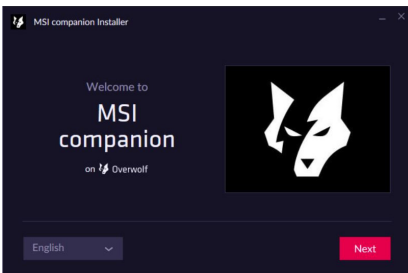
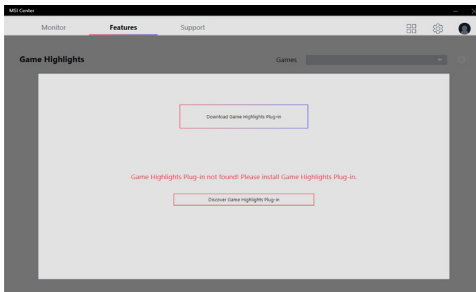


Game Highlights

Game Highlights feature automatically and intelligently creates highlight videos during gameplay that can be shared online.

To use Game Highlights for the first time, follow the on-screen instructions to download and install Game Highlights Plug-in, MSI Companion, before using it.

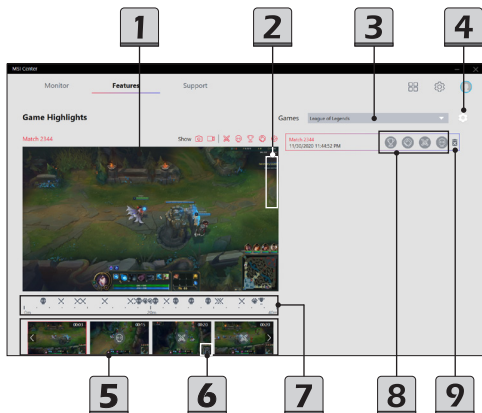
To activate MSI Companion, go to MSI Center [Features > MSI Companion].



Interface Overview

To use Game Highlights, go to MSI Center [Features > Game Highlights].

1. Game highlight video playback zone
 2. Open game highlight video files or share the game highlight video to a social media
 3. Drop-down menu which enclose the supported games
 4. Setting options for supported games, shortcut for capturing, and file managements.
 5. Thumbnails of auto captured game highlights
 6. Click to delete the specific game highlight clip
 7. Game highlight video timeline
 8. Record lists of game highlights
 9. Delete the game highlight video
-



MSI Companion

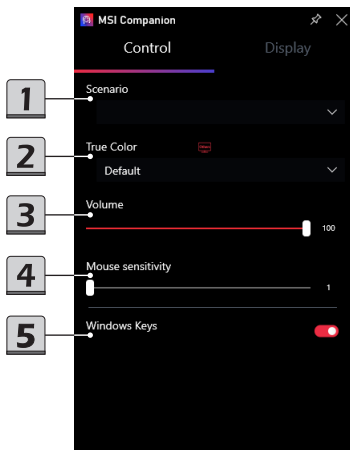
MSI Companion provides users a shortcut for multi-function controls and display during gameplay.

To activate MSI Companion, first install it from Features Sets. To open MSI Companion, click on Windows key + G. It can be found in the Widgets tab of the Xbox Game Bar.

When MSI Companion is activated, you may find Control and Display tabs for adjusting settings and getting real-time info of your notebook.

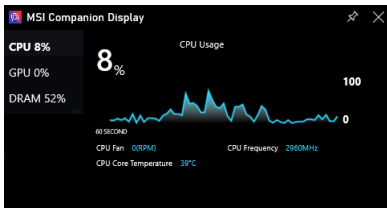
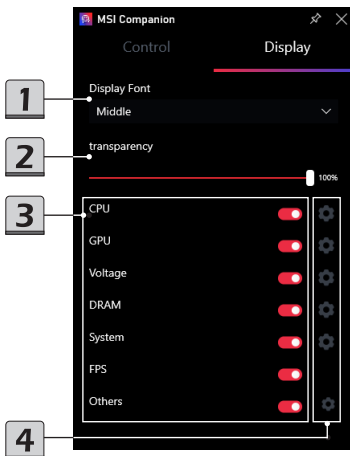
Control tab

1. Interactive selection of User Scenario
 2. Interactive selection of True Color
 3. Adjust system volume
 4. Adjust mouse sensitivity
 5. Set Windows Keys On/Off
-



Display tab

1. Adjust font size for system monitor
 2. Adjust transparency for monitor background
 3. Select the a required system performance to display on the screen
 4. Click the gear icon of each item to bring out its sub-menu
-



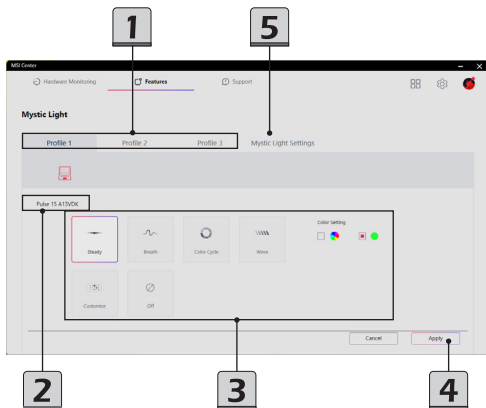
Mystic Light

* Optionally supported for selected models.

Mystic Light allows users to control keyboard LED light effects easier and quicker. Go to MSI Center [Features > Mystic Light] to do the setup.

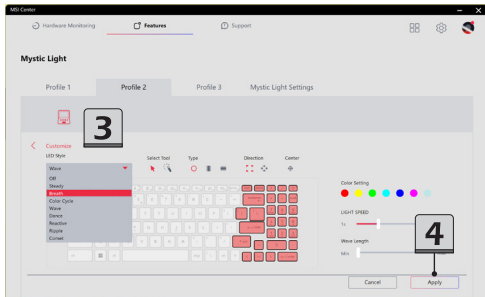
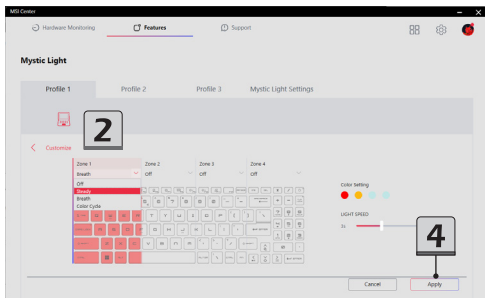
Function Overview

1. Profile: Setup your own keyboard LED light effects to Profile 1~3. Select one by clicking on the Profile buttons.
 2. Device name.
 3. LED Effect selections: Select one and setup the LED light effects, colors, speed, and brightness level here.
The available options for each Light Effect mode may vary from devices.
 4. Apply button: Click to make all the selections taking effect.
 5. Mystic Light Setting: Click to enter Mystic Light setting page to make selections for third party devices.
-



Customizing personal LED Light Effect

1. Select [Customize] to customize the personal keyboard LED light Effect.
 2. **For models equipped with 4 zones RGB keyboard**, users are allowed to select an individual light effect for each zone.
 3. **For models which is equipped with Perkey RGB keyboard**, users are allowed to setup a light effect for each individual key.
 4. Click [apply] to confirm the selections.
 5. Contact the local dealer for further information of the product specification.
-



Ambient Link

* Optionally supported for selected models.

Ambient Link provide visual color feedback on Philips Hue and Nanoleaf depending on what is happening in games. To use Ambient Link, click on [Ambient Link] and follow the instructions below to complete the link setup.

Network Requirements

1. The router is broadcasting a 2.4GHz network.
2. The Wi-Fi network is using WPA/WPA2 security.
3. The router is configured for any of the Wi-Fi modes a/b/g/n.

Philips Hue Setup (optional)

1. Plug in your Hue bridge and it will automatically power up.
2. Connect it to the router LAN port.
3. Wait for the two lights to come on and you are good to continue.
(Left is power light and center is local network light.)
4. Download the Philips Hue app from App Store or Google Play Store.
5. Make sure your phone is connected to the same Wi-Fi network as the Bridge.
6. Find your Hue bridge and add lights in the app then enjoy Philips Hue!

Nanoleaf Setup (optional)

1. The router is compatible with Bonjour (mDNS)
2. Android requirements:
 - Android OS 5.0 or higher
 - Location services are turned on (location services are required for Wifi scanning and discovering the Light Panels. These can be disabled once the Light Panels are connected in the app)
 - For best results in setting up, please forget your 5GHz network (if applicable) and turn off Bluetooth. You can re-enable these once setup is complete
3. iOS Requirements:
 - iOS 9.0 or higher
 - Signed into iCloud using their Apple ID.
 - iCloud keychain enabled
 - Allowing the home app to have access to location

How to reset the Light Panels

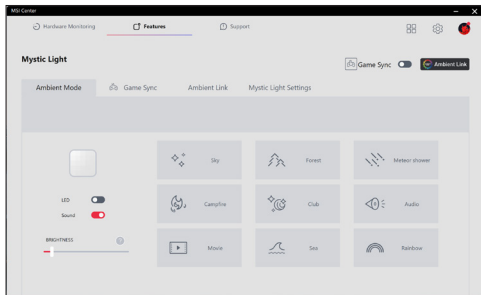
The Light Panels can only be connected to one Wifi network at a time. The following steps will help users to reset the Light Panels, so that the Light Panels can be connected to a new network or reset back to the factory settings.

The following instructions will lead users to do a soft reset. By doing so, only the Wifi connection and all pairing information for your Light Panels will be reset, but all the scenes will be kept.

1. Plug in your Light Panels into power. After a 1 minute boot up sequence, the Panels will show the last Scene that during previous game playing.
2. Press and hold down the Effect Select and Power buttons on the controller for about 10 seconds until the LED turns on, and the controller starts flashing.
3. Release the two buttons, the LED stays on, and the controller remains on and steady.
4. Delete the previous device from the app and setup once again.

Enter Ambient Link Control Panel

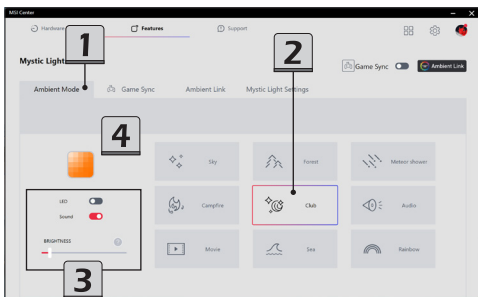
Go to MSI Center [Features > Ambient Link] to enter Ambient Link control panel.



Be noted that, in Ambient Link control panel, you can only have Game Mode or Ambient Mode taking effect one at a time.

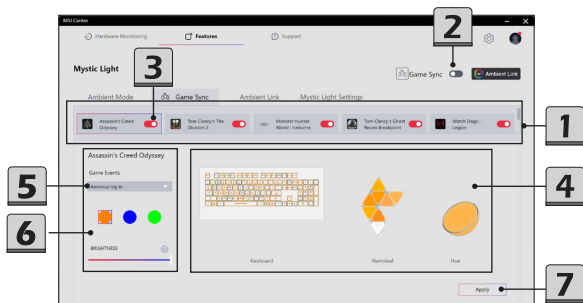
Ambient Mode

1. Click on Ambient Mode tab
 2. Select a preset effect as background light.
 3. Set on/off the background light and music. Use the slider to adjust the brightness level of the background light.
 4. Preview the selected effect.
-



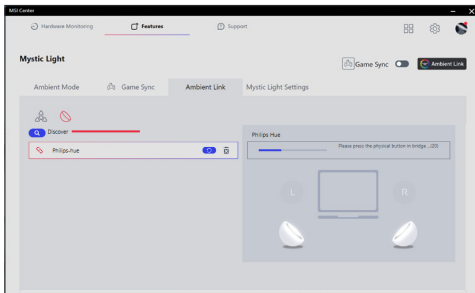
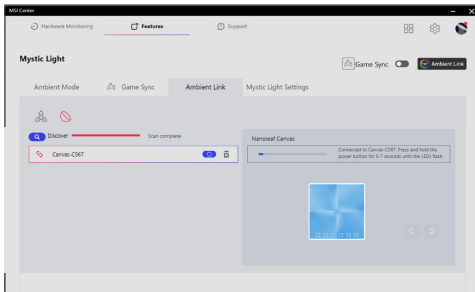
Game Mode

1. Click on Game Mode tab, select a game to access the game control panel.
 2. Main switch of synchronization.
 3. Enable or disable the synchronization between the game and the device connected.
 4. Preview the effect.
 5. Select an event within the Game Events drop-down menu.
 6. Setup the effect for the selected event.
 7. Click [Apply] button to make all the selections taking effect.
-



Ambient Link

Click on Ambient Link tab. Select either Nanoleaf or Philips Hue by click on it.

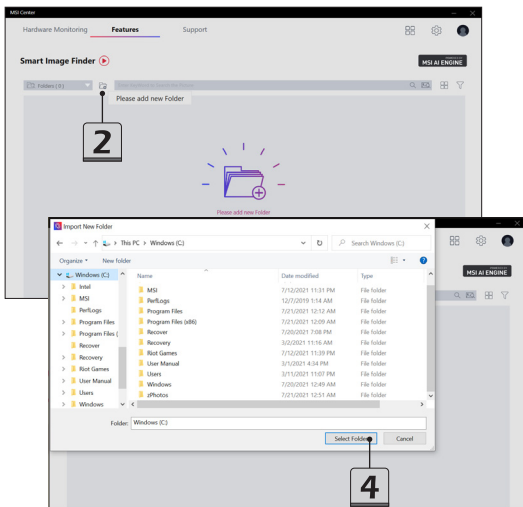


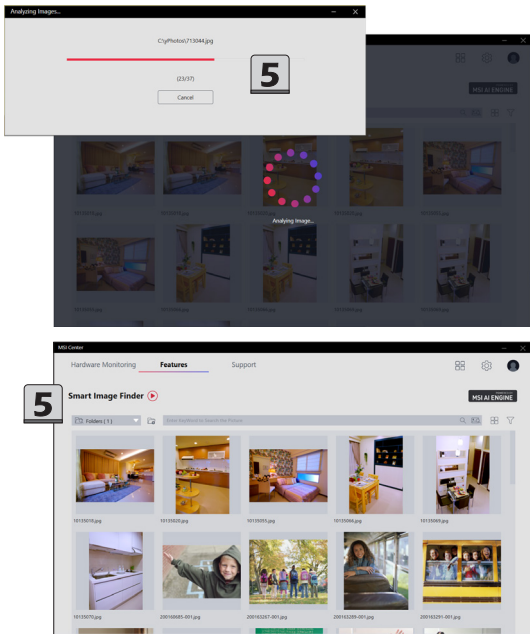
Smart Image Finder

With the help of Smart Image Finder, users will no longer have troubles finding the image they want among the many images. Smart Image Finder is capable of filtering the imported images, and giving tags to them automatically. Thus, users will be able to search for or filter out the specific images in a second. Let's experience an intelligent way of managing images now!

How to Import Images to Smart Image Finder

1. Go to MSI Center [Features > Smart Image Finder]
 2. Move the mouse cursor to the Folder icon and left click on it to bring out the [Import New Folder] window.
 3. Select the folder where the images are placed and ready to be imported.
 4. Click [Select Folder] to continue.
 5. Importing and analyzing the selected images.
-





How to Tag/ Untag an Image

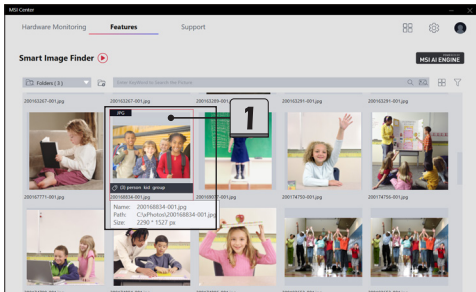
Smart Image Finder is capable of filtering the imported images, and giving tags to them automatically. At the same time, users are also allowed to give personal tags to those images imported manually.

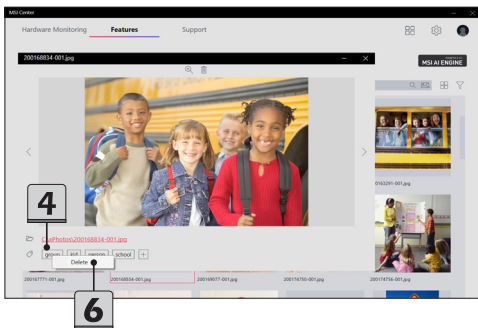
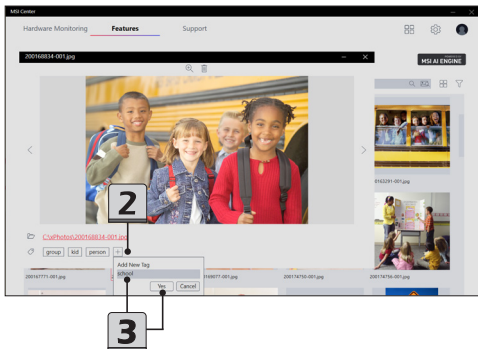
Add a Tag

1. Move the mouse cursor to an image and then double click on it.
2. Move the mouse cursor to [+] icon and click on it.
3. Give some key words to add a new tag, and then click [Yes] to confirm the action.

Delete a Tag

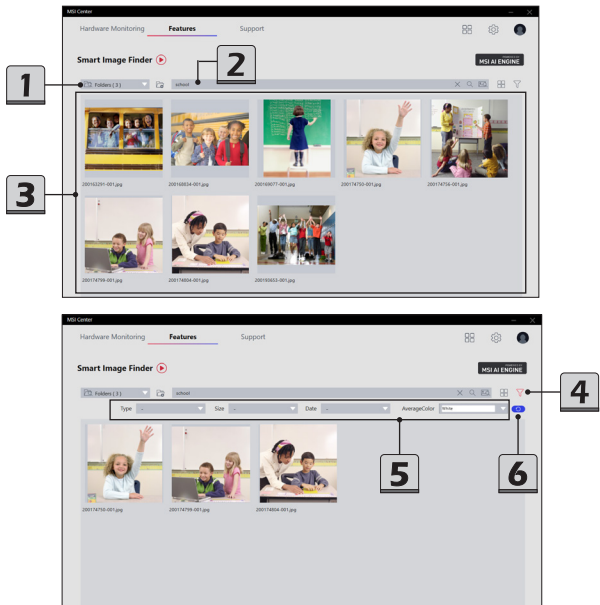
4. Move the mouse cursor to a tag which is no longer needed.
 5. Right click on the selected tag.
 6. Click on [Delete] to remove the tag.
-





How to Filter the Imported Images

1. Select the folder where the target images are placed.
2. Give a keyword for filtering the images.
3. Get the images with the instructed tag.
4. You may also give advanced commands to filter the images. Simply move mouse cursor to [Image Filter] icon and click on it.
5. There are 4 advanced filtering commands--Type, Size, Date, and Average Color. According to your needs, select proper advanced filtering commands to continue.
6. Click on [Reset] icon to reset the selected filtering commands back to default.



True Color

* Optionally supported for selected models.

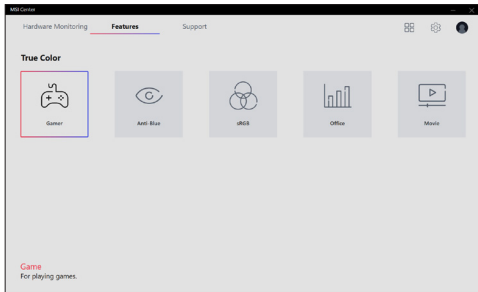
True Color Technology guarantees exceptional color fidelity of close to 100% sRGB.

Users are allowed to choose a proper view mode to meet their needs among the various preset view modes provided by True Color.

Be note that the preset view modes may vary from model to model.

True Color preset view modes

1. Gamers: this mode is best suit for game playing.
 2. Anti-Blue: this mode can reduce the amount of blue light that is emitted from the display to reduce eye fatigue.
 3. sRGB: this mode is for accurate color when viewing images on the web.
 4. Office: this mode is best suit for office and productivity applications.
 5. Movie: this mode is for watching movies
-



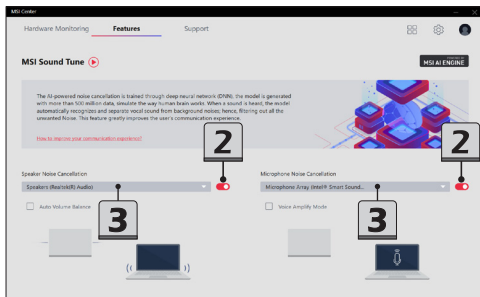
Noise Cancellation

* Optionally supported for selected models.

The AI-powered noise cancellation is trained through deep neural network (DNN), the model is generated with more than 500 million data, simulate the way human brain works. When a sound is heard, the model automatically recognizes and separates the vocal sound from background noises. Hence, filtering out all the unwanted noise. This feature greatly improves the users' communication experience.

How to Make Noise Cancel Take Effect

1. Go to MSI Center [Features > Noise Cancellation > MSI Sound Tune].
 2. Make sure to set Speaker Noise Cancel and Microphone Noise Cancel to [ON].
 3. Select a device from the drop-down menu.
-



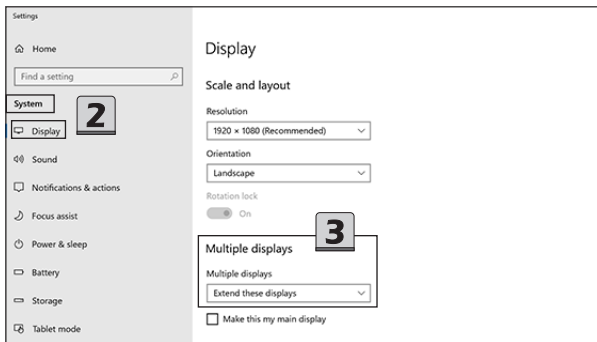
Duet Display

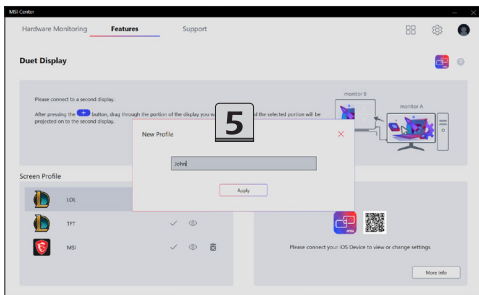
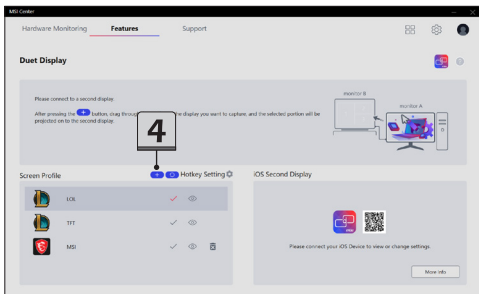
* Optionally supported for selected models

With this function, Duet Display, you may extend the screen across multiple monitors or turn your iOS devices into a second display.

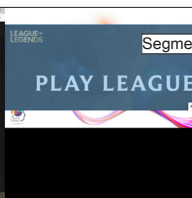
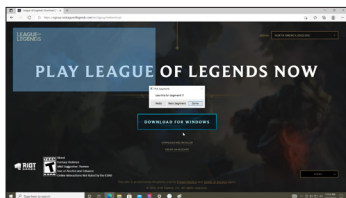
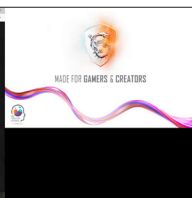
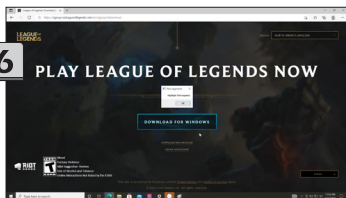
How to setup a Screen Profile

1. Connect a second display.
 2. Go to Windows [Start > System > Display] and find Multiple displays option.
 3. The system will detect automatically if there is a second monitor connected. Select [Extend] under Multiple displays option.
 4. Go to MSI Center [Features > Duet Display]. To make a screen profile, move the mouse cursor to [+] and click on it.
 5. Give a name to the New Profile.
 6. To pick segments of the display for the new Profile, use mouse to drag and snip maximum 3 segments, and then click [Done] to finish.
 7. A new profile added successfully.
 8. To activate a profile under Screen Profile, move the mouse cursor to click on the [V] icon of the selected profile.
 9. Click [Yes] or [No] to decide switching between captured and projected display.
-

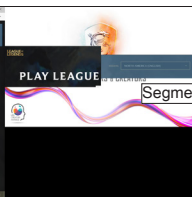
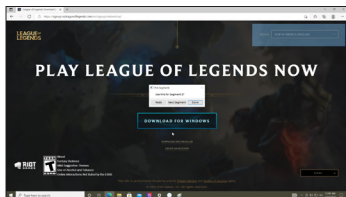




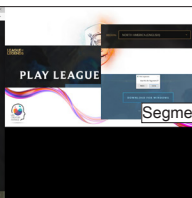
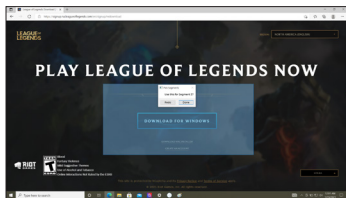
6



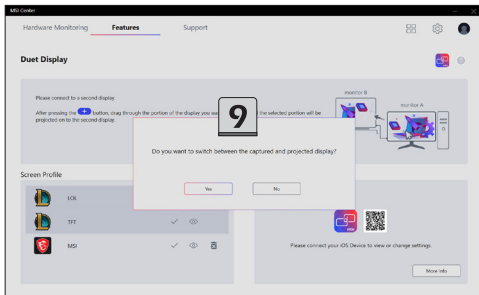
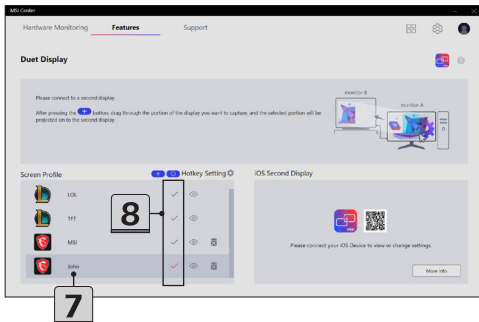
Segment 1



Segment 2

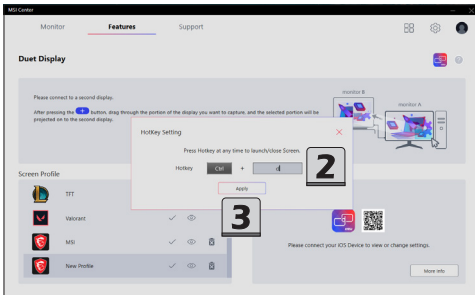
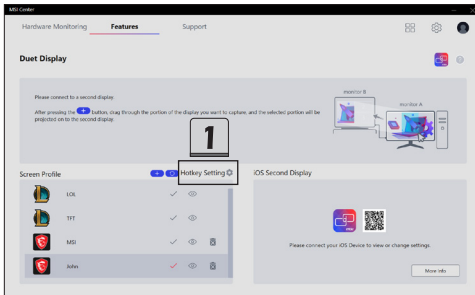


Segment 3



How to setup a Hotkey to launch Duet Display

1. Move the mouse cursor to the [HotKey Settings] icon and click on it to browse the HotKey Setting dialog box.
 2. Setup a hotkey for launching or closing the selected Duet Display screen profile.
 3. Click [Apply] to make the hotkey taking effect.
-



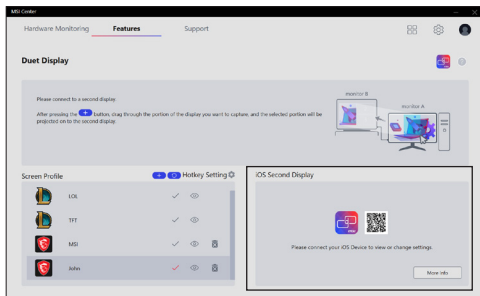
How to use iOS Screen Mirroring

* This function is only available with iOS devices connected.

Before using this function, find and download [duet coach] from Apple App Store.

Duet Coach is capable to turn your iPad or iPhone into a high performance display to mirror your MSI PC. Once an iOS device is connected to the notebook, users will be able to interact to the notebook by using fingers or stylus through the iOS multi-touch display.

Please connect your iOS device to MSI notebook with an Apple Certified Charging Cable and activate MSI Center to get Duet Coach support. Follow the on-screen instructions to continue.



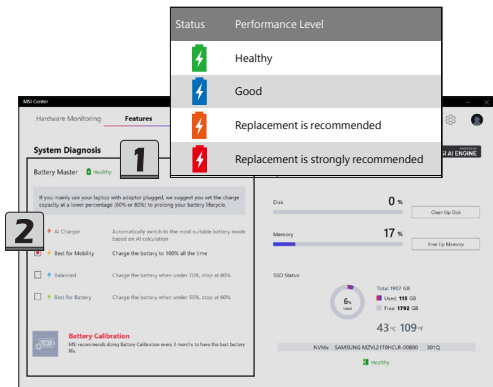
System Diagnosis

System Diagnosis provides real-time battery and system status of the notebook. Use Battery Master to manage the battery with a wiser way; and use System Checker to analyze the storage and memory usage.

Battery Master

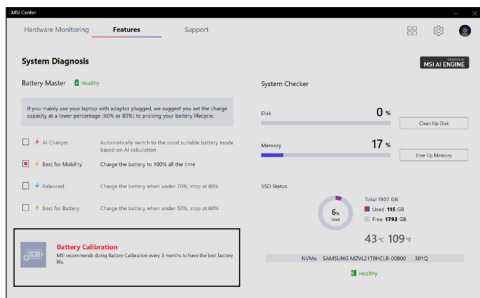
Go to MSI Center [Features > System Diagnostics] and find [Battery Master].

1. Users may distinguish the battery health status by the colors of the battery icon.
 2. Select a suitable Battery modes for different usage.
 - AI Charger: automatically switch to the most suitable battery mode based on AI calculation.
 - Best for Mobility: Charge the battery to 100% at all time.
 - Balanced: Charge the battery when under 70%, and stop charging at 80%.
 - Best for Battery: Charge the battery when under 50%, and stop charging at 60%.
-

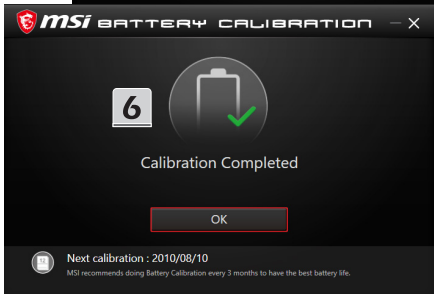


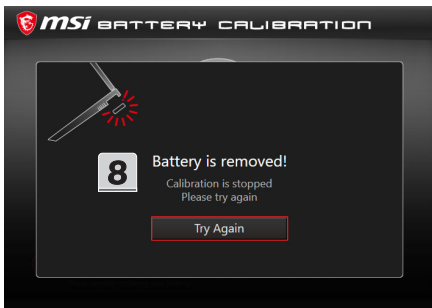
Battery Calibration

Go to MSI Center [Support > System Diagnostics] and find [Battery Calibration](#). Click on the [Battery Calibration] icon.



1. If you are using the Battery Calibration process for the very first time, at the [Status] field, there will be no information telling the date of last calibration.
2. Before starting the Battery Calibration process, it is required to check that the following conditions, a green signal will appear for each item if they meet the requirement:
 - The AC/DC adapter must be connected.
 - The battery must be installed properly.
 - No any other application is activated.
3. A red signal will appear, if any condition listed above does not meet the requirement.
4. Click on the [Start] icon to start the Battery Calibration process.
5. The calibration process status will be shown on the display telling users that the system is now charging, recharging, or discharging.
6. Calibration completed.
MSI recommends doing Battery Calibration every 3 months to have the best battery life.
7. If the calibration process kept going failed, please replace the battery only with the same or equivalent type recommended by the manufacturer. Consult an authorized retailer or service center for further information and assistance.
8. If the AC/DC adapter is disconnected during the calibration process, a warning notification will appear. Please reconnect the AC/DC adapter to continue the calibration process within 15 seconds; otherwise the calibration process will stop automatically.

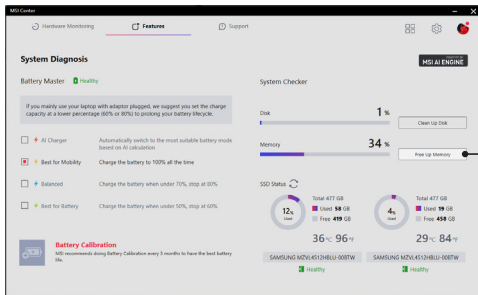
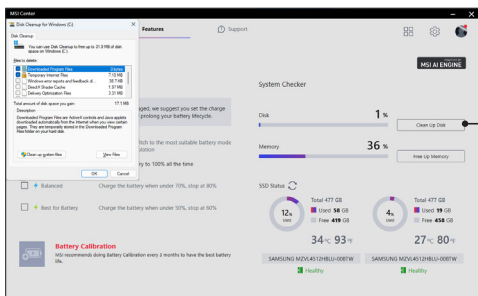





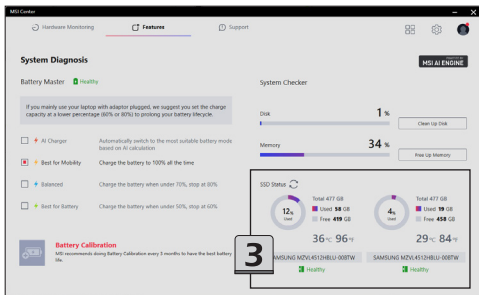
System Checker

Go to MSI Center [Features > System Diagnosis]. Users may read the real-time status of the HDD and SSD storage and memory usage.

1. To clean up the disk, move the mouse cursor to [Clean Up Disk] and right click on it to bring the dialog window of [Disk Cleanup for Windows], and then follow the on-screen instructions to clean up the disk.
2. To free up the memory, simply move the mouse cursor to [Free Up Memory] and right click on it.



3. SSD status provides the information of SSD model, capacity, temperature, health status. Users may distinguish the SSD health status by the colors of the SSD icon. Click the refresh icon  to get the SSD status refreshed when it is needed.



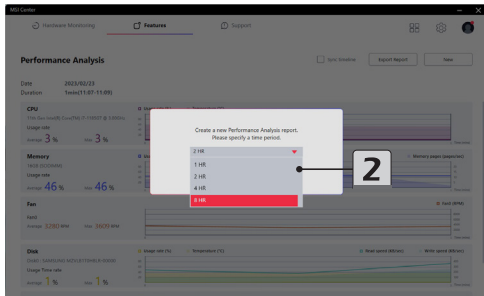
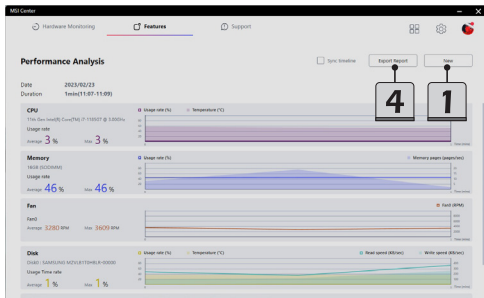
Status	Performance Level
	Healthy
	Good
	Replacement is recommended
	Replacement is strongly recommended

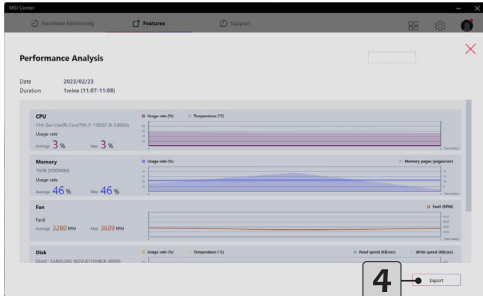
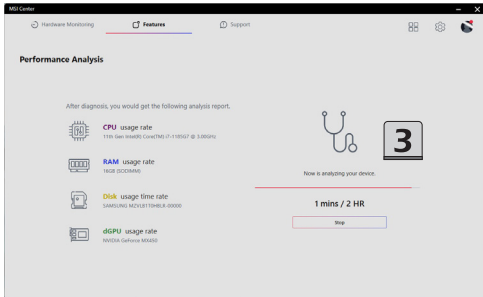
Performance Analysis

Performance Analysis provides system performance analysis report of the notebook. With this function, users may be able to learn the basic system performance whenever is needed.

Go to MSI Center [Features > Performance Analysis].

1. Click on [New] to create a new Performance Analysis report.
2. Specify a time period.
3. Follow the on-screen instructions to generate the report as specified.
4. It is allowed to export the Performance Analysis report by clicking the [Export Report].



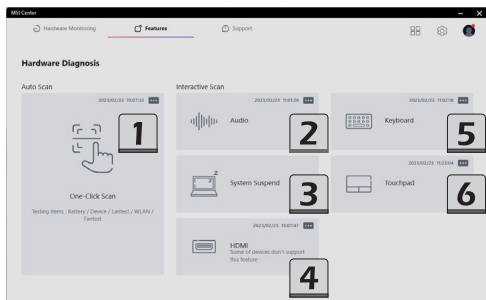


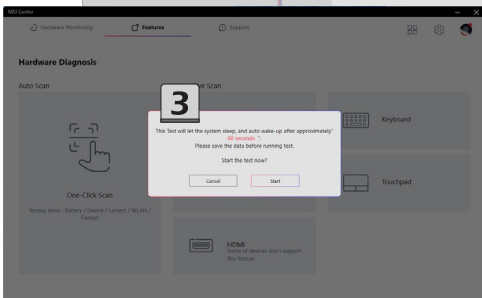
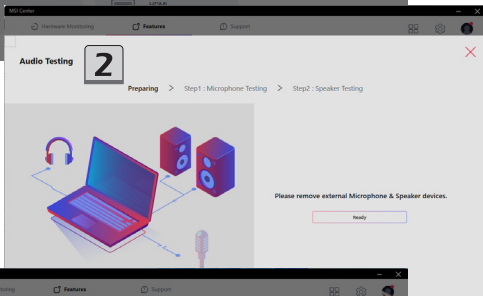
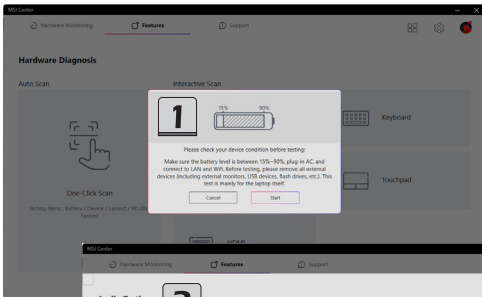
Hardware Diagnosis

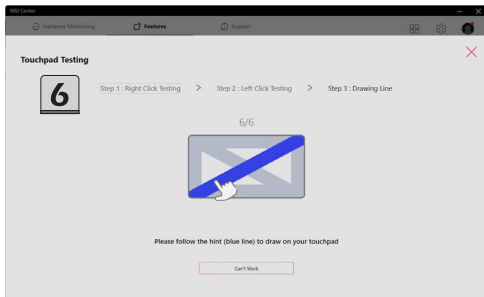
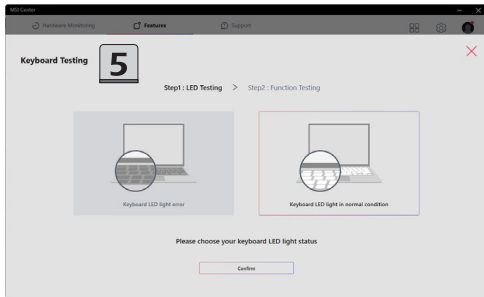
Hardware Diagnosis is capable of doing a quick self-examination for the hardware devices of the notebook.

Go to MSI Center [Features > Hardware Diagnosis], and follow the on-screen instructions to continue the self-examination procedures.

1. One-Click Scan: check the status of the battery, LAN, WLAN, Fan module, etc.
 2. Audio: check the internal audio devices status.
 3. System Suspend: set the system into sleep mode, and auto wake-up the system.
 4. HDMI: check the connection status of HDMI devices.
 5. Keyboard: check the keyboard LED status.
 6. Touchpad: check the touchpad status.
-



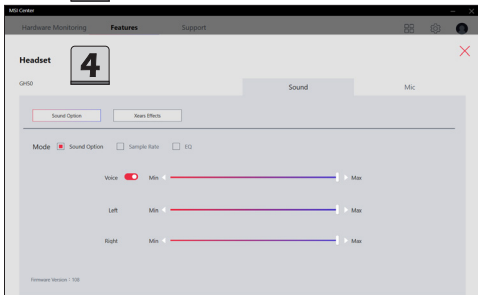
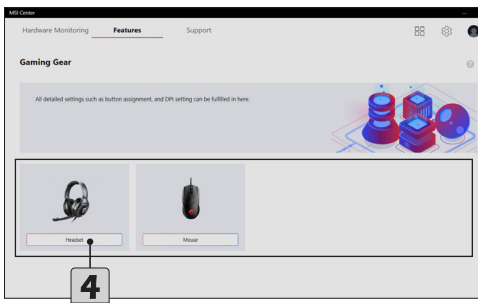




Gaming Gear

This page will only be available when MSI gaming gear or supported third-party devices are connected to your notebook. You are allowed to setup specific options to the devices connected.

1. Connect MSI gaming gear to your notebook.
 2. Go to MSI Center [Features > Gaming Gear]
 3. Follow the on-screen instructions to install necessary drivers, if needed.
 4. Move the mouse cursor to the detected devices shown on this page, and click on the device button to enter its setting page.
-

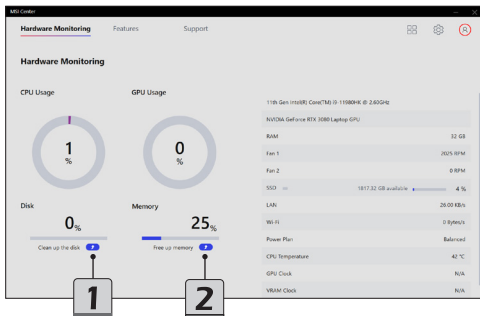


Hardware Monitoring

Monitor provides a real-time status of the CPU Usage and GPU Usage.

Activate MSI Center and click on Monitor to browse the page.

1. Click and follow the on-screen instructions to clean up the appointed disk.
 2. Click to free up the memory.
-



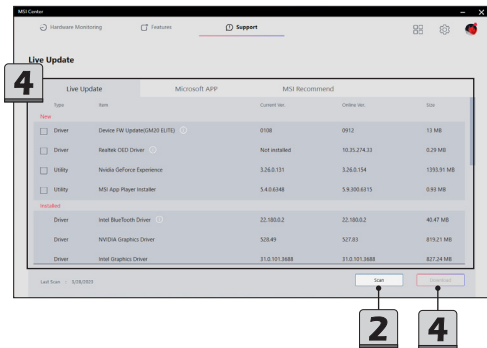
Support

Within **Support** page, you may find the advanced functions included: Live Update, System Info, MSI Recovery and Knowledge Base.

Live Update

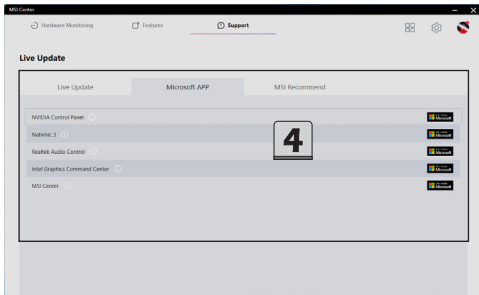
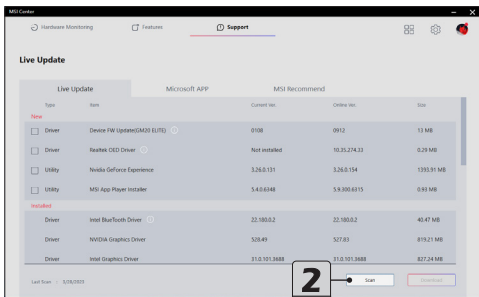
Live Update

1. Connect to Internet, and go to MSI Center [Support > Live Update].
 2. Move the mouse cursor to [Scan] icon, and click on it.
 3. Live Update is capable to analyze the system automatically and give a list with every latest drivers and utilities available for updating.
 4. Select a required driver or utility for updating, and then click [Download] to continue. Follow the on-screen instructions to complete the installation.
 5. You may read the message [No Internet connection]. Please connect to the Internet and retry], please check the Internet connection.
-



Microsoft APP

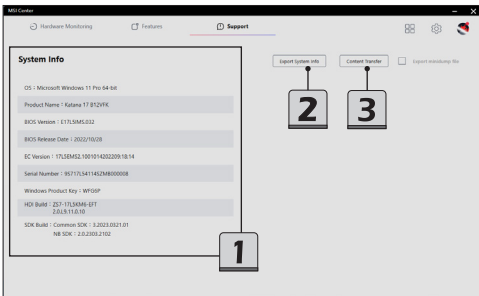
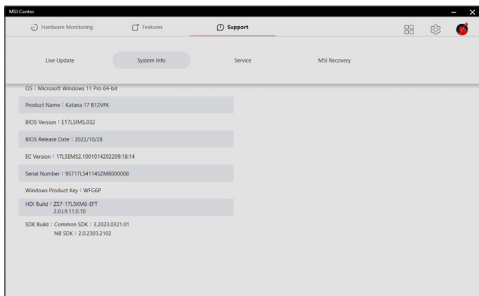
1. To use this function for the very first time, analyzing the system by Live Update is a must.
 2. Connect to internet, go to MSI Center [Support > Live Update], and click [Scan] icon.
 3. Go to Microsoft app now, users will get a list with compatible utilities.
 4. Select a desired utility, and follow the on-screen instructions to downloading the APP.
-

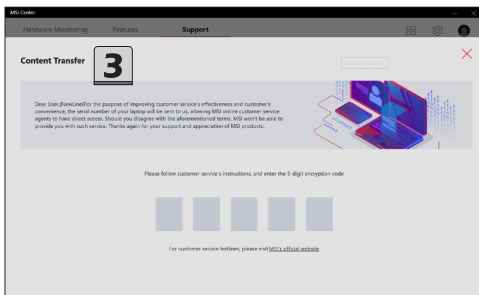
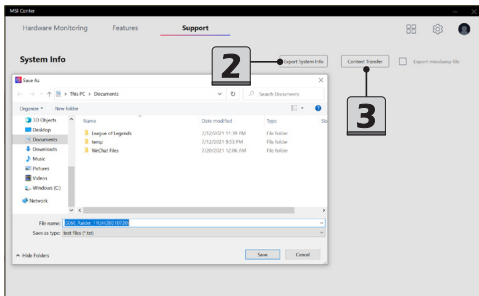


System Info

Go to MSI Center [Support > System Info].

1. System Info: Read-only system information provided here.
 2. Export System Info: Export the current system information data to a .txt file.
 3. Content Transfer: Use this function when contacting MSI online customer service agents. Follow the instructions given by the online agent to continue.
-





Service

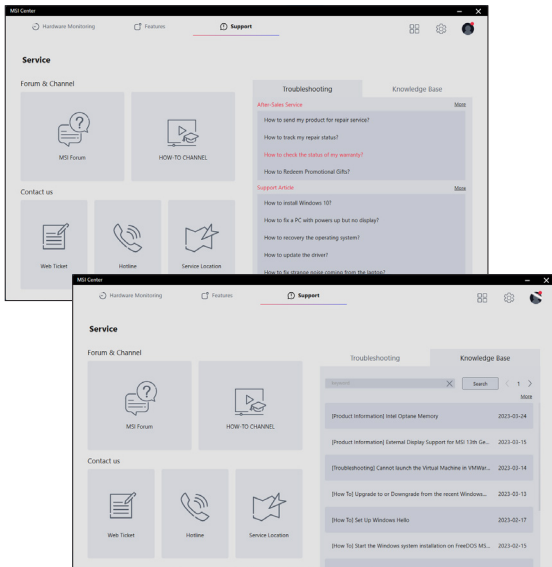
Trouble Shooting and Knowledge Base

In Trouble Shooting and Knowledge Base page, user can find a list of frequently asked questions and answers, giving them possible instructions to solve basic situations.

Go to MSI Center [Support > Service].

Users can search for related information by searching for the keywords in the search toolbar.

Move the mouse cursor to click on [More] to get more information at MSI official website.



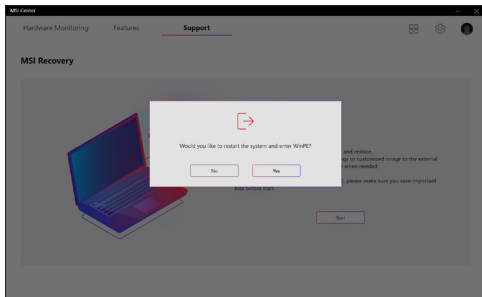
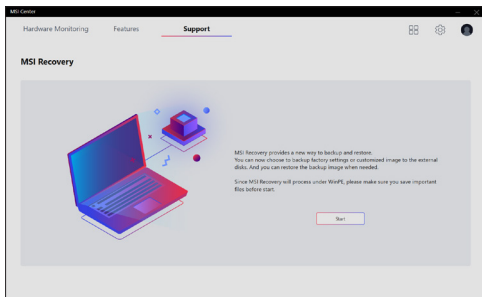
MSI Recovery

Use this function to make a recovery image to a USB flash disk to recover the system back to the initial status of original manufacturer's default settings, or the customized recovery point.

Be aware of backing up the important data to other storage devices before using this recovery function is a must.

Go to WinPE to Use MSI Recovery

1. Go to MSI Center [Support > MSI Recovery].
 2. Click [Start] and then [Yes] to enter MSI Recovery main page under WinPE.
-



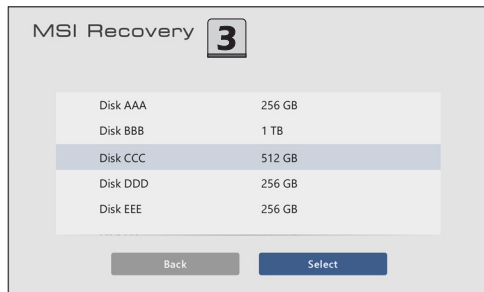
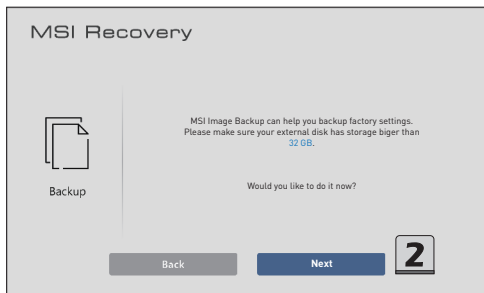


Create a MSI Rescue USB disk

1. To use MSI Recovery function for the very first time, it is a must to make a **MSI Rescue USB disk** first. With MSI Rescue USB disk, users may be able to fix or restore the system back to the factory default settings while the system encountering problems booting to Windows. Select [Backup] to start making MSI Rescue USB disk.



-
2. Insert an USB flash disk with minimum capacity 32GB required.
Click [Next] to continue.
 3. Select the path of the inserted USB flash disk and then click [Select] to continue.
 4. Be noted that making a **MSI Rescue USB disk**, the USB flash disk will be formatted, all data will lost.
 5. Follow the on-screen instructions to complete creating the **MSI Rescue USB disk**.
 6. Keep the **MSI Rescue USB disk** properly, it will be used whenever you perform the Backup and Restore functions.
-



MSI Recovery

5



0:15

Once started, cannot be interrupted.

Making BootDisk...

MSI Recovery



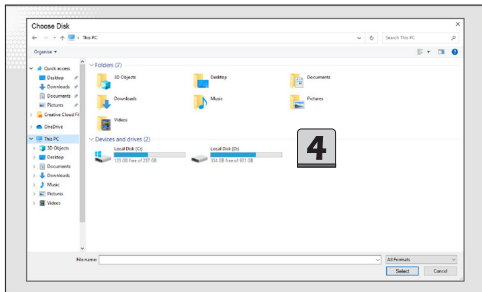
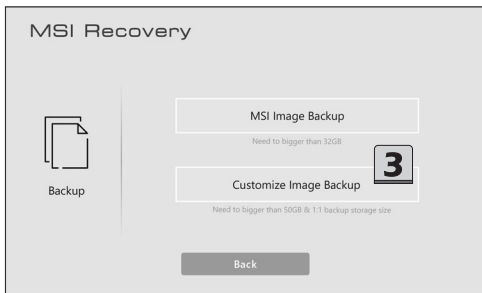
Image Back Up Successfully

Back to Main Page

Exit & Enter Windows

Create a Customize Image Backup

1. To make a Customize Image Backup, always be sure to have the **MSI Rescue USB disk** inserted to the notebook.
 2. Insert another USB flash disk or connect a hard disk with available capacity required.
 3. Select [Customize Image Backup] to continue.
 4. Select the path of the inserted USB flash disk or the connected hard disk, then select [Select] to continue.
 5. Follow the on-screen instructions to complete creating the Customize Image Backup in a *.wim file format.
 6. Keep the backup file properly, it will be used while performing the Restore function.
-



Recovering the System

If the hard drive or the system encountered non-recoverable problems, it is recommended to proceed the MSI recovery function with the MSI Image Backup or Customize Image Backup which you made in advance.

1. Go to MSI Recovery main page, and select [Restore].
 2. To perform the Restore function, always make sure that the **MSI Rescue USB disk** is inserted to the notebook.
 3. Connect the storage drive, where you can find the Customize Image Backup *.wim file, to your notebook.
 4. You may restore the system from MSI Image Backup to have the system restored back to the factory default settings.
 5. Or, to restore the system from the Customize Image Backup by finding and selecting the *.wim file from the connected storage drive to have the system restored back to a specific point in time. Click [Select] to continue.
 6. AC power is required while proceeding MSI Recovery function. Assure that the AC power is connected to the notebook before moving forward to the next step.
 7. Always make sure that the important data has been backed up before continuing MSI Recovery process.
 8. Follow the on-screen instructions to continue and complete MSI Recovery process.
-



MSI Recovery



0:15

Once started, cannot be interrupted.

D:\backupimage.wim 2020.12.08 13:25:08

[Restore MSI image...](#)

MSI Recovery



Restore Successfully

Restart System & enter Windows in 5s



MSI.COM



SUPPORT



SOCIAL MEDIA