



AIOT CLOUD CORP.

USB UltraLock

User Manual

AIOT CLOUD CORP.

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FAQ



User Guides

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PREFACE

Disclaimer

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Acknowledgements

The USB UltraLock is a trademark of AIOT CLOUD CORP. All other product names mentioned herein are registered trademarks of their respective owners.

Revision History

Version	Date	Description
v1.0	Oct 2022	1. New Release 2. Support Configuration Import/Export Function 3. Support Whitelist for USB Storage/Key Board/ Mouse

CHAPTER 1: USING THE USB ULTRALOCK

1.1 Introduction

The AIC USB UltraLock is a tool for configuring a white list for USB Storages & USB Keyboard/Mouse.

USB is a convenient interface, but it also exposes a security risk when used in industrial environments. “USB UltraLock Utility” can set specific USB Storages & USB Keyboard/Mouse as a white list to ensure the protection of Industrial PC(IPC).

Why an Industrial PC (IPC) need to protect his USB interfaces?

Industrial PC (IPC) is widely used in a specific environment, such as an airport, factory, railway station, hospital, department store, etc. They serve us in a variety of ways, but they are not always housed in a secure enclosure. For example, if you go to the back side of a signage player in an airport (which displays the flight schedules of the planes), an IPC box is attached to the panel. You can easily control it by plugging in any USB keyboard/mouse and a private USB storage. The signage system will become your personal computer without any security.

In the past, the only solution was to disable the USB ports by configuring the BIOS. However, this means that all the USB ports are disabled at the same time. If the customer wants to reboot, the BIOS has to be updated, which is a complicated process.

Another solution is to change the PCB layout circuit by adding a GPIO to the USB port power line, and then controlling the GPIO to turn on/off the USB port using a special utility. However, this method requires a layout change and higher cost.

The USB UltraLock Utility allows the customer to enable the connected USB peripherals by adding them to the white list. If they want to block them again, simply remove them from the white list and the USB peripherals will be disabled. As for restricting the use of USB drives, customers simply add the selected USB storages to the white list and other USB drives that are not on the white list will not work.

Check the operating system requirement before installing the USB UltraLock Utility. Operating systems supported are:

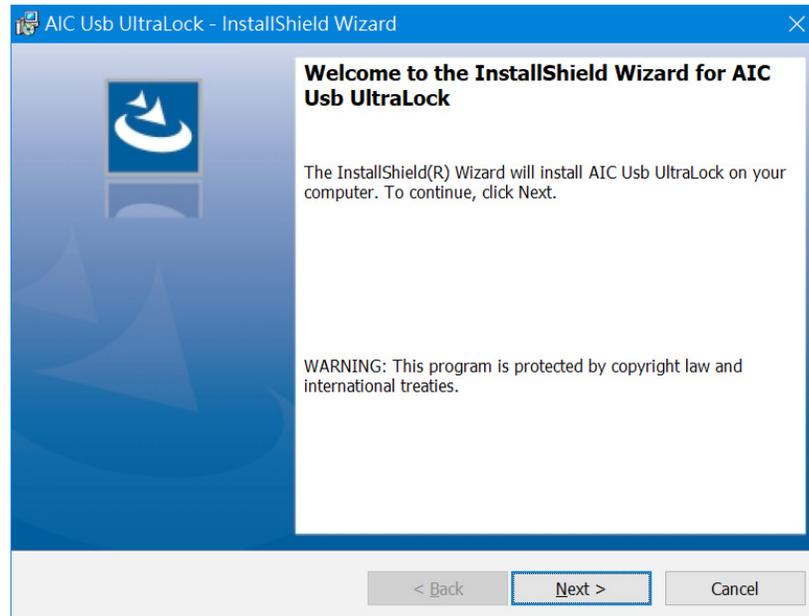
- Microsoft Windows 11 and Windows 10. Do not install any operating system that is not on this list.



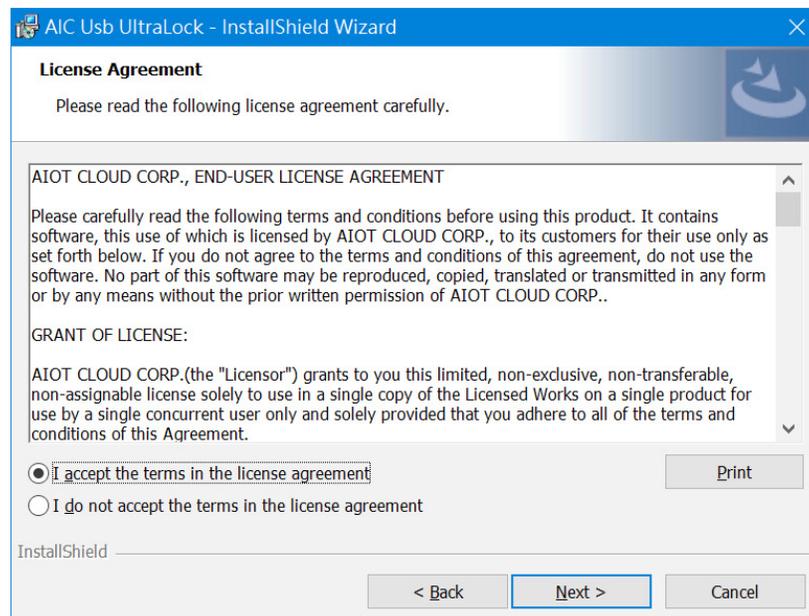
Warning: We are not responsible for any incorrect configuration or if you have lost your white list USB storage peripheral or KB/Mouse.

1.2 Installing USB UltraLock

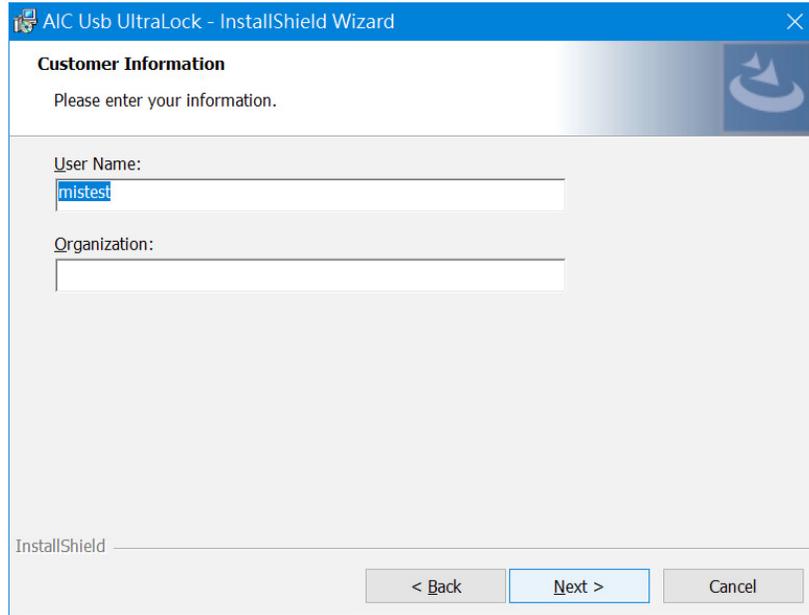
1. Double click on the filename of the USB UltraLock setup file, the installation wizard will prepare the setup process and click **Next**.



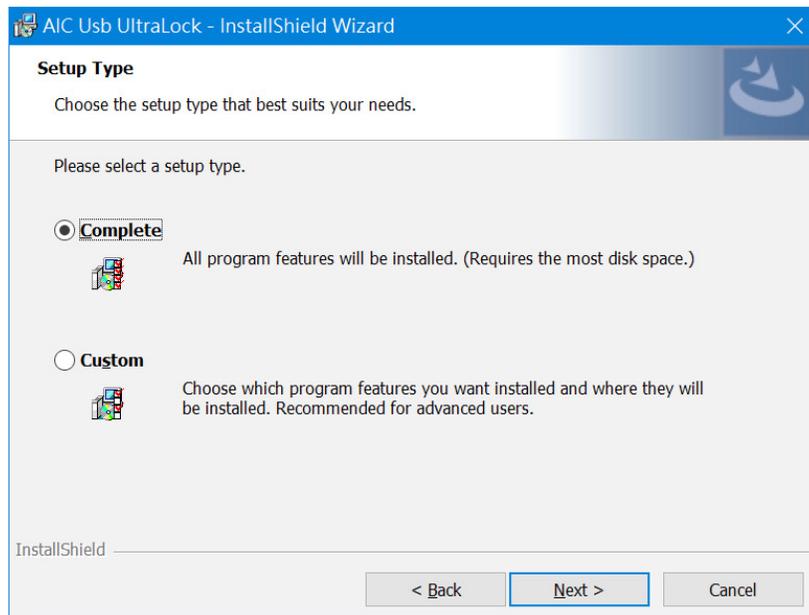
2. Check the **I accept the terms in the license agreement** option, and click **Next**.



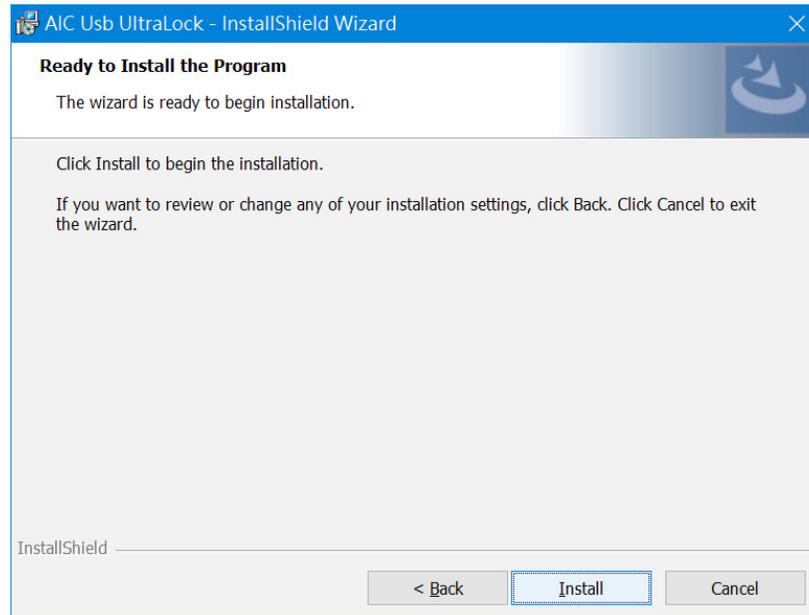
3. Enter the user information and click **Next**.



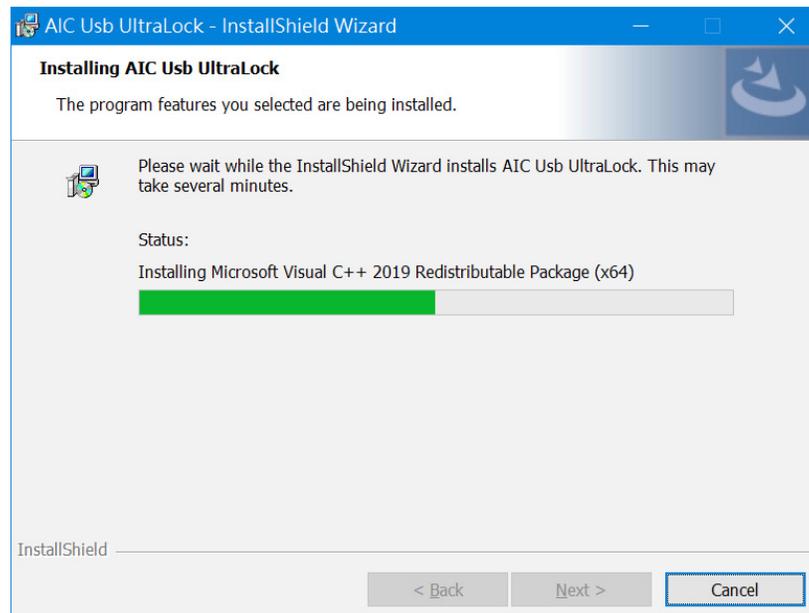
4. Select **Complete**, click **Next** to continue.



5. Click **Install** to begin the installation.

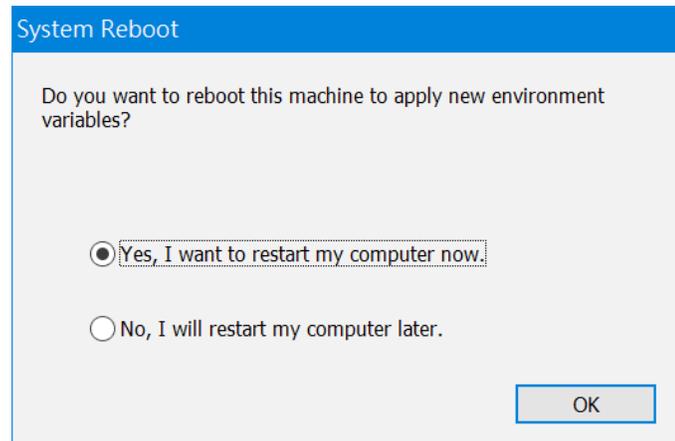


6. The installation will begin and may take a while.

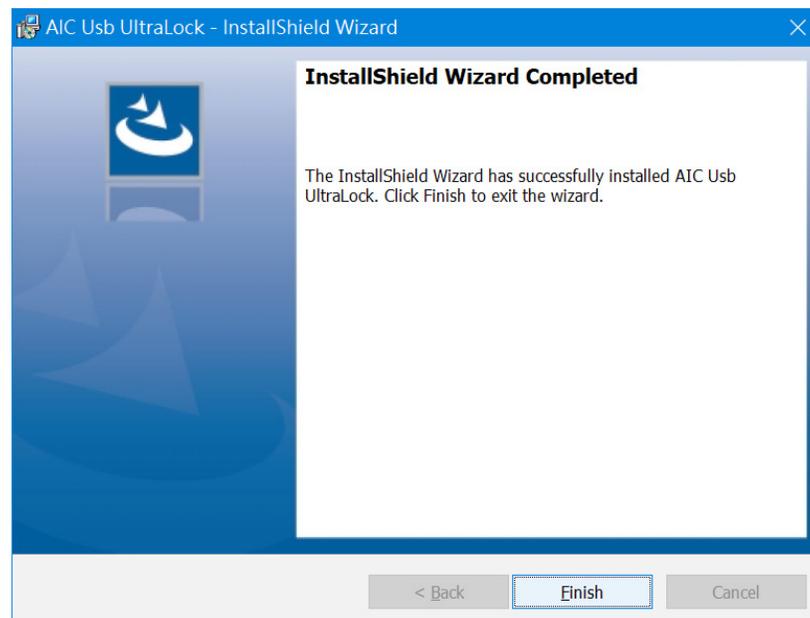




Note: Click **Yes** and then **OK** to reboot the system when the reminder dialog window appears on the screen.

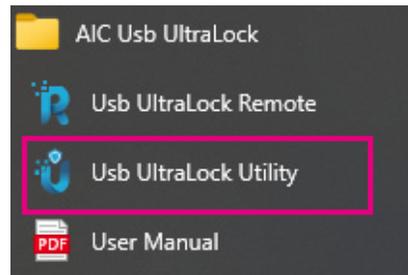


7. Once the installation is completed, click **Finish** to exit.

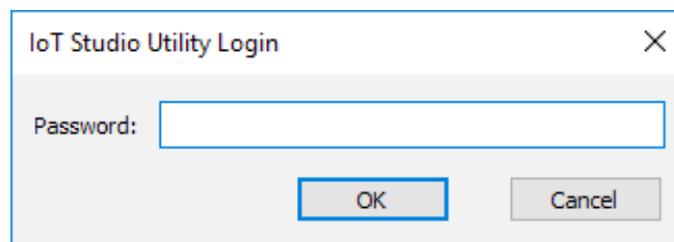


1.3 Launching USB UltraLock

1. Once installed, you should be able to find the program named **AIC USB UltraLock** in the **All Programs** list. Click on it () to launch the utility.

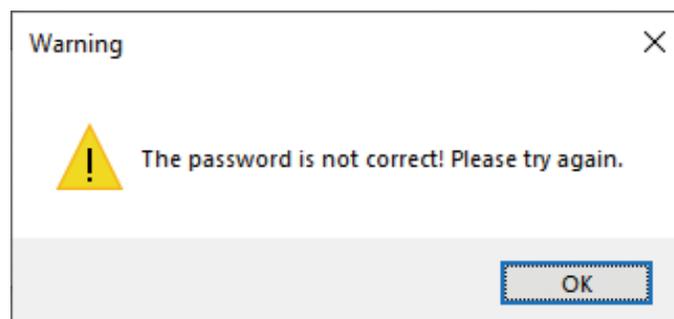


2. Enter the password in the respective field and click **OK**.



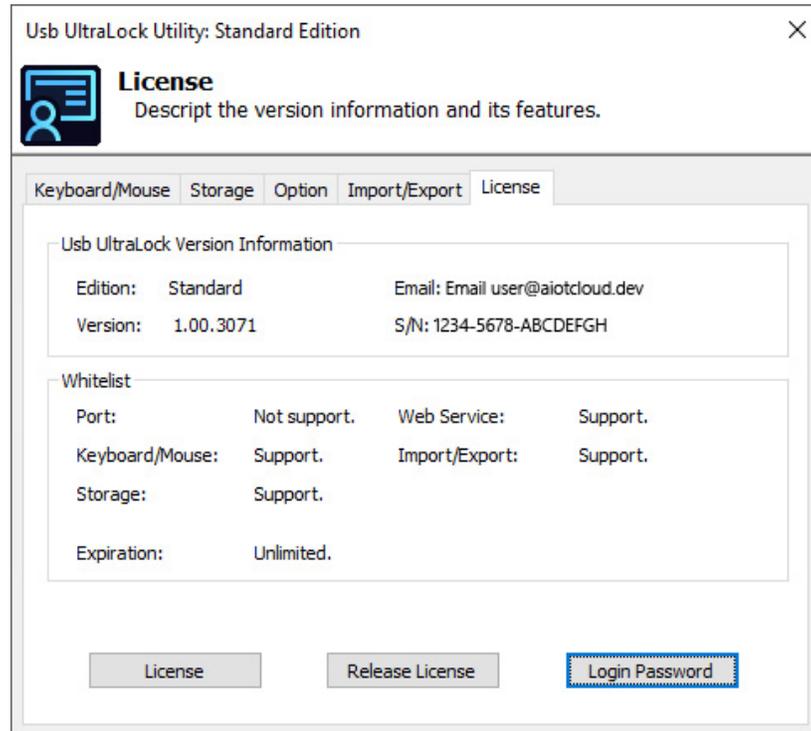
Note:

1. Use the default Password: 0000 to log in if you are logging in for the first time.
2. Remember to change the password frequently and keep it in a safe place to avoid hacking. Refer to [License](#) for setting the password.



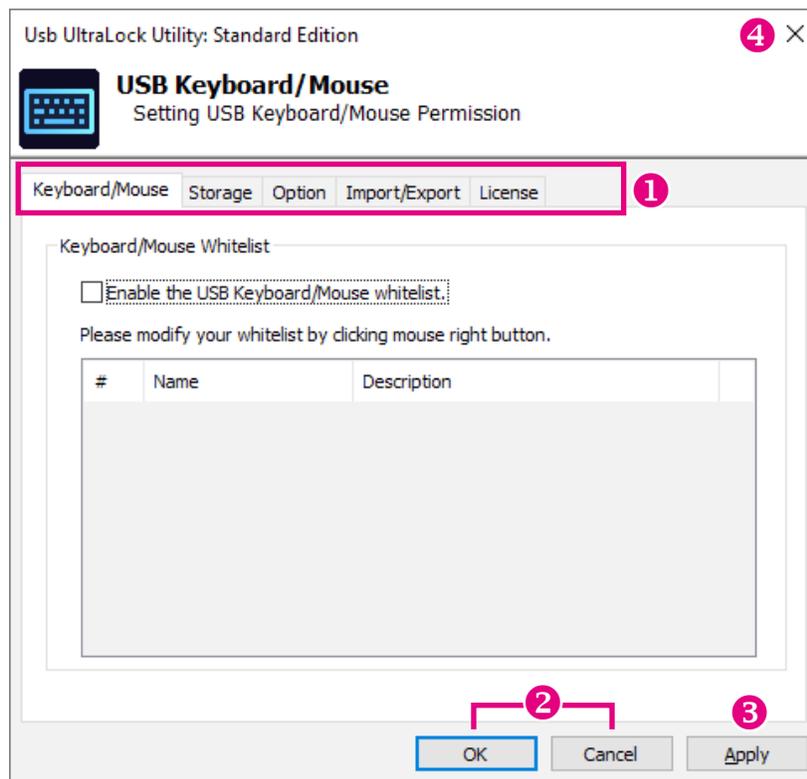
**A warning message will be prompted if an incorrect password is entered.*

3. The GUI of USB UltraLock will be displayed on the screen.



CHAPTER 2: AIC USB ULTRALOCK BASICS

AIC USB UltraLock consists 5 pages of information and menus for status and configurable parameters. Simply click on the respective tab for further configuration purposes with AIC USB UltraLock.



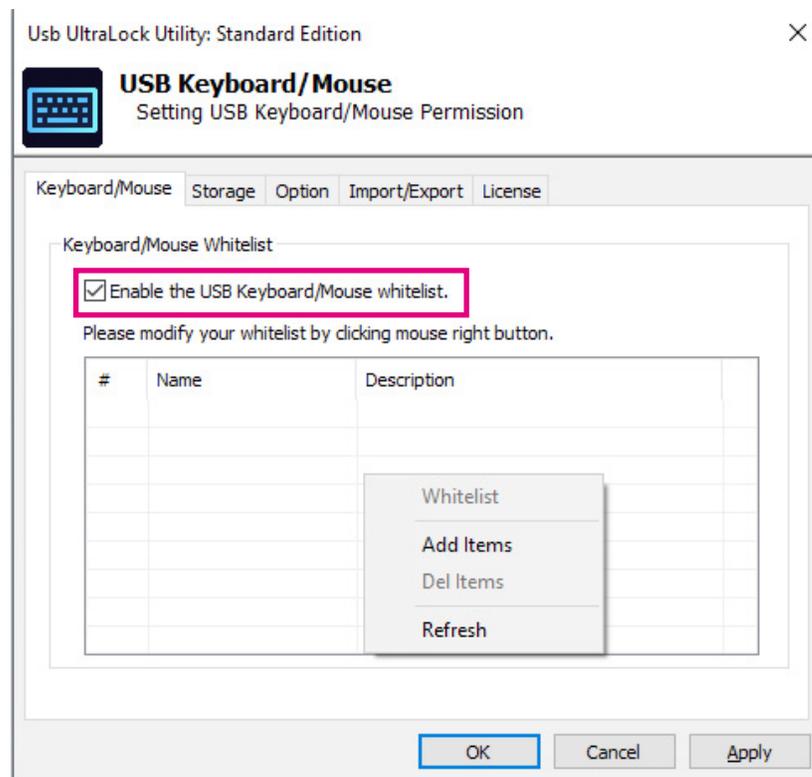
Item	Description
1	Menu Bar: Use the cursor to select the desired function menu for configuration.
2	Click OK or Cancel to hide the interface in the background.
3	Click Apply to make the configured parameters take effect. A message will prompt you with the option to restart the server.
4	Click on the X button to exit AIC USB UltraLock.

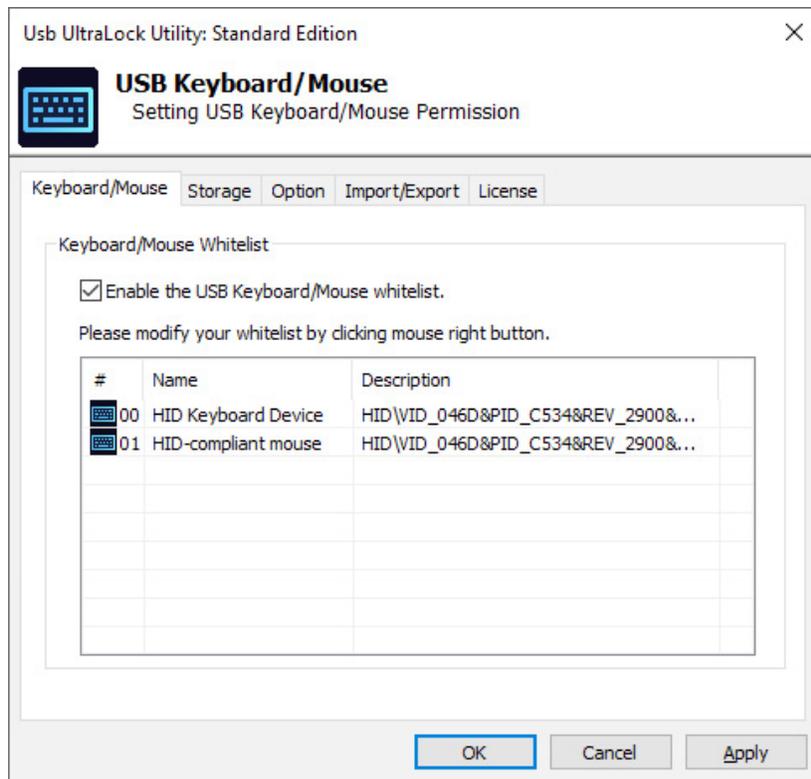
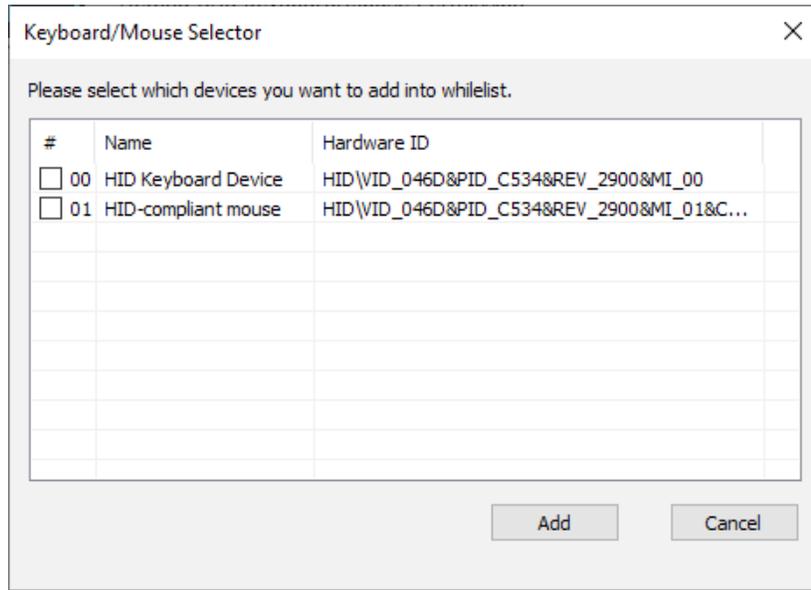
2.1 White list for “USB Keyboard/Mouse”

Click the check box to enable the USB Keyboard/Mouse White List function. Right-click to add the available USB keyboard/mouse.



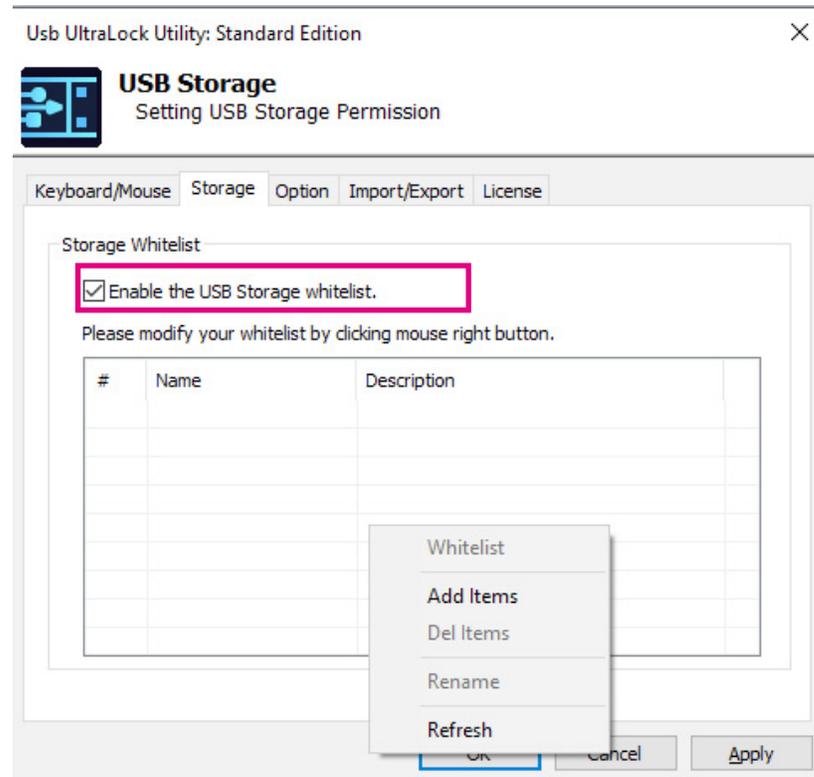
Note: For ACPI, standard PS/2 devices are in the white list by default. If your PC has them, you don't need to select them. They will not be blocked.





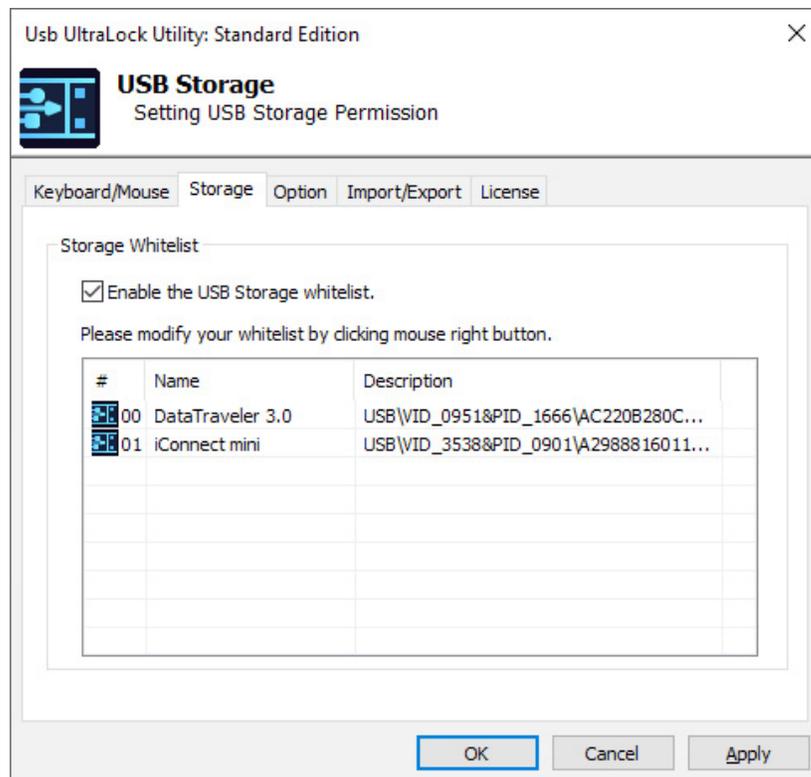
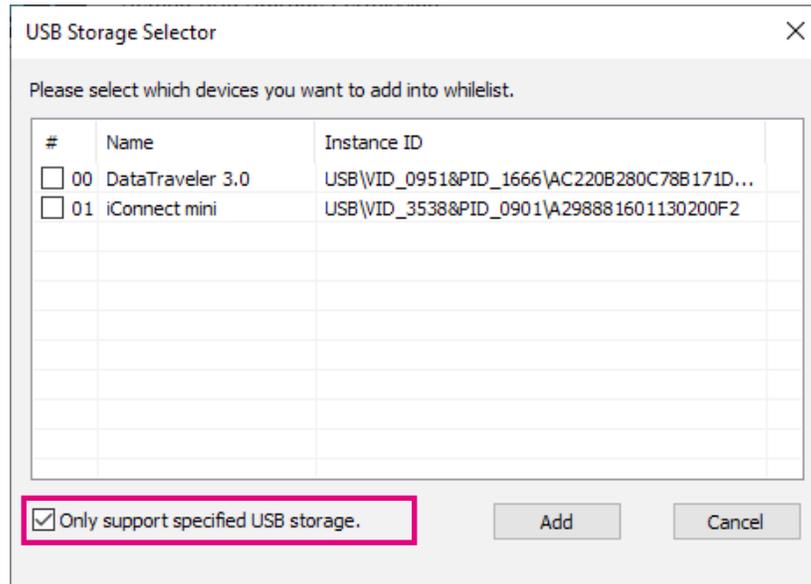
2.2 White list for “USB Storage”

Click the check box to enable the USB Storage White List function.
Right-click to add the available USB Storages. The function will allow the same model USB Storages for accessing.



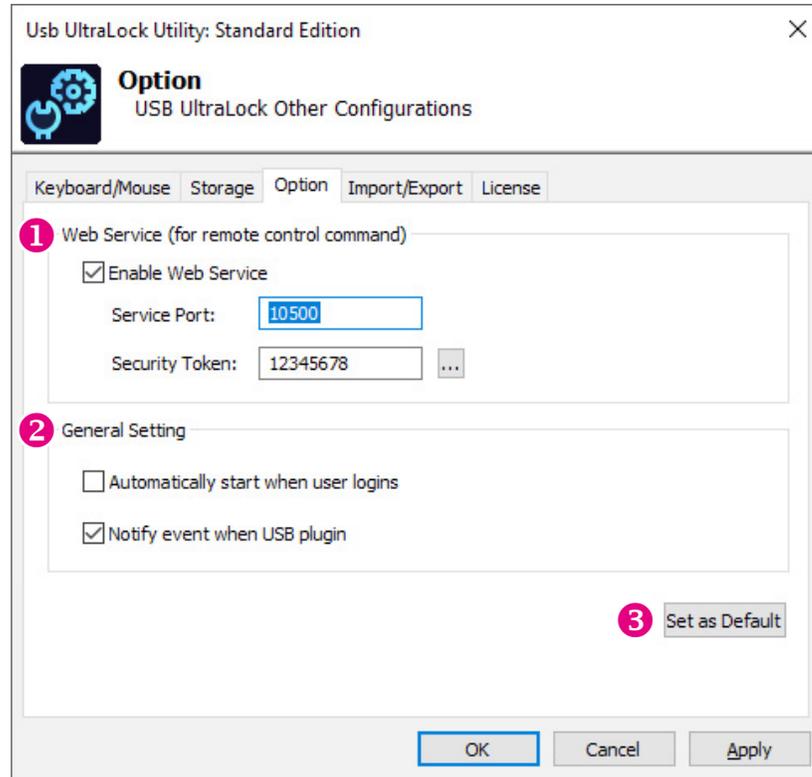


Note: The "Only support specific USB storage" check box is a special function that allows only the specific USB storage to be accessed. Other USB storage devices of the same model will not work.



2.3 Option

The Option page is designed for configuring the USB UltraLock Utility.



Item	Description
1	Web Service (for remote command) It is for remote control restful service command. You can enable the Web Service to assign the service port and security token.
2	General Setting Automatically start when user Logins Notify event when USB plugin
3	Set as Default Restore to the default options.

2.4 Import/Export Function

2.4.1 Export Configurations

Export the USB UltraLock configurations, user can select Keyboard/Mouse, Storages, and settings.

Export Log File

Export the history log file of all USB activities, including plug, unplug, blocking, and unblocking.

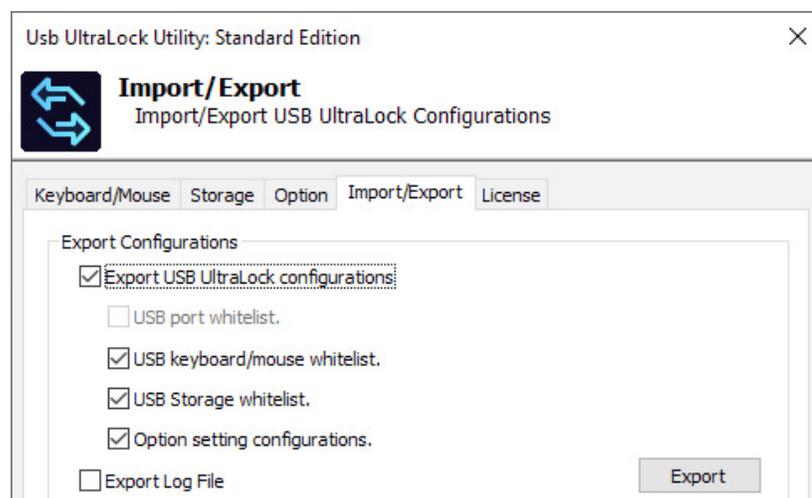
Examples:

2022/12/05 08:11:32:0965 Plug-in Device: USB\
VID_054C&PID_09C2&REV_0110

2022/12/05 08:11:32:0965 Plug-in Device: USB\
VID_05E3&PID_0743&REV_0819

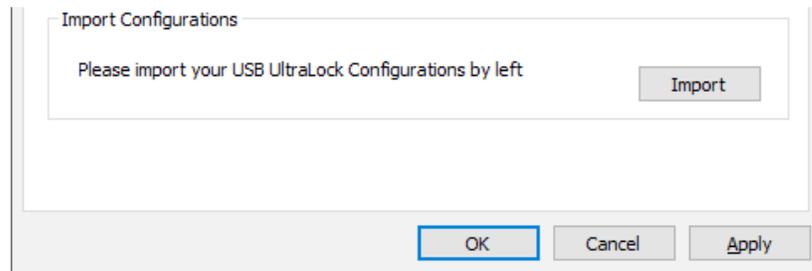
2022/12/05 08:11:32:0980 Blocking Device: USB\
VID_05E3&PID_0743&REV_0819

2022/12/05 08:11:32:0980 Unplug Device: USB\
VID_05E3&PID_0743&REV_0819



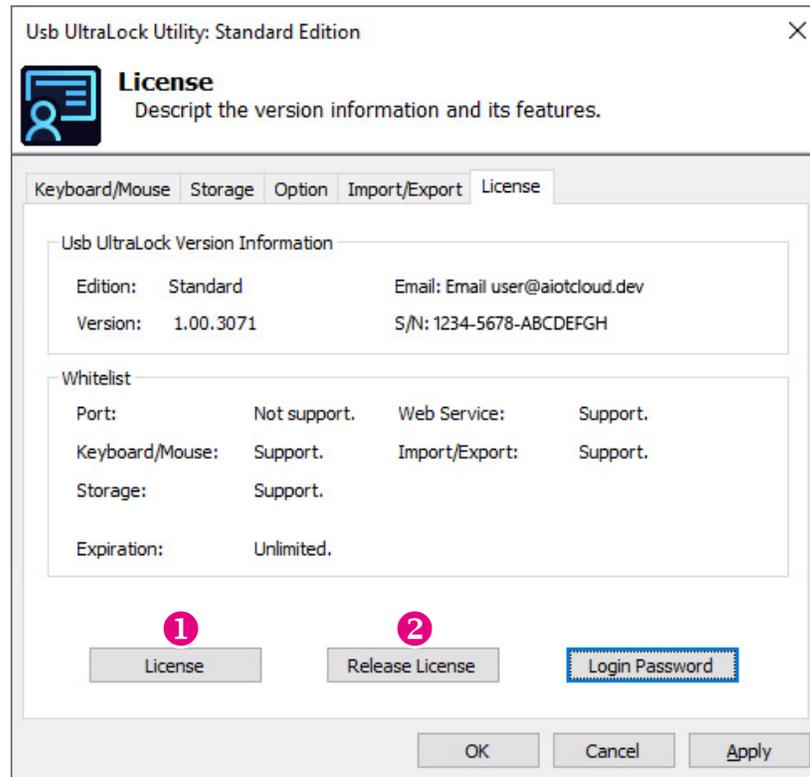
2.4.2 Import Configurations.

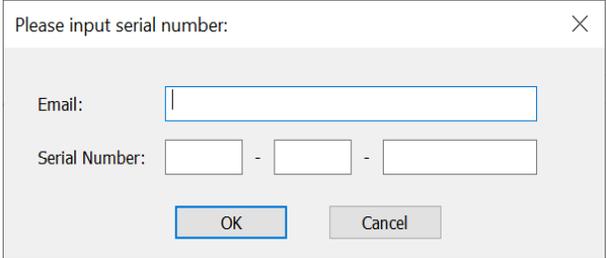
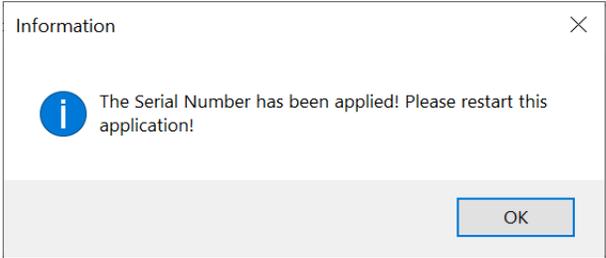
This feature allows user to import the USB UltraLock configurations from another PC. When the import process is complete, make sure you click on the "Apply" button to reboot the computer and make it take effect.



2.5 License

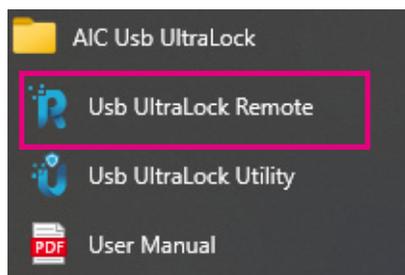
The License page displays the **AIC USB UltraLock Version Information** and the **Whitelist**. Also, this page allows you to register the product key.



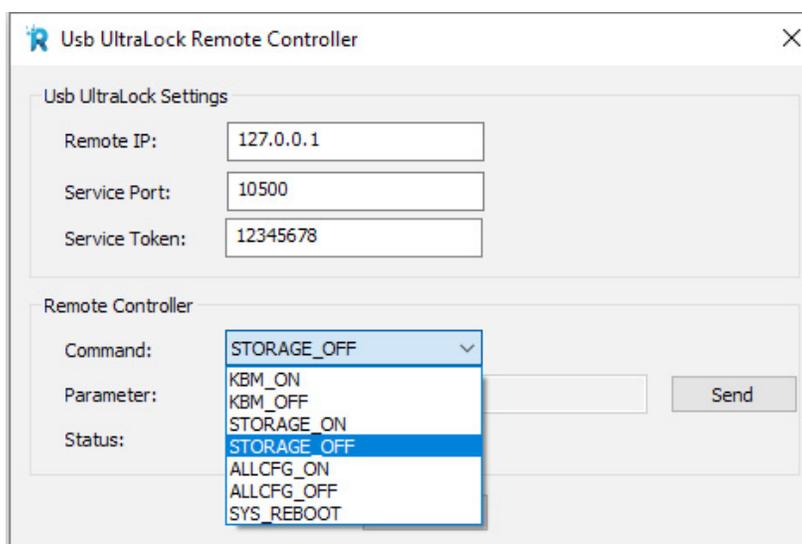
Item	Description
1	<p>License</p> <p>Click License button to enter a valid license email and serial number. Click OK when done.</p>  <p>A pop-up window appears to remind you to restart the application.</p> 
2	<p>Release License</p> <p>Click it to release the license key on the current device, then you can use the license key in the other device.</p>

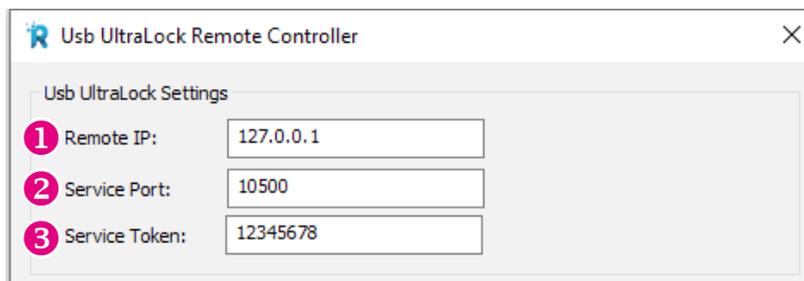
CHAPTER 3: USB ULTRALOCK REMOTE CONTROLLER

The USB UltraLock offers remote control functions such as KBM On/Off or Storage On/Off. You can find the program named AIC USB UltraLock / USB UltraLock Remote () in the All Programs list, then click it to launch.



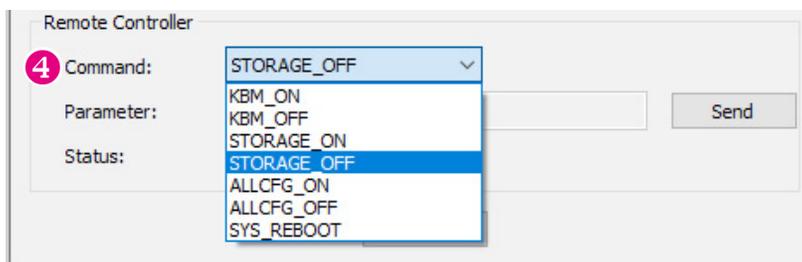
Access the IPC equipment you wish to remote by entering its IP address, service port, and service token in the UltraLock Remote Controller. Select the desired command you wish to operate, and then click the "Send" button. Refer to the next page for more details.





Item	Description
1	Remote IP The IP of the computer you want to remote.
2	Service Port The numeric value must match the remote computer.
3	Service Token The numeric value must match the remote computer.

* The description above states that the user controls one remote computer at a time.



Item	Description
4	KBM_ON/KBM_OFF Remotely turn on or off the white list for selected keyboards and mice.
	STORAGE_ON/Storage_OFF Remotely turn on or off the white list for selected storages.
	ALLCFG_ON/ALLCFG_OFF Remotely turn on or off the white list configurations.
	SYS_REBOOT Remotely boot up your PC.