Hi-Safe v3 User Guide

Document History

Version	*Date*	*Author*	*Description*
1.1	2018.11.02		First Release
1.2	2019.03.19	Hsiuyang Chien	Add install error part
2.1	2021.02.08	Brian Wu	Hi-Safe V3 Version

1. Introduction

The document provides necessary instructions for users who need to use AAEON's Hi-Safe utility. The Hi-Safe utility may provide user to test some features or to get information in most AAEON's products: CPU boards, Embedded Controllers, and Panel PCs. The document starts from the installation of the software; then, it describes the explanation of the fields and items in each function associated and the step to access the functions. Accesses for the following features are provided in the utility:

- CPU and Chipset information, SIO information is also detectable automatically.
- Display Information,
- Memory installed,
- HW Monitor (Hardware Monitoring for voltages, fans, temperatures)
- DIO (Digital Input and Output)
- Watchdog Timer
- SMBUS access for devices connected
- Backlight Control

User must recognize that the software is only for products designed by AAEON. Associated with the Hi-Safe utility, there is SDK (Software Development Kit) for user's further developing his own application software, which may include similar functions as the utility. Then, the user does not need to know more component information during his designing the software program. User guide for SDK is depicted in another document, aaeonEAPI.pdf.

2. Supported Environment

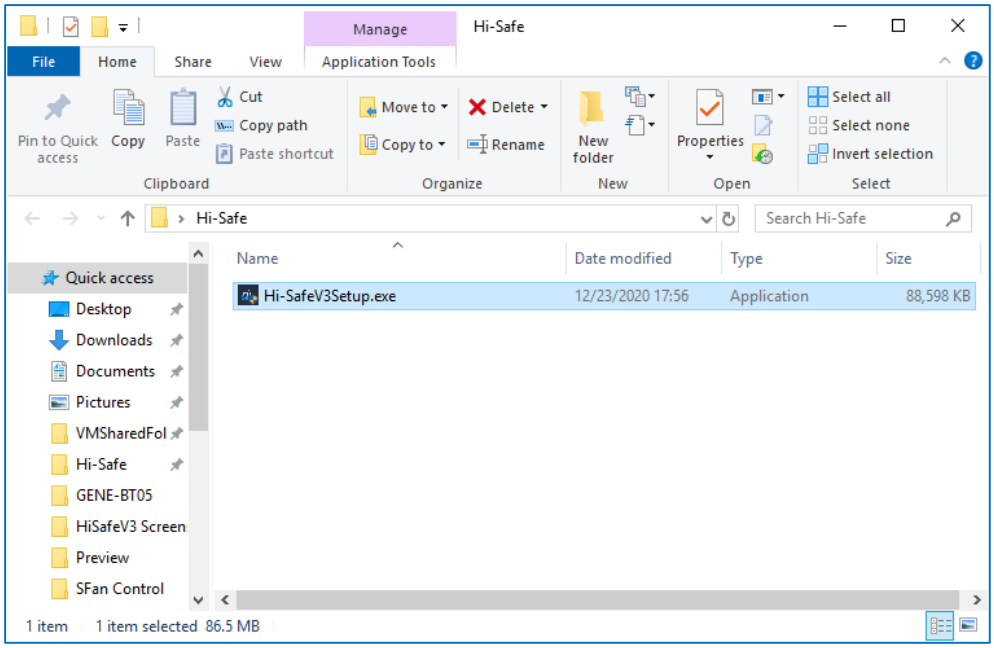
1. OS: Windows 10 32bit, Windows 10 64bit
2. Super IO Chip: ITE8728, ITE8783, Nuvoton NCT6791D, Nuvoton NCT6793D, FintekF75111, FintekF75113, FintekF81866D, EC85XX..

3. Installation and Uninstallation

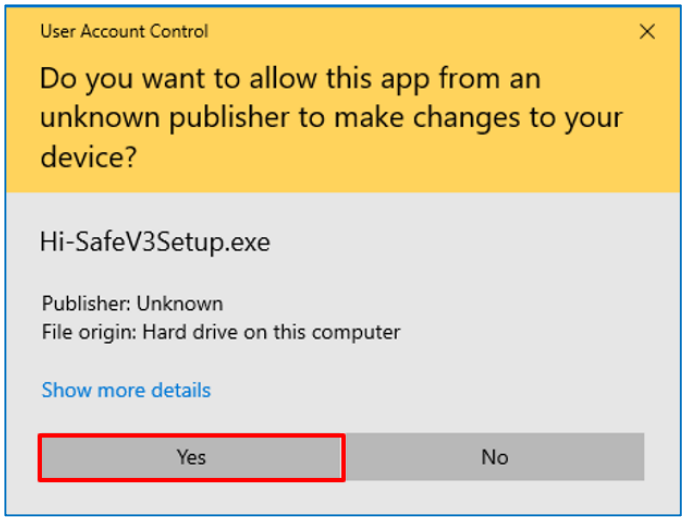
AAEON provides 2 methods that can install Hi-Safe V3 Application. One is to install application by using Hi-SafeV3Setup.exe, the other is to install application by downloading from Microsoft Store. Please note that Hi-Safe V3 App need to run with aaeonFramework driver. Hi-SafeV3Setup.exe contains the aaeonFramework driver in need. However, the Hi-Safe V3 App from Microsoft Store does not contain aaeonFramework driver due to Microsoft Store Policy.

- **Install with Hi-SafeV3Setup.exe**

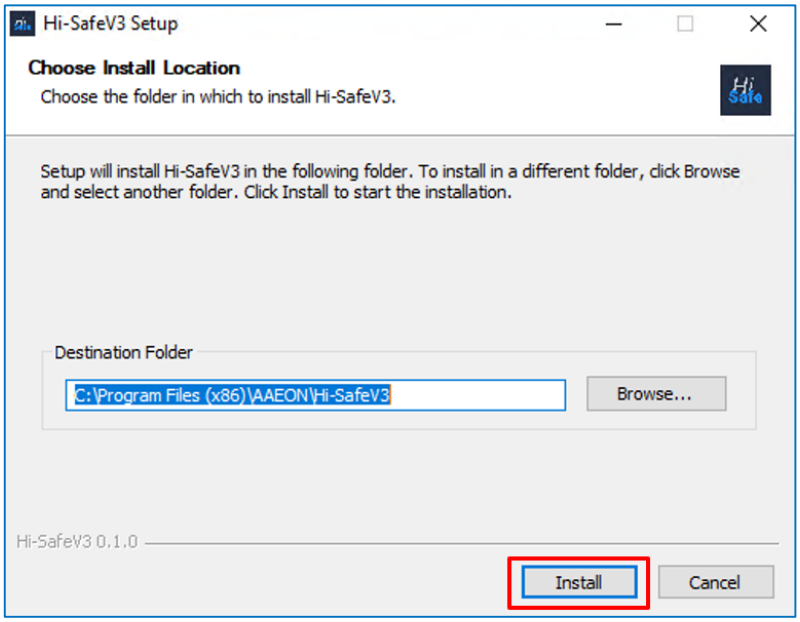
1. Double click on **Hi-SafeV3Setup.exe**



2. Pop up the User Account Control Windows, then press the **Yes** >

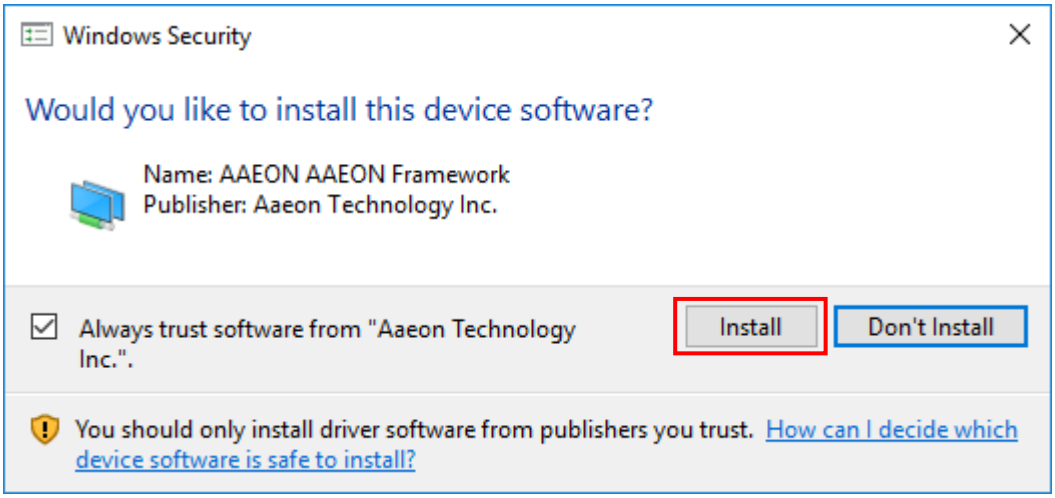


3. Choose install location, then click **Install** button>

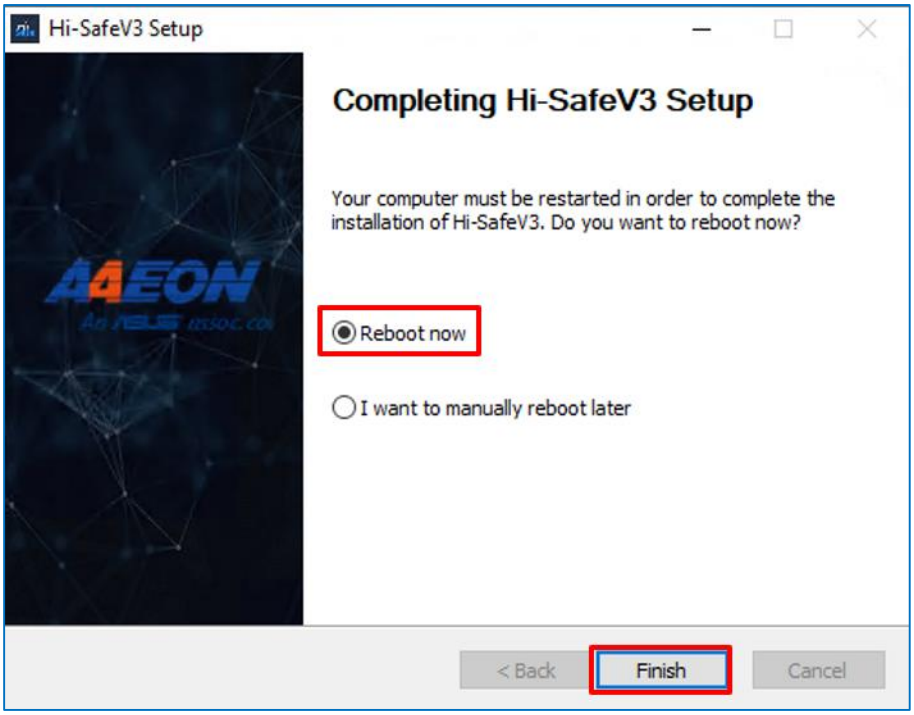


4. Pop up the Window Security Window, and press the **Install**

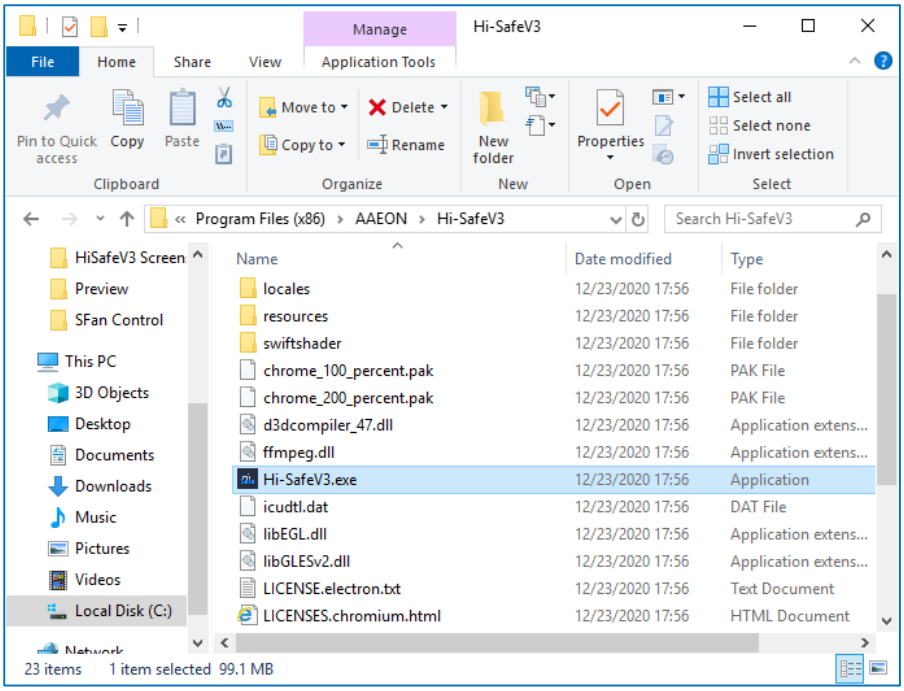
（Only Windows 10 will appear this security issue）



5. Choose **Reboot now**, then press **Finish** to reboot the system
   (Must restart the system for the configuration changes to take effect)

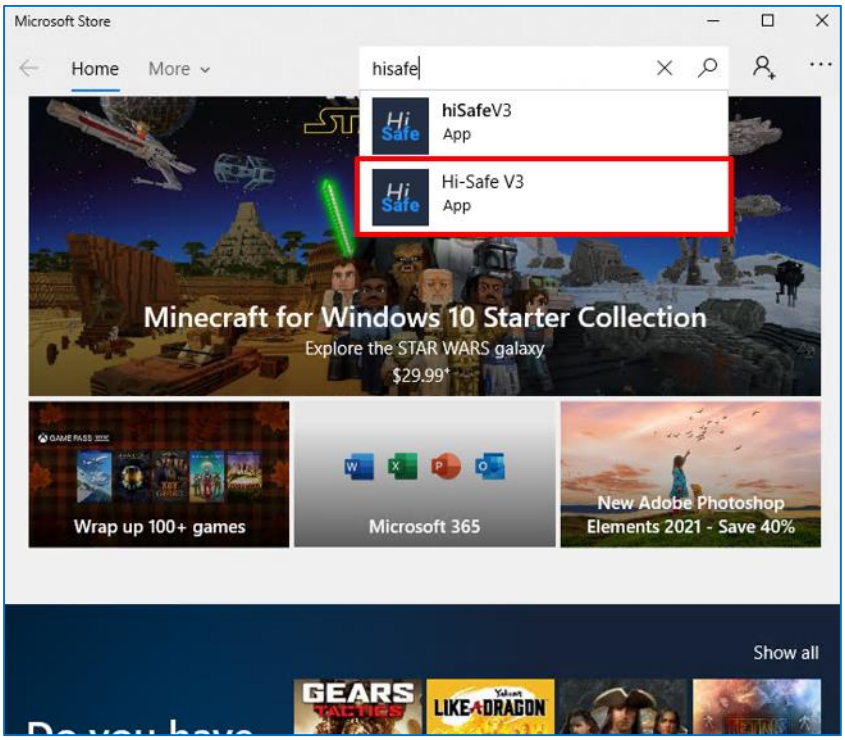


6. There will be a shortcut on desktop and start menu. And there will be some related files under your selected install path.

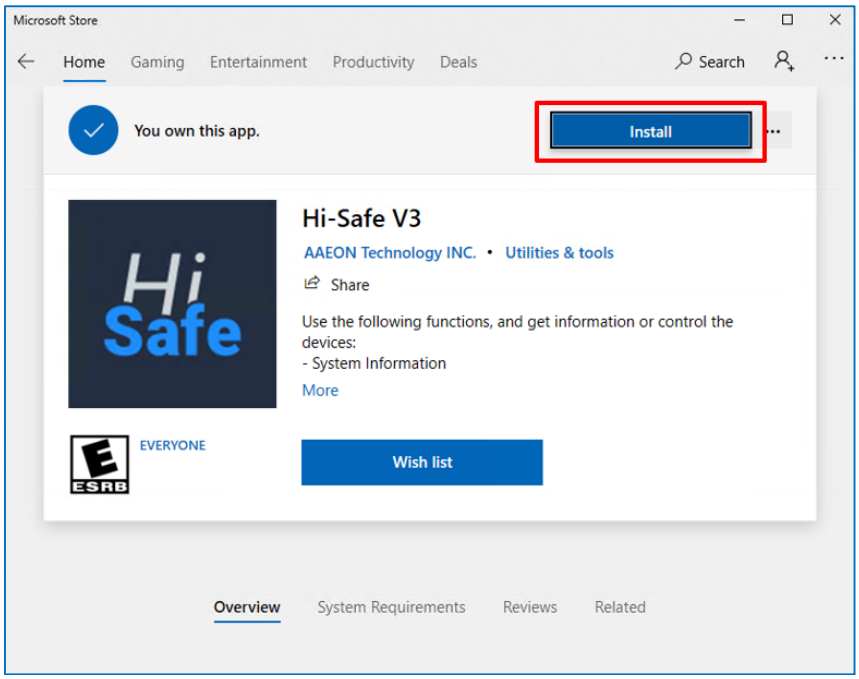


- **Install from Microsoft Store**

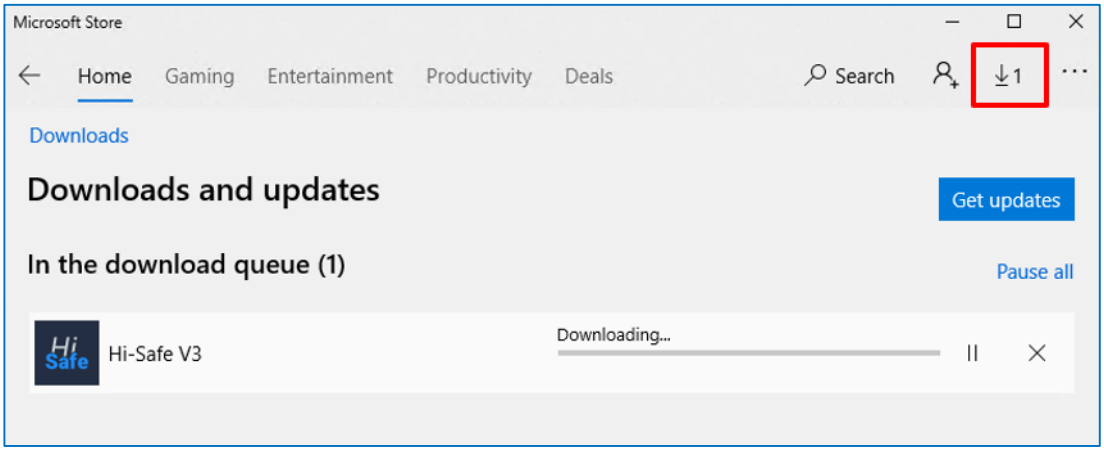
1. Search Hi-Safe V3 on Microsoft Store search bar, and click **Hi-Safe V3 App**



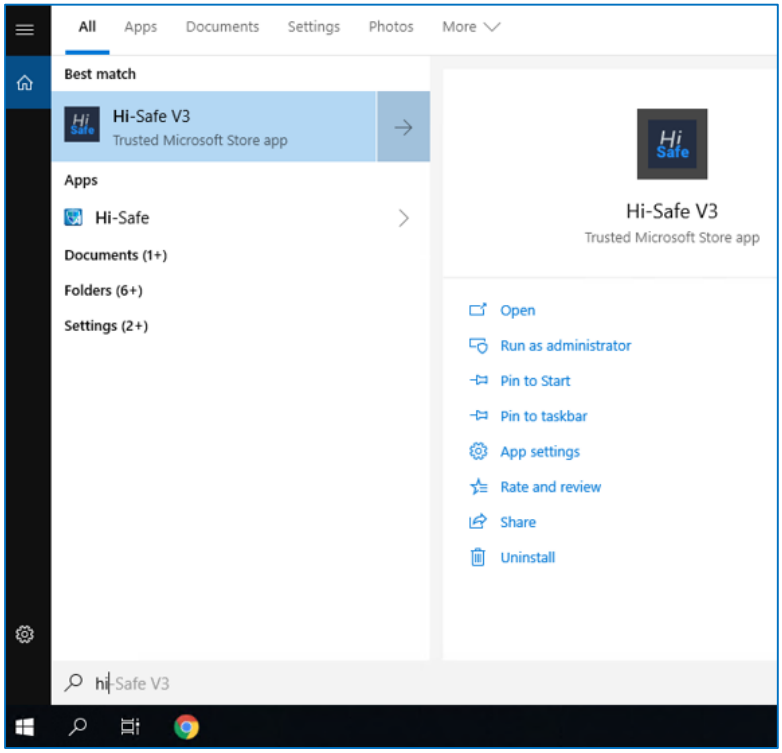
2. Press **Install** button>



3. Click the download icon on the upper right side, then can check download process.

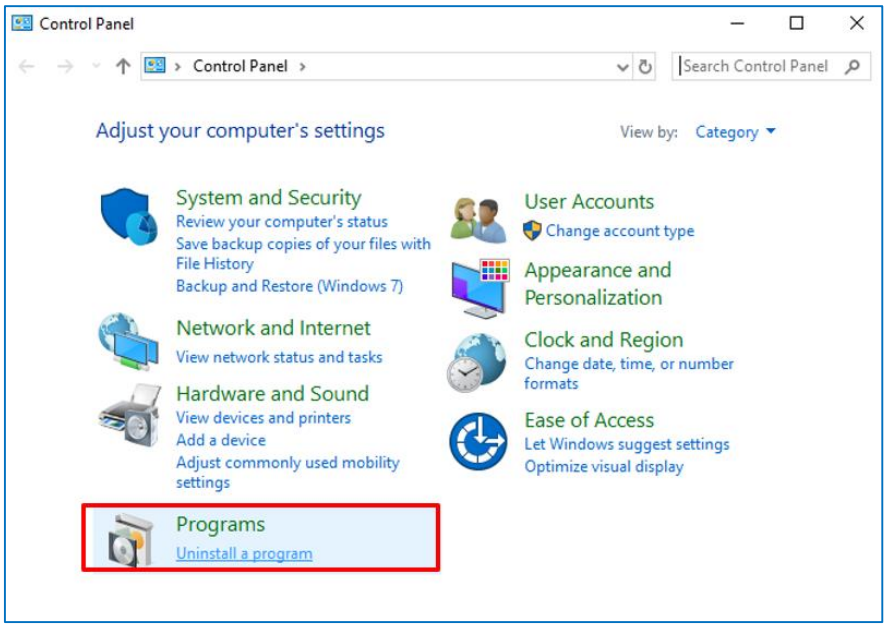


4. From start menu or search from windows search bar, then can find Hi-Safe V3 App

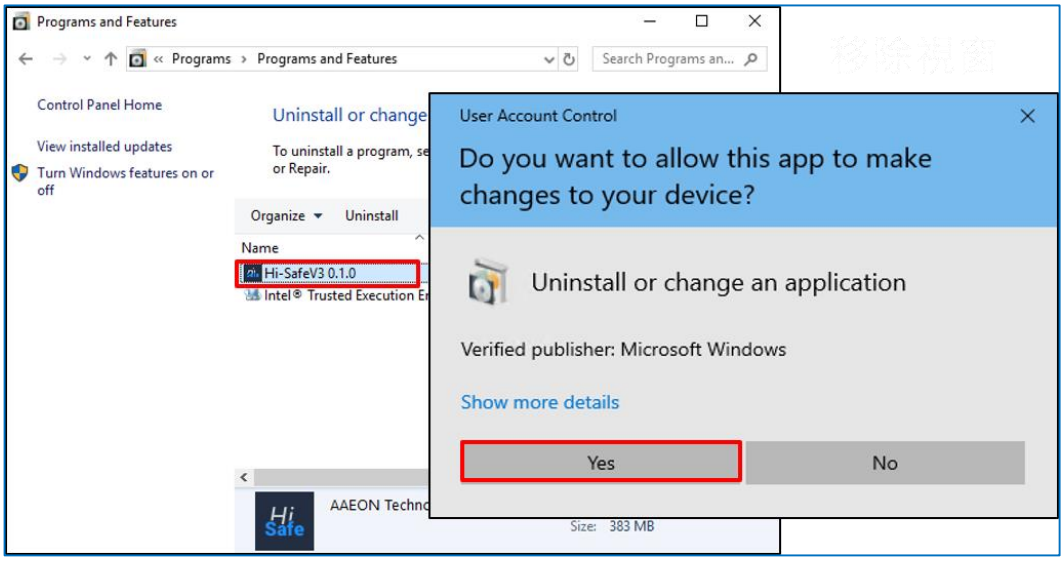


- **Uninstall if install app by Hi-SafeV3Setup.exe**

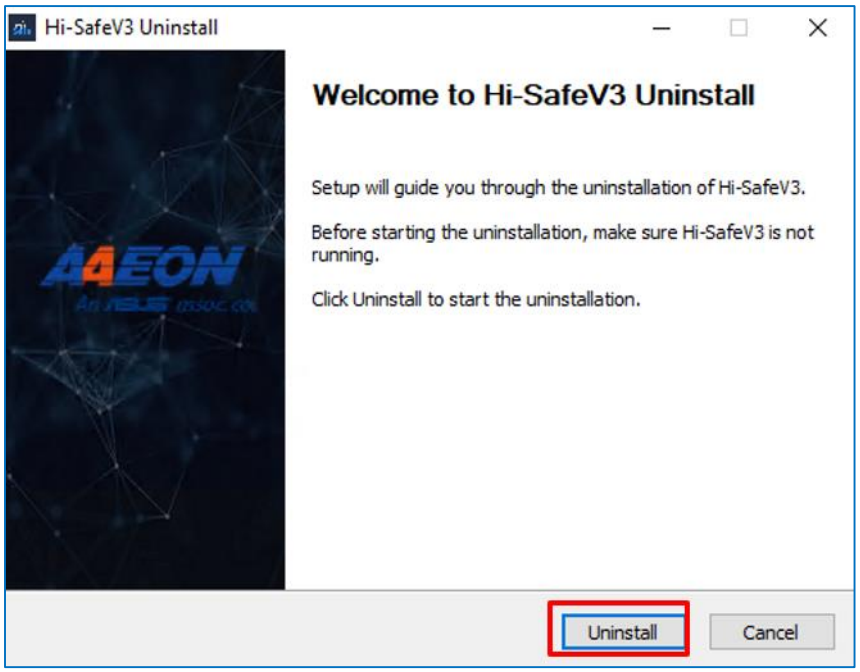
1. Navigate to **control panel**, and click **Uninstall a program**



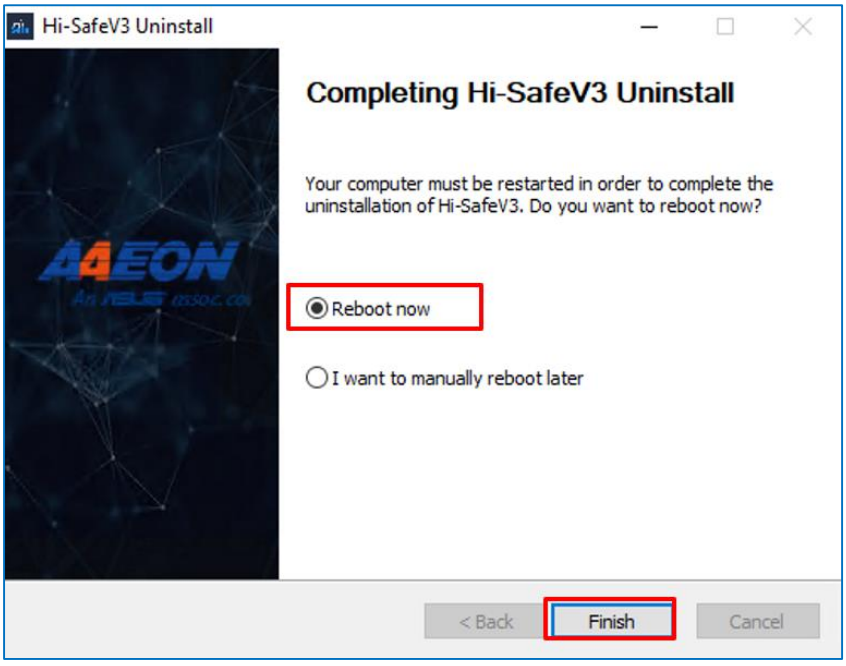
2. Double click **Hi-SafeV3**, then press **Yes** button if User Account Control Window pop up



3. Press **Uninstall** button>

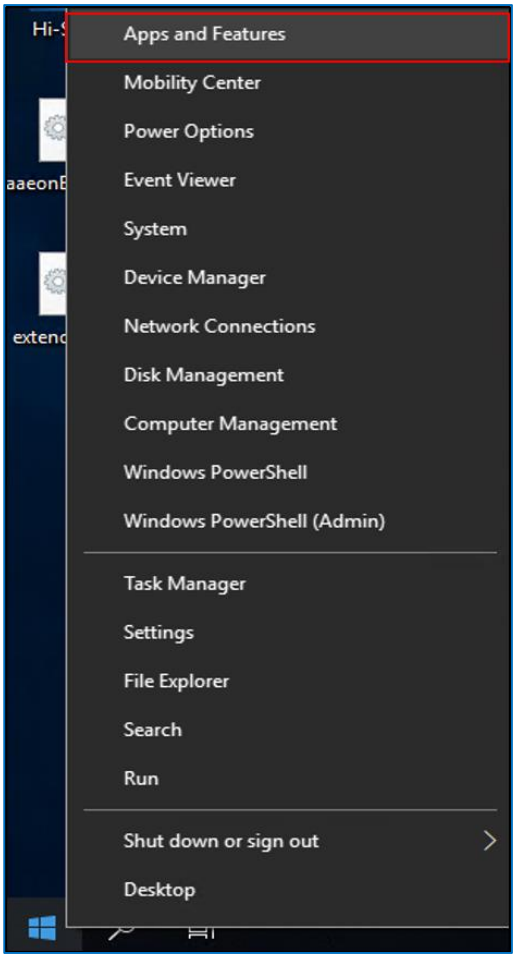


4. Choose **Reboot now**, then press **Finish** button>
   (Must restart the system to complete the uninstallation of Hi-Safe V3)

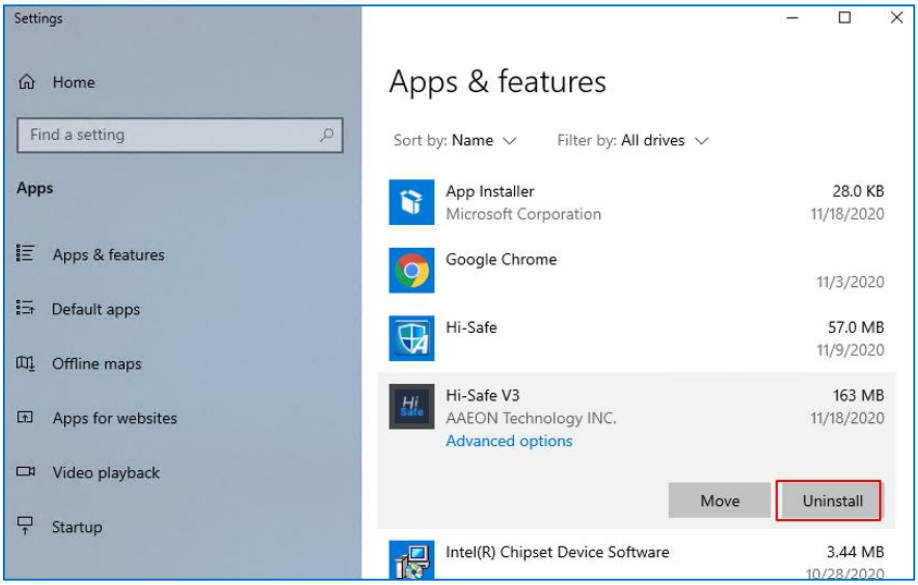


- **Uninstall if install app from Microsoft Store**

1. Right click Start Menu, and click **Apps and Features**>

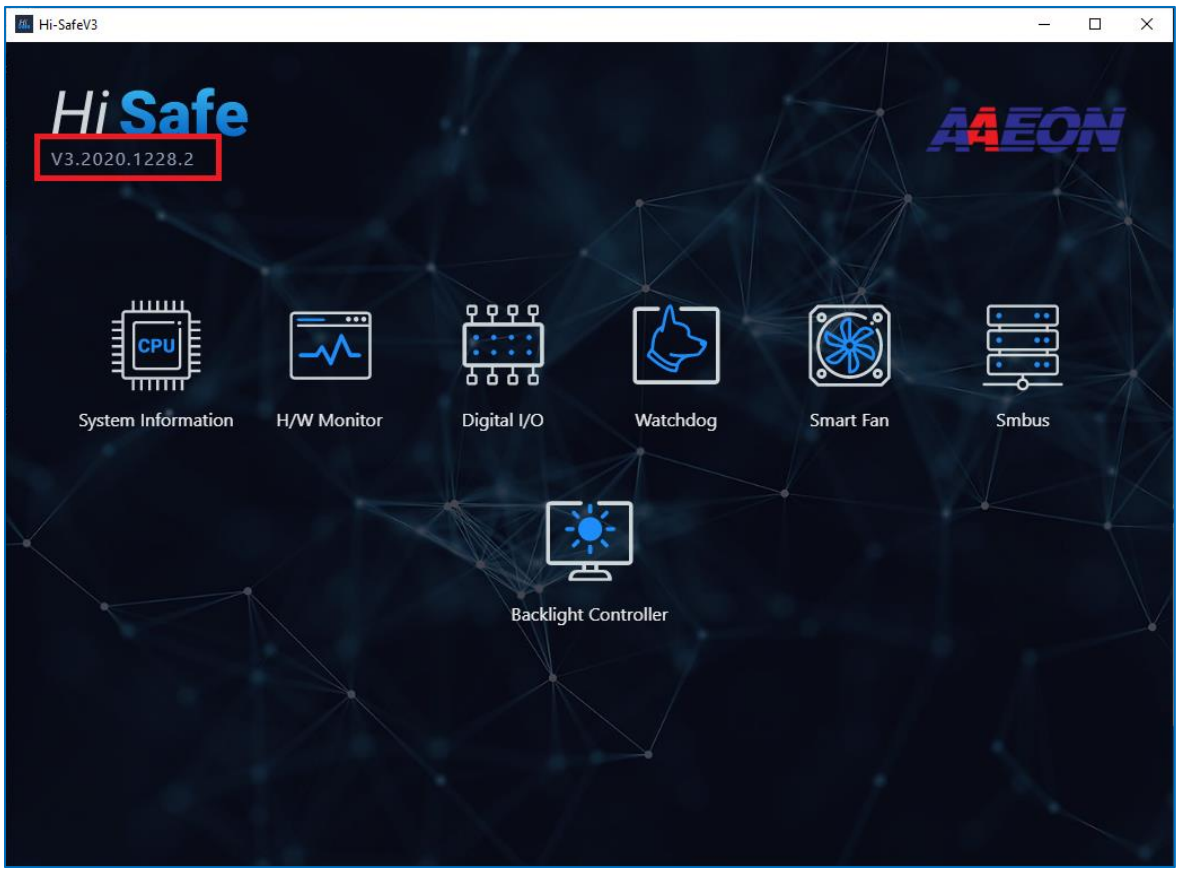


2. Find Hi-Safe V3, then press **Uninstall** button to remove the Hi-Safe V3 App



4. Hi-Safe V3 App Version Check

From Hi-Safe V3 App user interface:

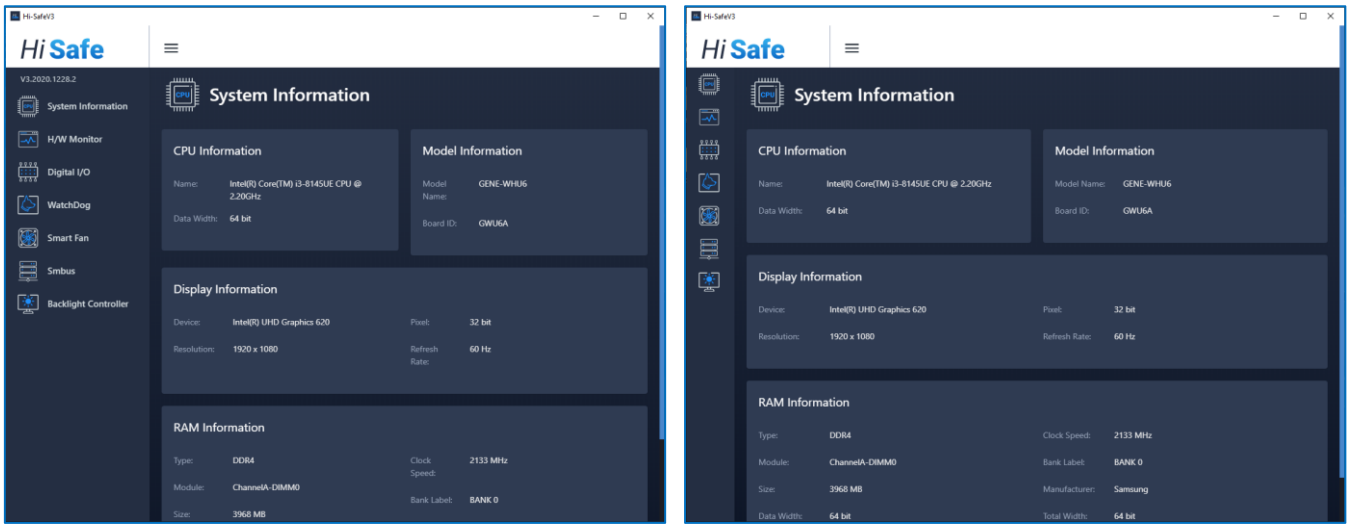


5. Utilization of the Utility after Installation

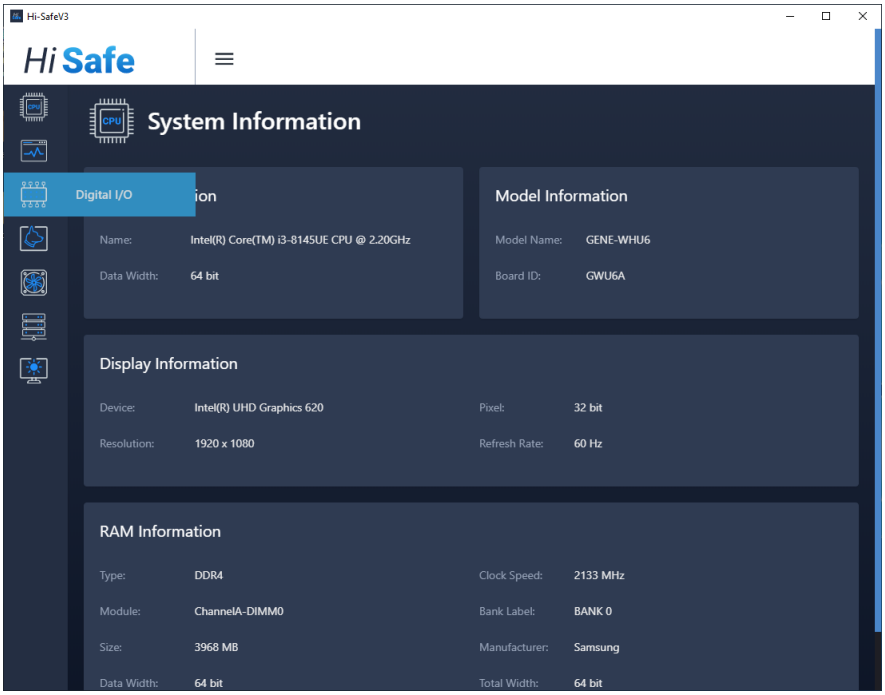
Different from V2, Hi-Safe V3 App use another front-end framework to build user interface. Now the V3 application has more flexible on window dynamic revision. In other words, user can adjust application window size while the content of application will rearrange and fit to the size of window.

Also, Hi-Safe V3 App make the menu bar be adjustable. User can click icon to enlarge or shrink menu bar. At shrink bar mode, if mouse hovers on (mouse on) the small utility icon, the small icon will span and display the name of icon.

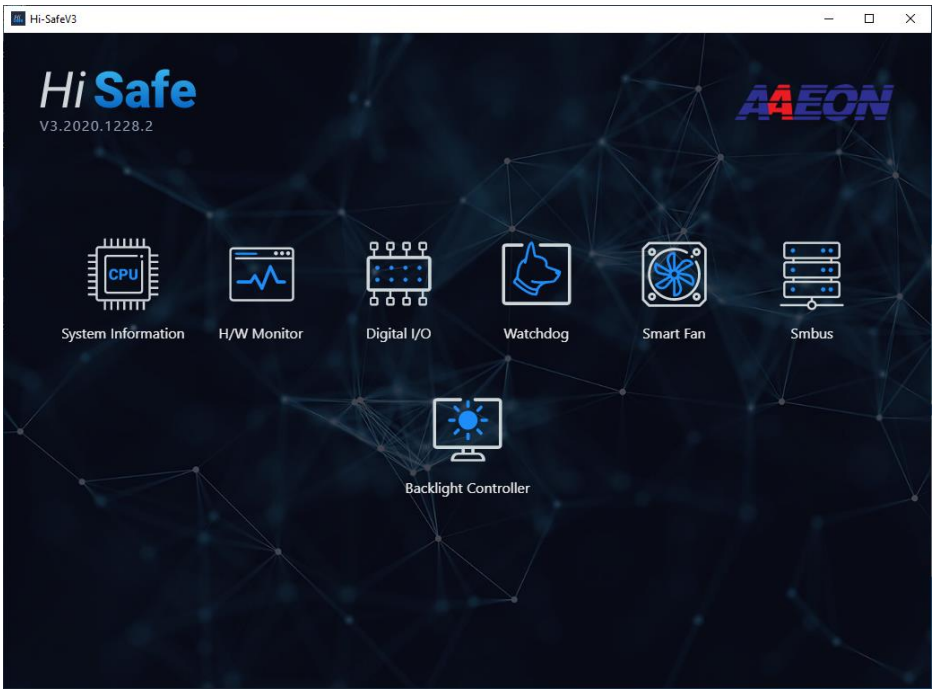
Enlarge Menu Bar / Shrink Menu Bar:



The icon will span if mouse hover on:



5.1. Hi-Safe Main Menu



Features:

1. ***System Information***: Show the information of CPU, VGA and RAM.
2. ***H/W Monitor***: Show the information in the Super IO. Get the speed of fan, Temperature and Voltage.
3. ***DIO***: Through the application, obtain the Digital IO information. It can be set for the pin's direction (input or output) and accessed for set/read pin's data (low or high), upon the direction of pin configured
4. ***Watchdog***: Set the countdown time of system reboot when timeout happens. The time mode is the second or minute. The count value is from 0 to 255.
5. ***Smart Fan***: Show the speed of fan and associated temperature. It also can control the fan speed corresponding to temperature.
6. ***SMBus***: Get data of device connected to SMBus (I2C). It can automatically detect the base address of SMBus.
7. ***Backlight Controller***: It has two modes. One is Inverter mode through Smbus, and the other is PWM mode. It can control the brightness of LVDS interface LCD panel.

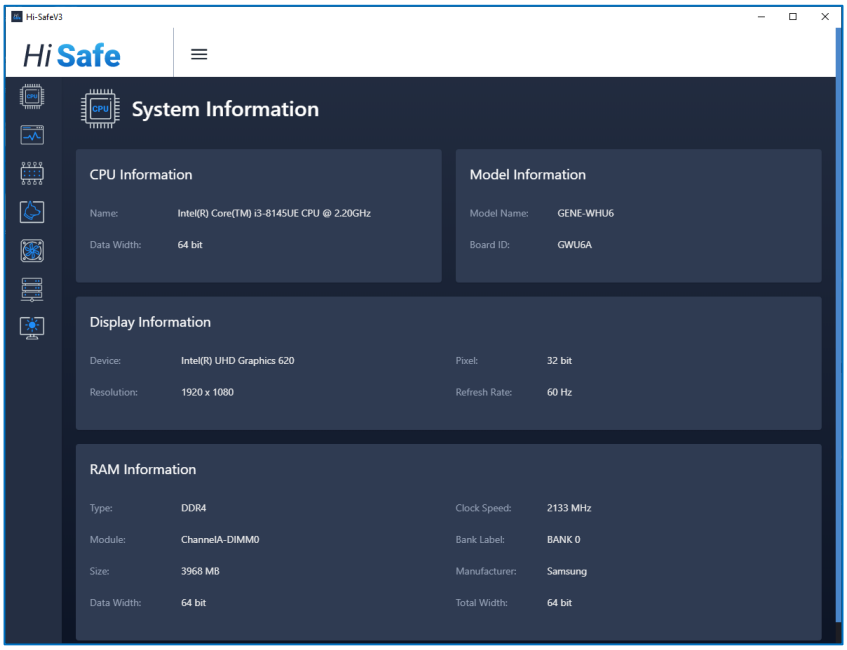
Advantages:

1. Free and powerful for control and status read out in AAEON's products.
2. Easy to use and to build custom applications.
3. Support all kinds of chipset for Aaeon's products.

5.2. System Information

Icon:

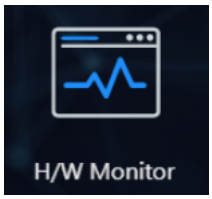
Operation:



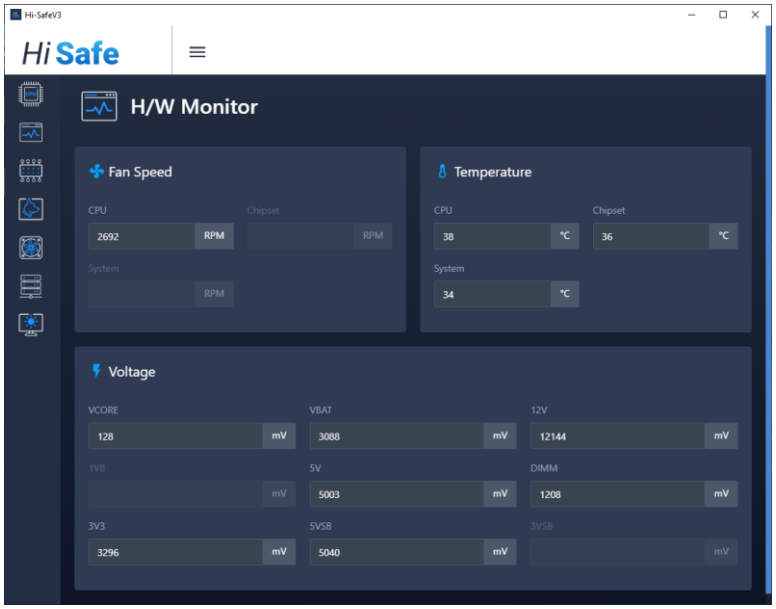
1. *CPU information*: Show CPU model and frequency.
2. *Model & BIOS*: Show the BIOS version string and the board (product) string. For example, K782A is the abbreviation of FWS-7820.
3. *Display information*: Show the mode, resolution, pixels, and frequency of VGA controller's operation.
4. *RAM information*: Contain two parts. One is Clock, and the other is RAM Information. It shows the data about the RAM installed in the board. It contains the RAM size, type, bus width, clock and module.

5.3. HW Monitor

Icon:



Operation:



1. *Fan Speed*: Show the speed of fan. The speed unit used is rpm (revolution per minute). It gets the speed information of fans connected in the system, including CPU fan, Chipset fan and system fan. Different products may have the different monitors.

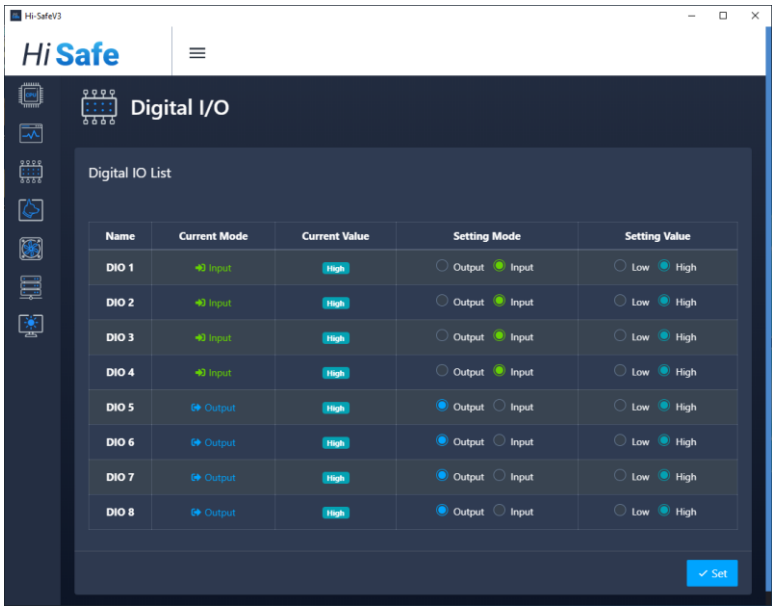
2. *Temperature*: Show the temperature of CPU, system and other temperature detected. Different products may have the different monitors.

3. *Voltage*: It shows the voltage information monitored with the Super IO. It may offer the kinds of voltage information such as VCORE, VBAT etc. However, voltage information may be varied among different boards.

5.4. DIO

Icon:

Operation:



1. *Dio Current State*: Means the current DIO states in the Super IO. It shows the input (Green) and output (Blue) in item "Mode". For signal level of the DIO, low level is Gray, and high level is Cyan in item "Value". In the figure shown above, current states of DIO1~DIO4 are configured as input with high level statuses; the DIO5~DIO8 are configured as output with high level statuses.

2. *Dio Setting*: By the Setting, it can be selected as either input or output in item "Mode". For output pins configured, they can be set to either high or low in item "Value".

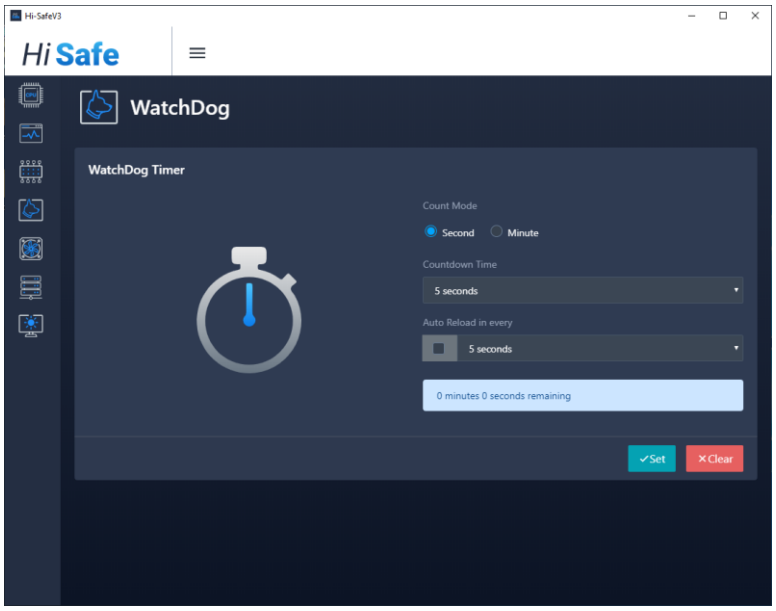
3. *"Set" Button*: When the Dio Setting is finished, press the button to affect the setting mentioned. Then, it changes the Dio configuration and signal levels at the same time.

4. *Picture symbol*: As mentioned in item 1; for mode, input is Green and output is Blue. For Value, low is Gray and high is Cyan.

5.5. WatchDog

Icon:

Operation:

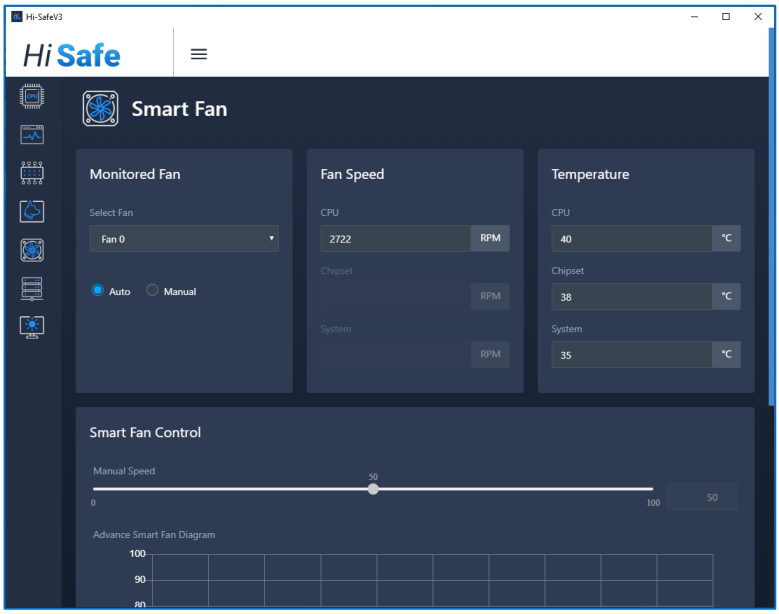


1. *Count Mode*: It has two modes. One is Second in the unit of count; another one is Minute as the unit in the timer counting.
2. *Time Count*: It can be set count from 0 to 255. The time unit is set through the Count Mode.
3. *"Set" Button*: When the Count mode and Time Count is chosen, presses the Button to start the watchdog function. The system will be rebooting when the time out happens in watchdog timer counting.
4. *"Clear" Button*: It can stop the Watchdog to reboot system while the watchdog is counting for its time out. All settings value is clear and recovers to the default value.
5. *Auto Reload*: It can set the Watchdog to recover the value of set Time Count automatically. The time in "Every time sec." must be smaller than the one in "count mode"; then, the Auto Reload function is workable.
6. *in every sec.*: The value will be set from the 0 to 255 for auto reload period of the watchdog timer. It is relative to "Auto Reload".

5.6. SmartFan

Icon:

Operation:



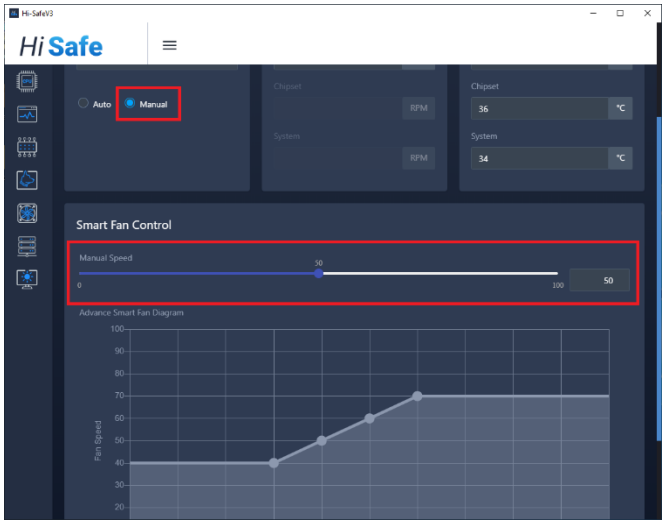
1. *Fan Speed*: Show the speeds of fans in rotating. The speed unit is rpm. It can show the speeds of CPU fan, Chipset fan and system fan.

2. *Temperature*: Show the temperature of CPU, system, and other temperature detected. Different boards may have different numbers and items.

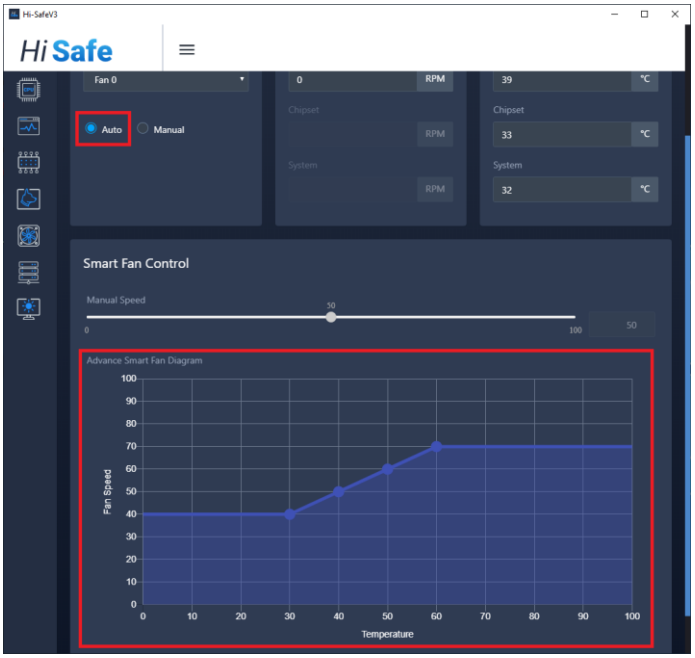
3. *Monitored Fan*: It can choose one fan to be monitored and controlled.

Smart Fan Control: (There are 2 situations, one is Manual Mode, and the other is Auto Mode)

4. *Manual Speed*: Under manual mode, set the speed value of selected fan manually through the slider. The value is from 0 to 100, which represents the percentage of the fan speed controlled by Super IO.

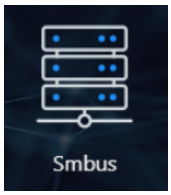


5. *Advance Smart Fan Diagram*: Under Auto Mode. The fan speed will be controlled by Super IO automatically. User also can manipulate control points (number of points decided by Super IO, and **this feature is only enabled if board supports BFPI**.) and set different temperature interval with corresponding fan speed duty cycle.

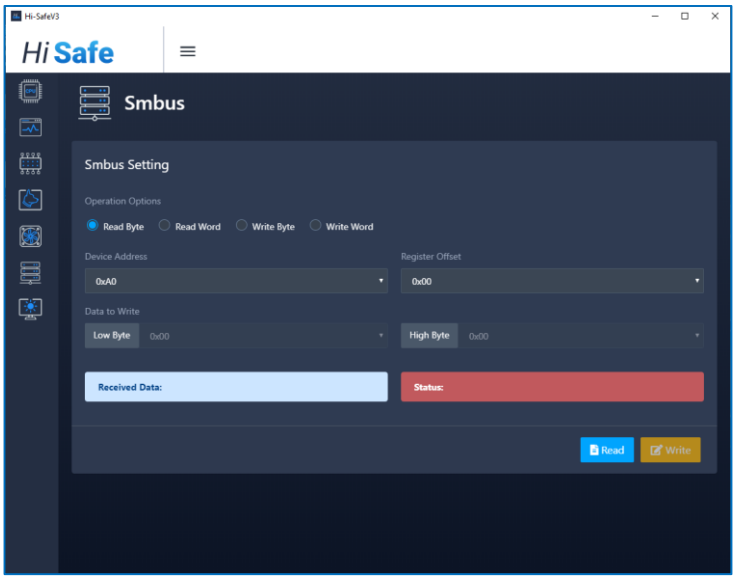


5.7. Smbus

Icon:



Operation:



1. *Operation Options*: It controls the Read Byte/Read Word/Write Byte/Write Word function from the slave device. Only one can be chosen at the one time.

2. *Device Address*: It chooses one of the addresses of slave device connected to the smbus. The value can be chosen from to 0x00h to 0xFEh

3. *Register Offset*: It sets the register (index) of data in the slave device.

4. *Data to Write*: It can write data to slave device connected to smbus. It is not workable initially until the “Write Byte” or “Write Word” is marked in the Write region.

5. *Read Button*: When the button is marked, items Received Data and Status will show the data and associated status read from slave device defined by Smbus address, Slave Address, and one of Read Word and Read Byte.

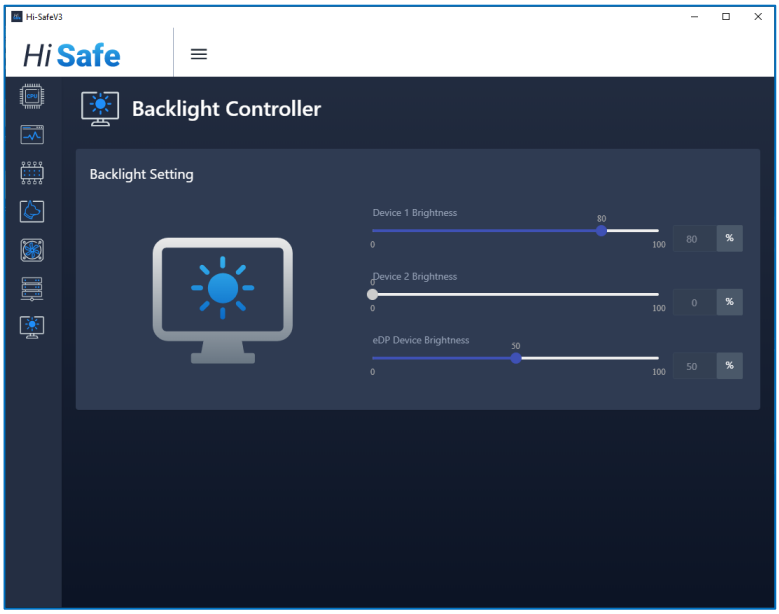
6. *Write Button*: When the button is marked, Data in Write Data to Register will be sent to the address specified in Smbus address, Slave Address, and only one of Write Word and Write Byte marked.

7. *Result*: Pressing the “Read” button, it can get data in the edit “Received Data” and show message “successful” or “failed” in the edit “Status”. Through the “Write” button is pressed, the data in “Received Data” is not shown, only the message in “Status” is shown.

5.8. Backlight Controller

Icon:

Operation:



1. *Brightness*: Show current brightness value of device 1/device 2/eDP device.

2. *Slider*: Manipulating the slide bar can change the backlight value. The value is ranged from 0 to 100