Hi-Safe v2 User Guide

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

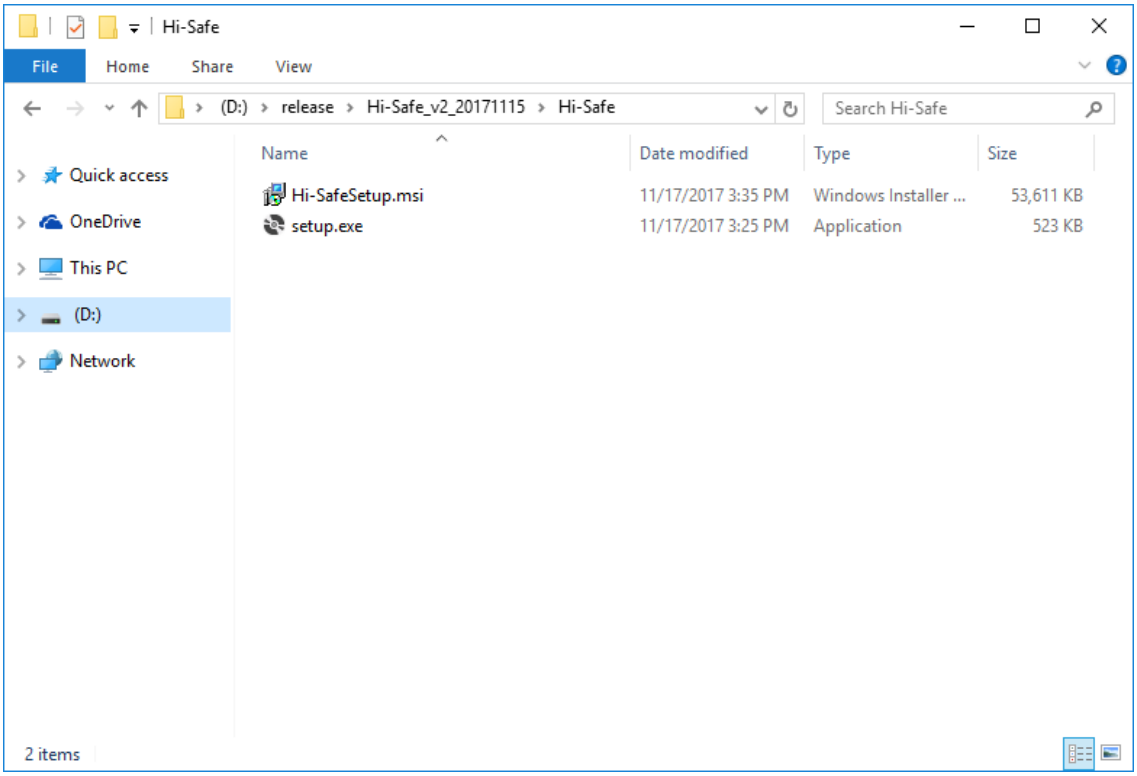
User must recognize that the software is only for products designed by AAEON. Associated with the Hi-Safe utility, there is SDK (Software Development Kit) for user's further developing his own application software, which may include similar functions as the utility. Then, the user does not need to know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

2. Supported Environment

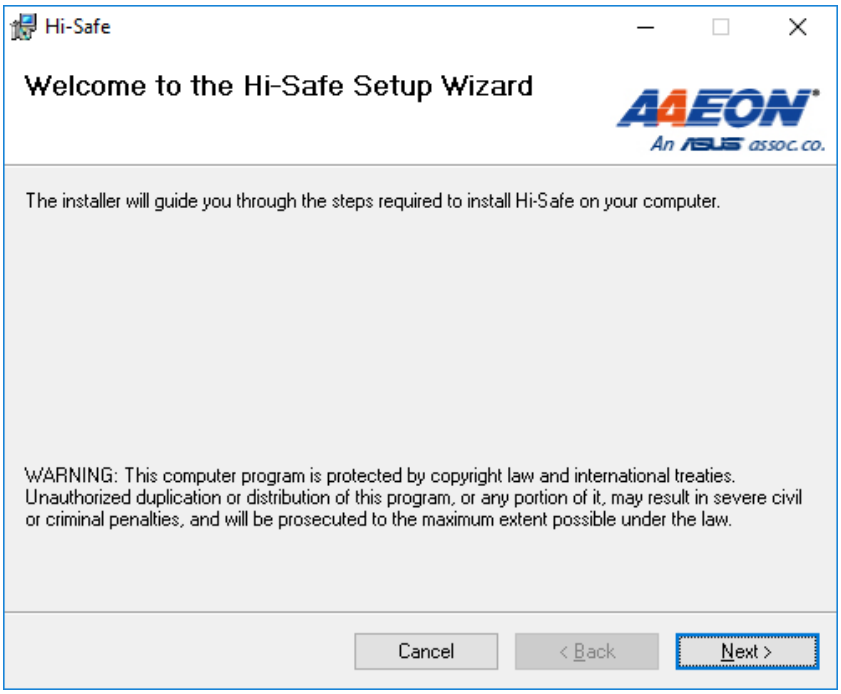
1. OS: Windows 10 32bit, Windows 10 64bit, Windows 7 32bit, Windows 7 64bit, WES 7 32bit, WES 7 64bit, Windows 8 32bit, Windows 8 64bit, WE8S 32bit, WE8S 64bit, Windows XP, WES 2009, XPE
2. Super IO Chip: ITE8728, ITE8783, Nuvoton NCT6791D, FintekF75111, FintekF81866D, EC85XX..

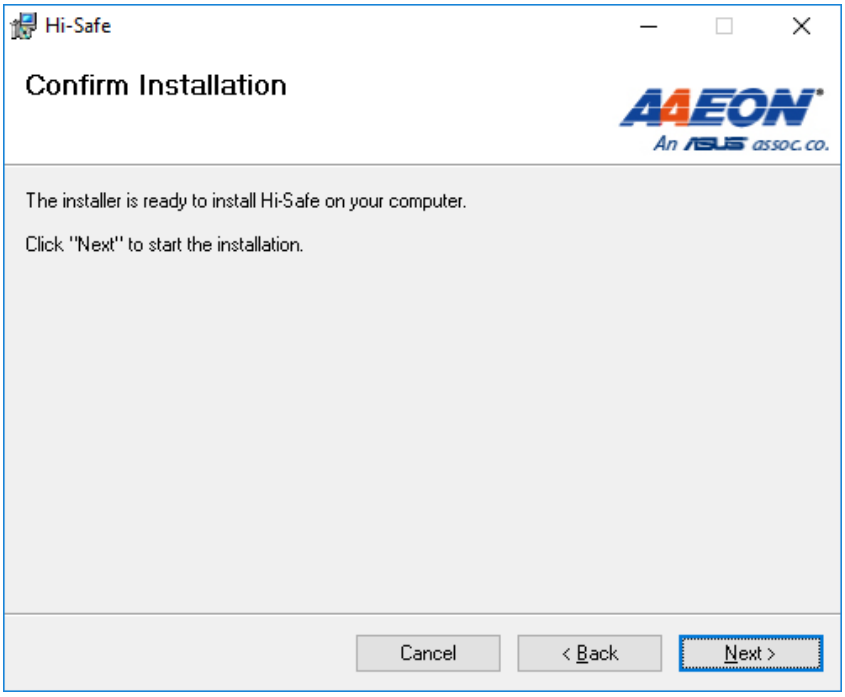
3. Installation and Uninstallation

1. Double click setup.exe or Hi-SafeSetup.msi.

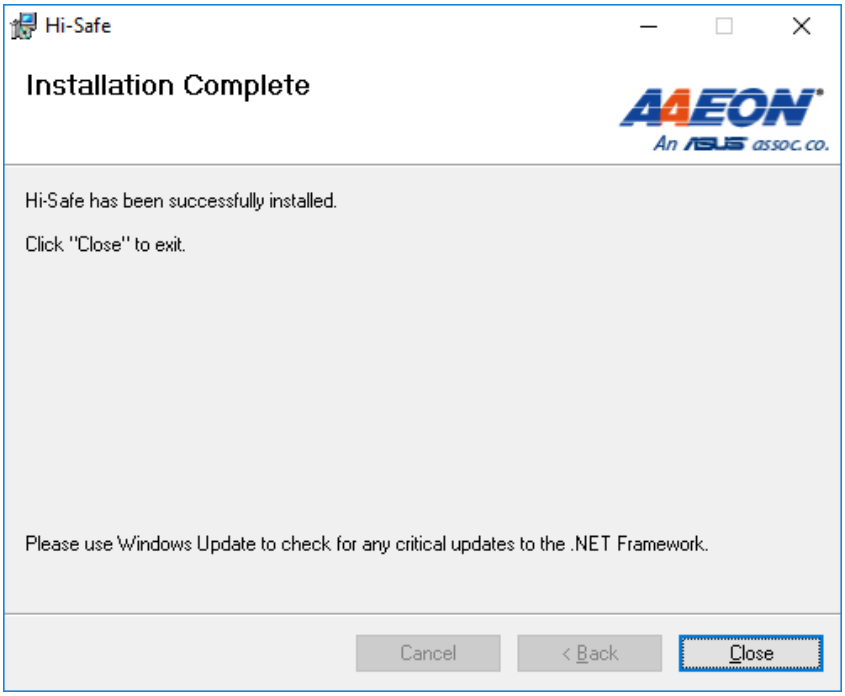


2. Press the **Next** button

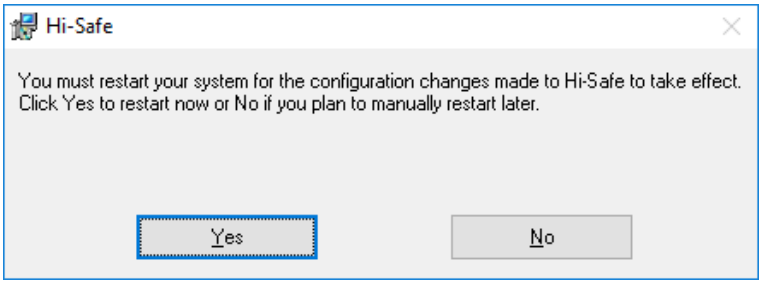




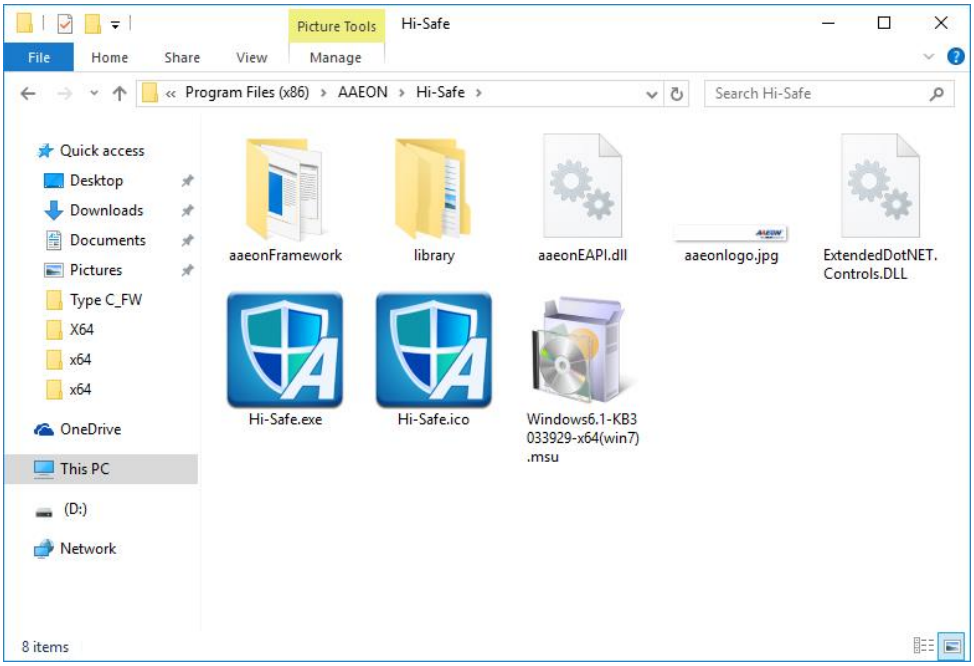
3. Press the **Close** button



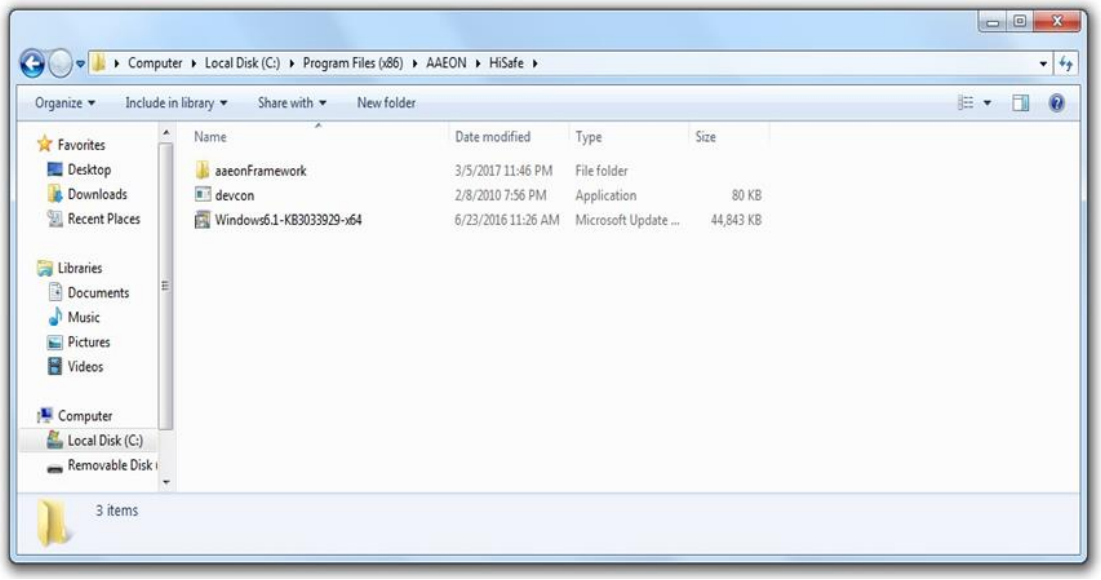
4. Reboot the system



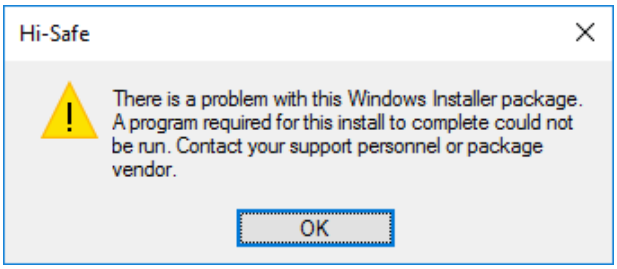
5. There will an icon on desktop and start menu. And there will some related files under C:\Program Files (x86)\AAEON\Hi-Safe

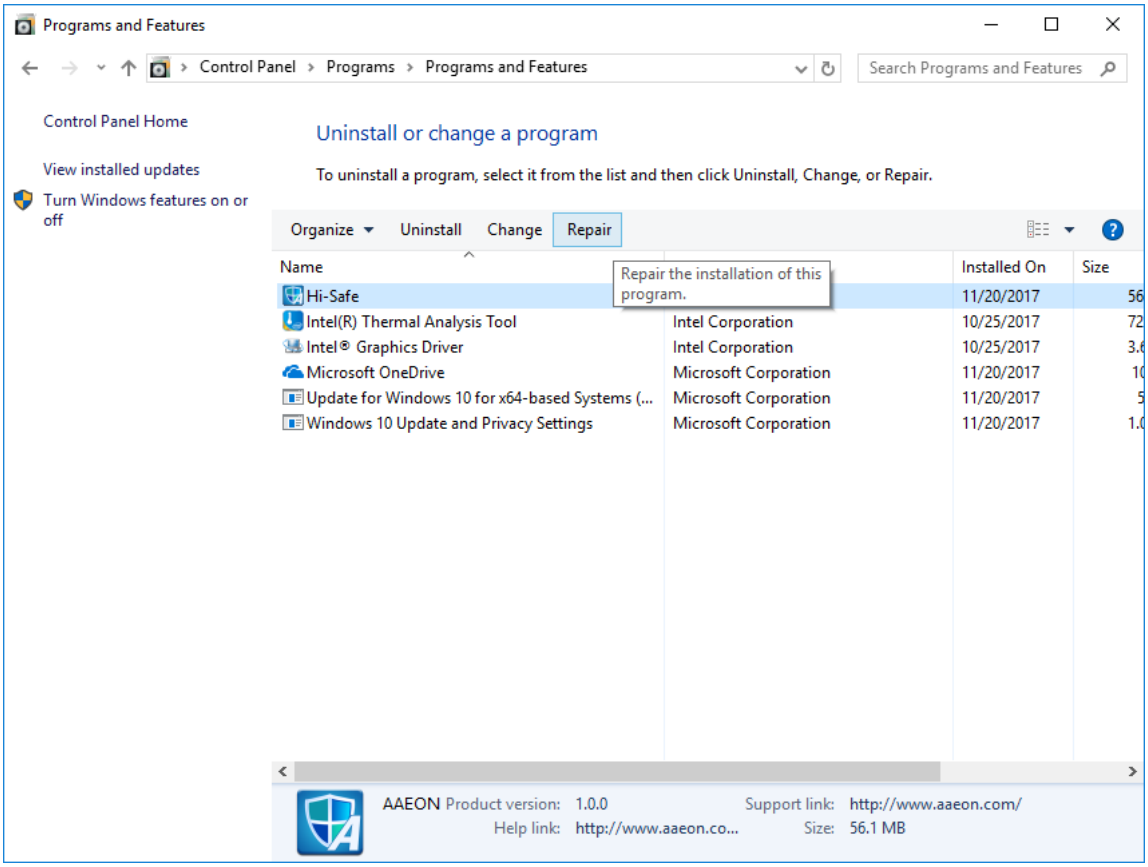


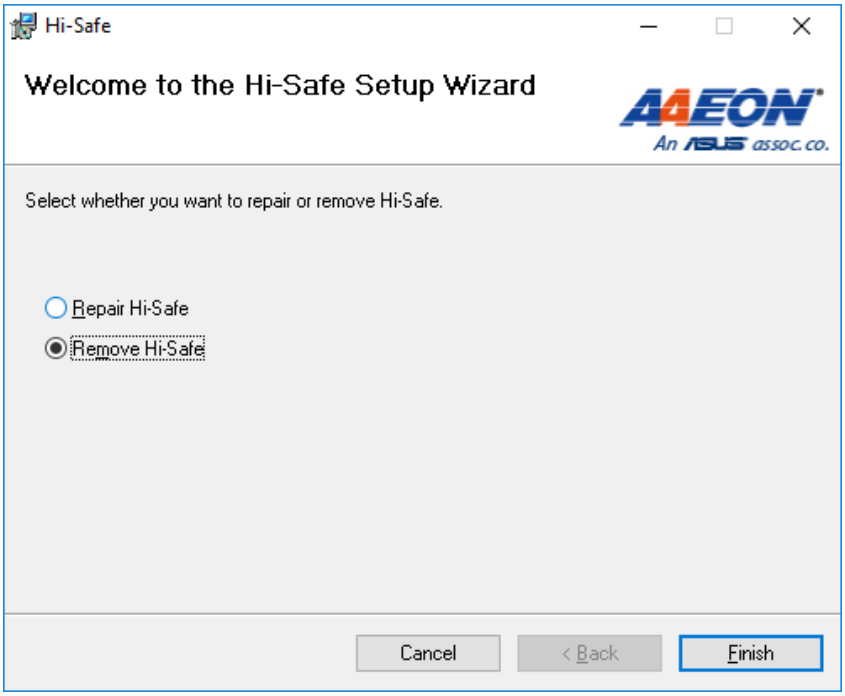
6. If your device is Windows 7 64 bit, please install Windows6.1-KB3033929- x64.msu from C:\Program Files (x86)\AAEON\HiSafe\.
   If you cannot find the file mentioned above, please refer to this link:
   https://www.microsoft.com/en-US/download/details.aspx?id=46148



7. If you encounter error when uninstalling Hi-Safe, please repair it and remove again.





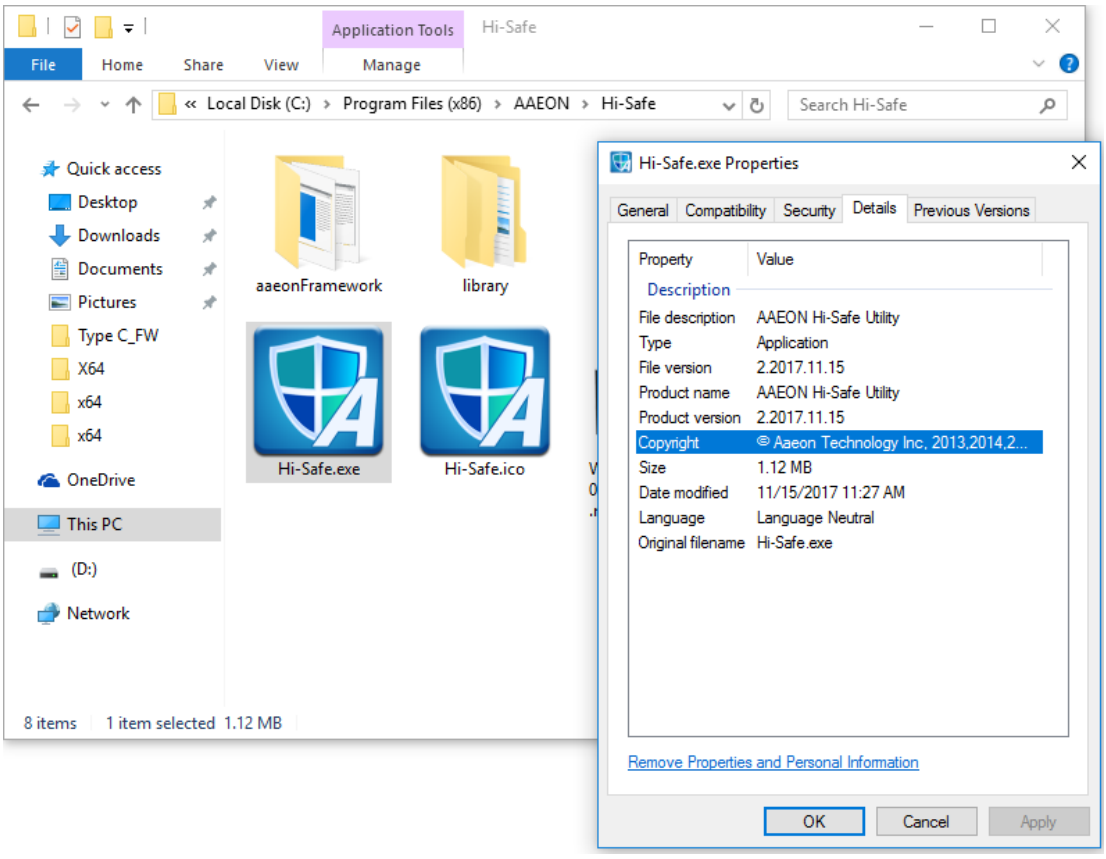

Hi-Safe
Welcome to the Hi-Safe Setup Wizard
Select whether you want to repair or remove Hi-Safe.
Repair Hi-Safe
Remove Hi-Safe
Cancel
< Back
Finish

4. Hi-Safe Version Check

There are two methods to check Hi-Safe version.

1. From Hi-Safe user interface:

2. From file details:



5. Utilization of the Utility after Installation

5.1. Hi-Safe Main Menu

Feature:

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.

Advantage:

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 and 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 Red, and high level is Green 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 low 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 red and high is green.

5.5. WatchDog

Icon:

Operation:

1. Count Mode: It has two models. 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. Sliding the bar may control the values of Speed Adjust, Low Speed Temperature and Full Speed Temperature.
4. Speed Adjust: It set the value about the speed of fan manually. The value can be set through the slider. The value is from 0 to 255.
5. Low Speed Temperature: It mean when the monitored temperature is lower than the corresponded temperature, fan may stop. The value can be set through the slider. The value is from 0 to 100.
6. Full Speed Temperature: It means when the monitored temperature is higher than the corresponded temperature, the fan will rotate in full speed.

5.7. Smbus

Icon:

Operation:

1. 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
2. Register Offset: It sets the register (index) of data in the slave device. It can show the data in the edit “Received Data” by operating “read” or “write” button
3. 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.
4. Operation Options: It controls the Read Byte or Read Word and Write Byte or Write Word function from the slave device. Only one can be chosen at the one time.
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: Through 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.
2. Slider: When the bar moved, it can write the backlight value. The value is ranged from 0 to 100