Intelligent System Management Module Plus (iSMM)

User Manual

Rev. 1.3

Table of Contents

1.1 iSMM Introduction

The IEI Intelligent System Management Module (iSMM) is a system health supervision application which utilizes sensor chips on IEI motherboards to track CPU and system temperatures, fan speed, watchdog timer, digital I/O status and system event. By quickly capturing and reporting system health data, users can prevent disasters such as system instability or damage. The users can control the settings in the following pages:

- Temperature Page
- Fan Page
- Watchdog Timer Page
- DIO Page
- Smart Fan Control Page
- Event Page
- Setup Page
- CPU Page
- Remote Power Off / Power On / Reboot Page

1.2 Local Management

Double click the **iSMM.exe** icon to launch the application. **Figure 1** shows the iSMM interface. The iSMM interface consists of two buttons: **Local Management** and **Remote Management**. Click **"Local Management"** button to enter into the local management interface.

Figure 1: iSMM Interface

1.2.1 Temperature Page

The IEI iSMM application monitors and shows the current CPU temperature and system temperature on the Temperature Page (**Figure 2**). The temperature value displays in Celsius scale (°C). The CPU temperature and system temperature values are refreshed every 5 seconds.

The **High Limit** value and **Low Limit** value of each temperature can be set by the user. Check the **"Alert"** box to have the temperature value shows in red when the temperature is greater than the **High Limit** value or lower than the **Low Limit** value. For example, the CPU temperature (38) shows in red since the current system temperature is lower than the **Low Limit** value (40).

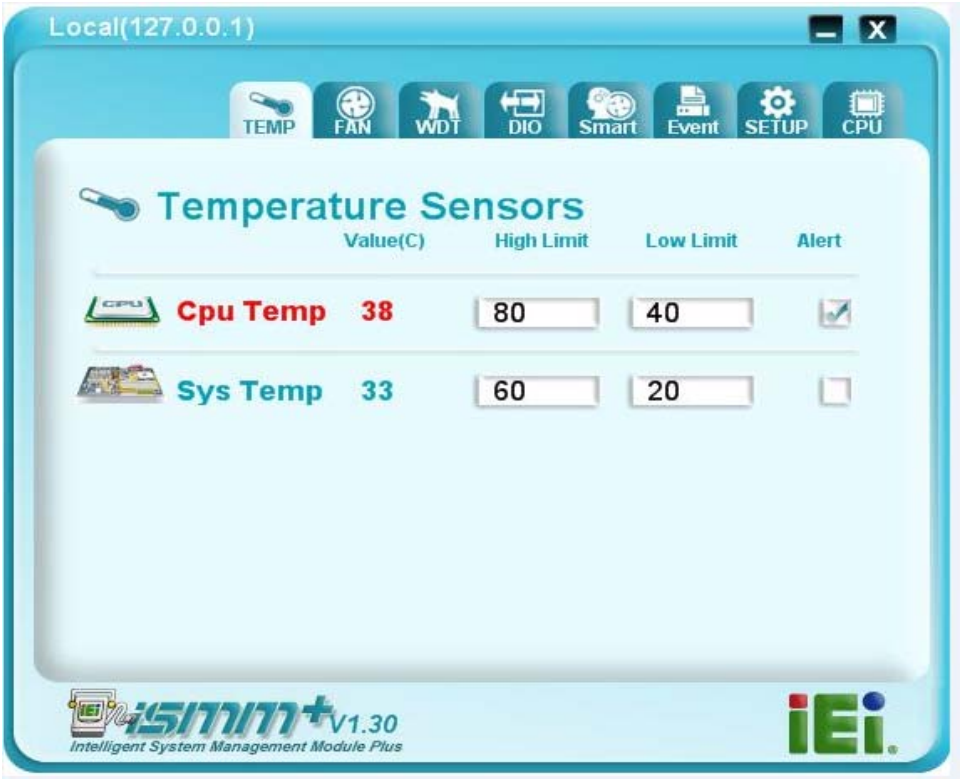


Figure 2: Temperature Page

1.2.2 Fan Page

The IEI iSMM application monitors and shows the fan speeds on the Fan Page (**Figure 3**). The fan speed displays in RPM. The fan speed values are refreshed every 5 seconds.

The **High Limit** value and **Low Limit** value of each fan speed can be set by the user. Check the **"Alert"** box to have the fan speed value shows in red when the fan speed is greater than the **High Limit** value or lower than the **Low Limit** value. For example, the system fan speed (0) shows in red since the current system speed is lower than the **Low Limit** value (2100). (**Figure 3**)

Figure 3: Fan Page

1.2.3 Watchdog Timer Page

The IEI iSMM application allows users to set watchdog timer on the Watchdog Timer Page (**Figure 4**).

- WDT(0~xx): Set the watchdog timer value. The value is a period of time that the system will reset if the timer is not reset in that period of time.
- By second: Set the watchdog timer by second.
- By minute: Set the watchdog timer by minute.
- Start: Start the watchdog timer.
- Stop: Stop the watchdog timer.
- Reload Timer: Auto reset the watchdog timer before timeout.

In the settings shown in **Figure 4**, the watchdog timer is set to 10 seconds and the Reload Timer is checked. Therefore, the system will continue to reset the watchdog timer to 10 seconds before timeout until the program is closed or the system crashes.

Figure 4: WDT Page

1.2.4 DIO Page

The IEI iSMM application monitors the current voltage of GPIO (GPI and GPO) and shows the information on the DIO Page (**Figure 5**). Input Pin information cannot be set and only

shows the pin state. Output Pin information can be set and written to an internal register to control the pin state.

Click the  /  icon in the Output Pin field to change the output pin state.

-  : Voltage pull high.
-  : Voltage pull low.

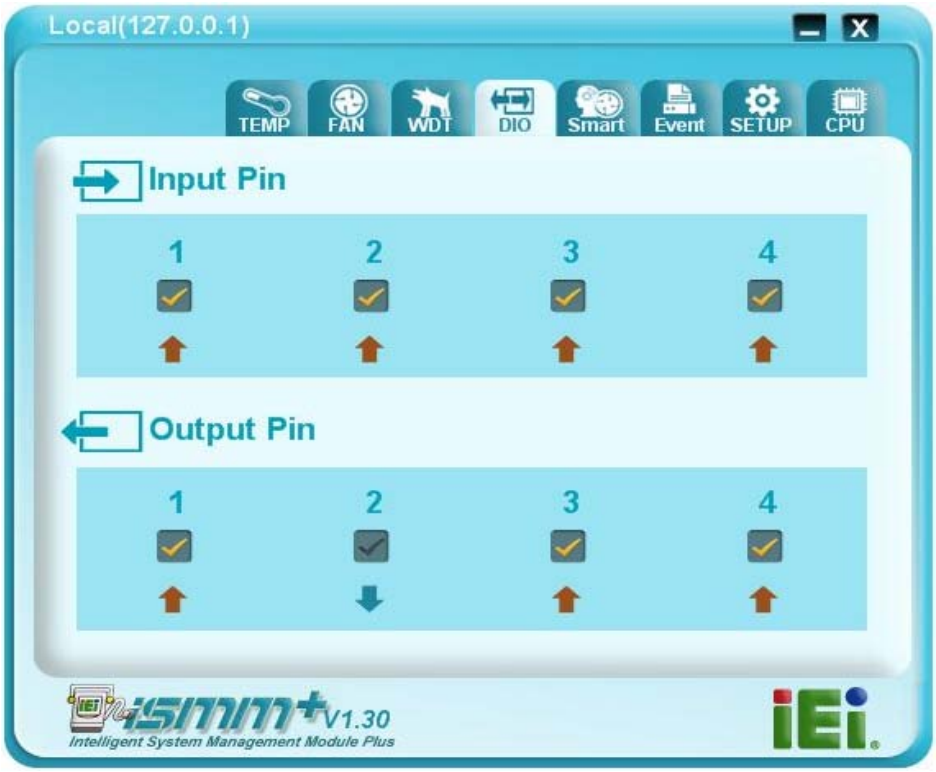


Figure 5: DIO Page

1.2.5 Smart Fan Control Page

The Smart Fan Control Page is for advanced fan setting. The user can select which fan need to be set on the right area. Click the **"Set"** button to take effect after setting the values on the Smart Fan Control Page. The Smart Fan Control Page has two kinds of interfaces depending on different implementation principles of smart fan.

1.2.5.1 Auto Mode (Interface A)

In the Auto Mode, the user can set the temperature that decides the fan activity. The following value can be set (**Figure 6**):

- 1st Temp, 2nd Temp, 3rd Temp, 4th Temp: Set the temperature values to control the fan speed.
- 1st Duty, 2nd Duty, 3rd Duty and 4th Duty: Set the fan speed (%).

The settings shown in **Figure 6** result in the following actions:

When the environment temperature is greater than 60ºC, the fan runs at full speed.

When the environment temperature is between 50ºC~60ºC, the fan runs at 85% of full speed.

When the environment temperature is between 40ºC~50ºC, the fan runs at 70% of full speed.

When the environment temperature is between 30ºC~40ºC, the fan runs at 60% of full speed.

When the environment temperature is lower than 30ºC, the fan runs at 50% of full speed.

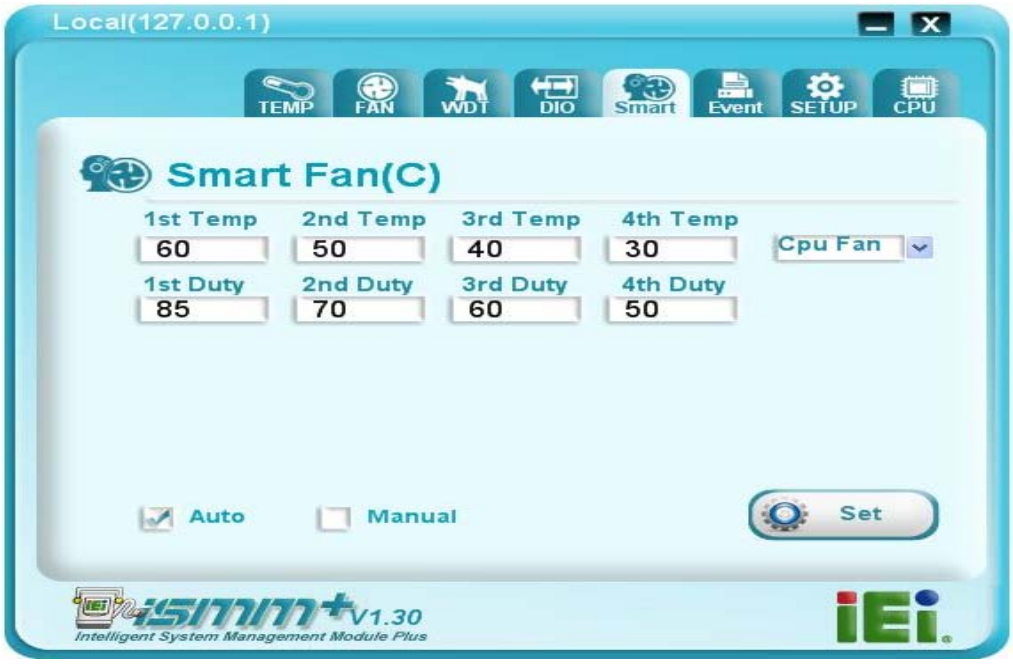


Figure 6: Smart Fan Setting – Auto Mode

1.2.5.2 Manual Mode (Interface A)

In the Manual Mode, the user can enter a value in **Duty** option to set the fan speed (%) (**Figure 7**). Click **"Set"** button when finish.

Figure 7: Smart Fan Setting – Manual Mode

1.2.5.3 Auto Mode (Interface B)

In the Auto Mode, the user can set the temperature that decides the fan activity. The following value can be set (**Figure 8**):

- Stop: The fan spins at lowest speed if the temperature is lower than the set value.
- Start: The fan spins faster than Duty value if the temperature is greater than the set value. The higher the temperature, the faster the fan speed. (Specific controlled by motherboard.)
- Duty (0~100): Set the initial speed (%) when the fan starts.
- Slope: Set the linear rate increases with respect to an increase in temperature.

Click **"Set"** button when finish.

Figure 8: Smart Fan Setting – Auto Mode

1.2.5.4 Manual Mode (Interface B)

In the Manual Mode, the user can enter a value in **Duty** option to set the fan speed (%) (**Figure 9**). Click **"Set"** button when finish.

Figure 9: Smart Fan Setting – Manual Mode

1.2.6 Event Page

The IEI iSMM application monitors and shows the system event logs on the Event Page (**Figure 10**). The event log records the event name, event status and first generation time. For further details, please refer to Setup Page.

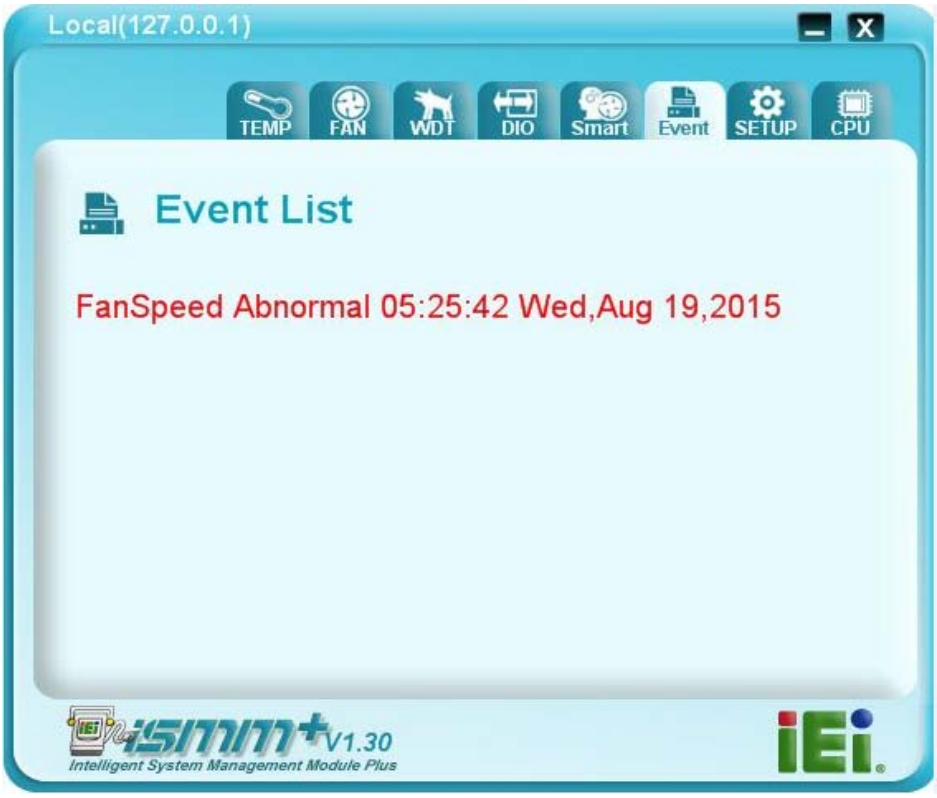


Figure 10: Event Page

1.2.7 Setup Page

The Setup Page allows the user to set some program functions. (**Figure 11**)

Figure 11: Setup Page

1.2.7.1 Beep Function

If the Beep function is enabled and the Alert function is selected in the Temperature page or the Fan page, the buzzer makes a beep sound when the corresponding value is not in the set range.

: Beep function is disabled. (Default)

: Beep function is enabled.

1.2.7.2 Save Function

Use the function to save the settings of the Temperature Page, Fan Page, Watchdog Timer Page, Smart Fan Control Page, Setup Page and login information. For security consideration, please do not use a simple password.

1.2.7.3 Load Function

Use the Load function to load the settings saved by the Save function described above. For example, when the WDT is turned on and the user clicks the Save button to save the settings, then the user changes the settings (turns off the WDT). The saved settings can be retrieved by clicking the Load button. Click the Load button and the WDT will then be turned on.

1.2.7.4 Auto Setting Function

Use the Auto Setting function to load the saved settings automatically when restarting the iSMM program. To use this function, enable the Auto Setting function and click the Save button before closing the iSMM program. The iSMM will login automatically and load the saved settings when you open the iSMM program next time.

1.2.7.5 RecordInfo Function

Use the function to save the corresponding values to a file when reading the temperature values and fan speeds.

1.2.8 CPU Page

The IEI iSMM application monitors and shows Intel cpu information on the CPU Page. Note if not Intel cpu, then this page will be hidden.(**Figure 12**).
The information displayed with name, specification, family, ext. family, model, ext. model, stepping, instructions, cache, cores and threads.

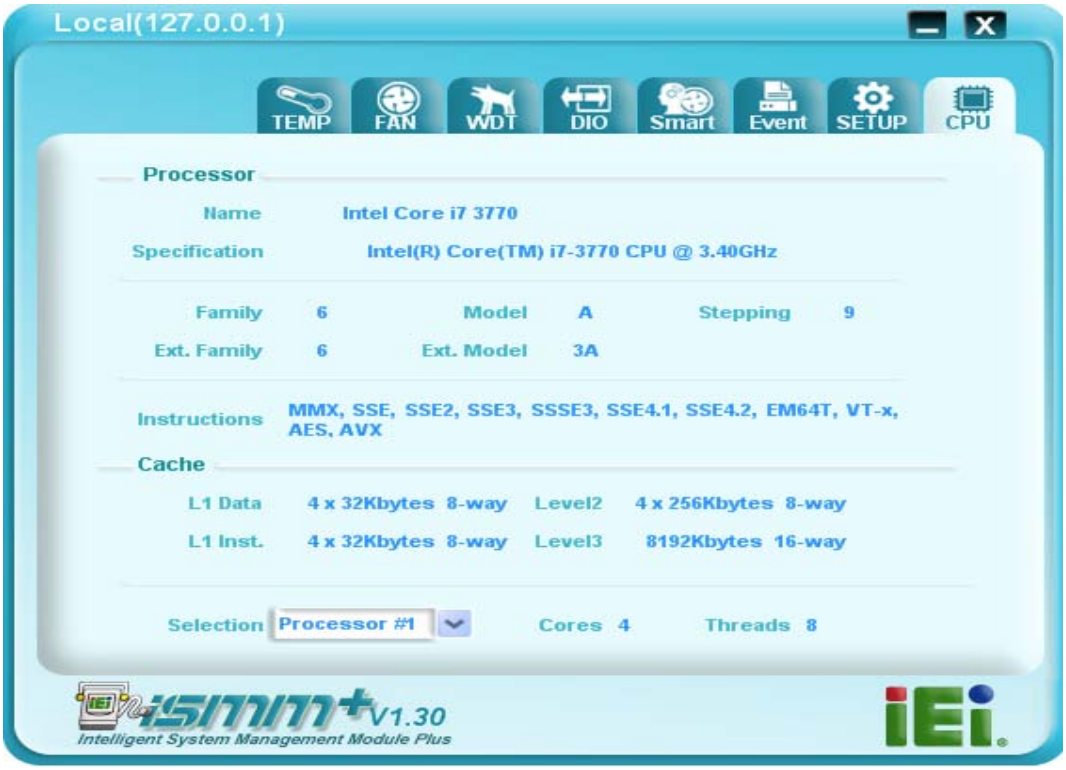


Figure 12: CPU Page

1.3 Remote Management

1.3.1 Remote Login Page

Click **"Remote Management"** button to enter into the remote management interface (**Figure 13**).

Figure 133: Remote Access Login

To connect to a remote compute, please follow the steps below:

Step 1: Enter the IP address.

Step 2: Enter the user name. (The user name must have Administrator permission. If the UAC function is turned on in the target system, the user name must be Administrator.)

Step 3: Enter the password.

Step 4: Click **"Login"** button to log in.

To avoid re-entering the IP address and user name next time, check **"Remember"** to record the information. Click the **"**  **"** button to return to the local login and remote login screen (The button is not available when connecting to a remote computer.).

1.3.2 Remote Power On/Power Off/Reboot Page

The IEI iSMM application allows users to remote turn on and shut down the system on the POWER Page (**Figure 14**). The target system motherboard must support remote wake-up function.

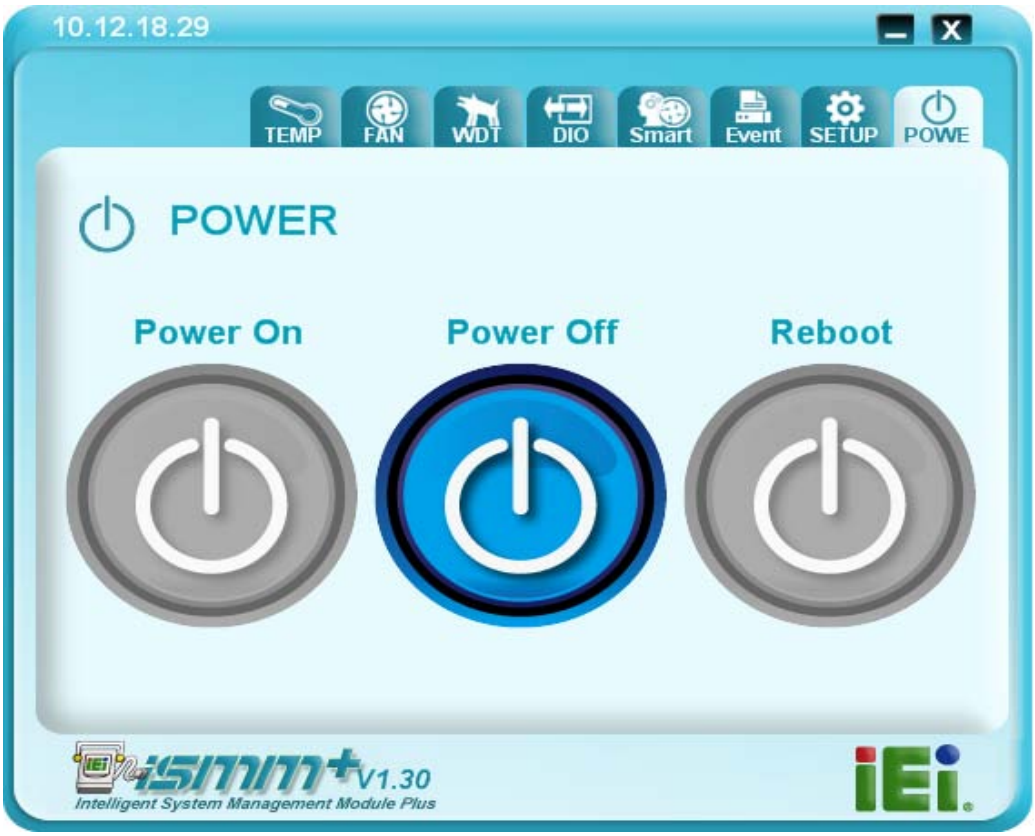


Figure 14: Remote Power On/Power Off /Reboot Page

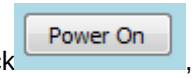
1.3.2.1 Power Off Function

After the remote login, click the Power Off button and then the target system will be shut down automatically.

1.3.2.2 Reboot Function

After the remote login, click the Reboot button and then the target system will be reboot automatically.

1.3.2.3 Power On Function

The target system must be in power off state. After the remote login, click the Power On button and then it will pop up a dialog for entering the MAC address. The default MAC address of the dialog is the target system when remote login successfully (**Figure 15**). The MAC address can be modified. When you click 

, the target system will turn on and then the dialog will automatically turn off after 5S.

Figure 15: Dialog to Enter the MAC Address

Appendix

A. The program supports re-connection after disconnection.

B. Our scripts can be used to set the target system and must be executed with Administrator permission.

Step 1: Local Security Policy - > Security Options - > "Network Access: sharing and security model for local accounts" needs to be set to "Classic - local users authenticate as themselves".

Step 2: Turn off Simple File Sharing.

Step 3: If Windows firewall is turned on in the target system, you need to do the following:

a) For Win7, the user needs to allow **Windows Management Instrumentation (WMI)** to pass.

b) For WinXP, the user needs to run the following command in the command line:

netsh firewall set service RemoteAdmin enable