



J2 Health Monitor Software 520/560/580/650

User Guide

May 2008

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J2 Health Monitor

Overview

The J2 Health Monitoring software provides a common method for a user's software application to access the J2 system PC Health hardware to check if the hardware is operating within specification. This allows applications to access hardware parameters such as system voltages, processor and system temperatures easily. The application does not need to access any hardware directly. All newer J2 touch screen computers are supported by this software. It can also be used as a standalone program for diagnostic purposes.

Hardware Supported

The J2 Hardware monitor software currently supports the J2 POS computers models 520M2, 560RT, 560IR, 580 (all) and the J2 650 (all) versions. The program auto detects the system type. The number of registry keys will vary depending on the systems type. Other J2 hardware support will be added as needed

Operating System Supported

Windows Vista, Windows XP, XP Embedded and WEPOS are supported including the versions of XPE and WEPOS running on Compact Flash. There is a separate version of the program for Windows CE 5.0 and 6.0. Linux is not supported by this program but J2 would be happy to provide the information to write a similar program for Linux.


Hardware/Software Requirements

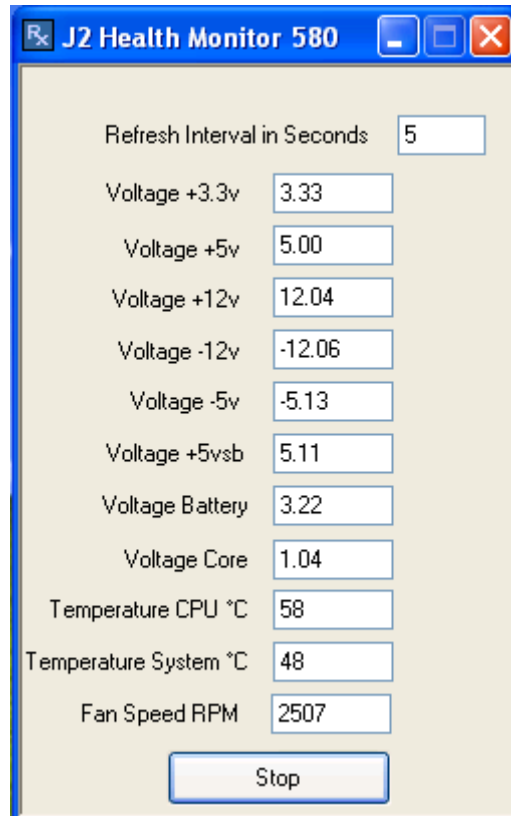
There are no special hardware requirements but the program only runs on the J2 hardware mentioned above. The J2 Hardware Monitoring program does require .NET Framework 2.0 or higher to be installed.

Installing Health Monitor

The J2 Health Monitor install program *Setup J2 Health.exe* is a self extracting program and will install the program under **Program Files\J2 Retail Systems\Health**. A copy will also be loaded in the **Startup** folder so the program loads on boot up. The program will create the registry keys it needs when it is run for the first time.

Running Health Monitor

The program will run at startup and an icon ; will appear in the taskbar tray. By clicking on the icon, a program window will open and the current hardware health values will be displayed. The refresh interval can be set in this program window. The program can also be stop by clicking the stop button. The program will restart when the system is rebooted unless remove for the startup folder.



Theory of Operation

The J2 Health Monitor software is an application program that loads on system bootup and runs in the background. At a predefined interval the software reads the health monitoring hardware and updates a set of registry keys with the current values. Any software application can read these registry keys values to check the current status of the systems health monitoring hardware.

The registry was chosen to store the health values because different systems have different hardware values that are monitored. By using registry keys the software applications can just scan for the keys present to determine which values need to be monitored for that particular hardware. One example would be the J2 650 system that supports Intel's Core 2 DUO processors which have two CPU temperatures where other systems only have one. Additional registry keys are added for this second CPU core temperature. Minimum and maximum values for some keys are also stored in the registry so the application can determine if a value is within J2's specification.

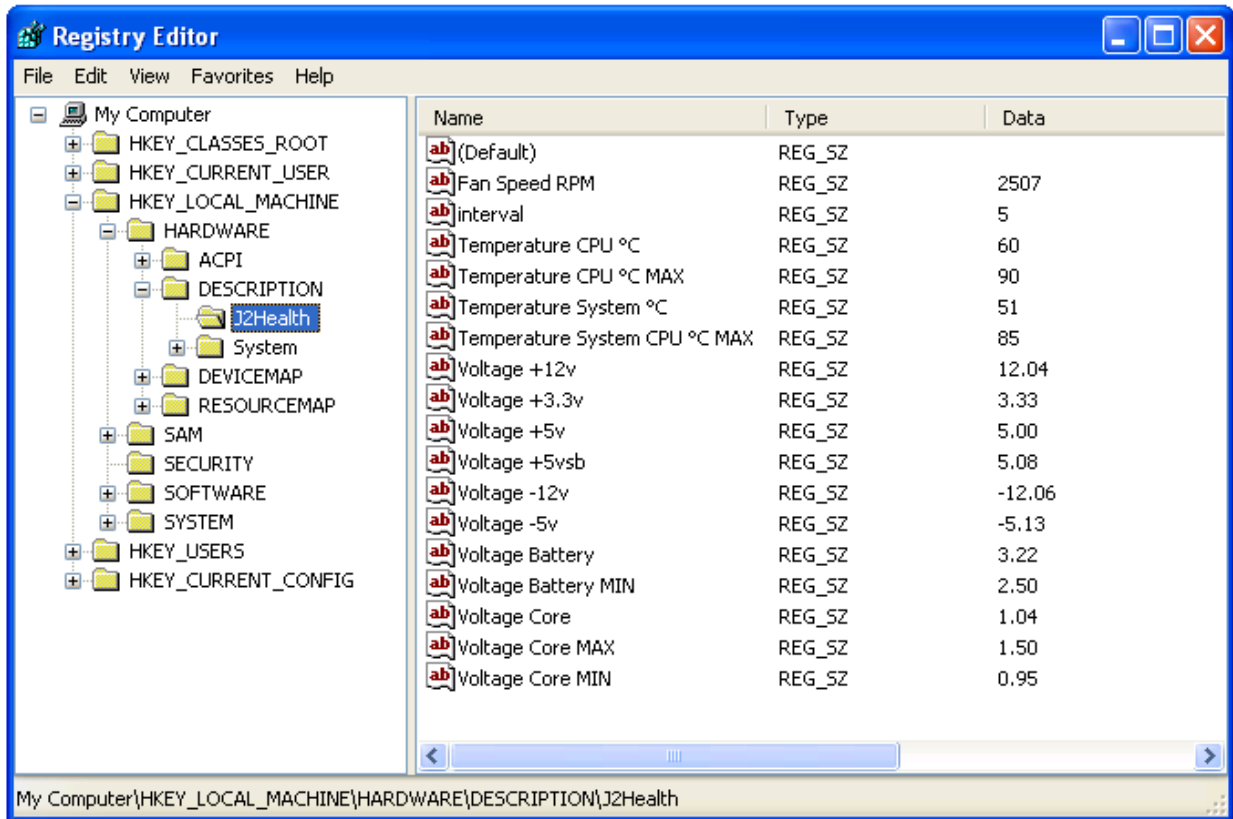
It is solely up to the user's software how to use this information. J2 makes no assumption as to how this information is used other than to say that if the hardware health values are within J2 specification the product is consider good. Many people make the wrong assumption that higher temperatures reduce the product life. This is just not the case if the product is running within specification.

Values Monitored

Most J2 POS hardware monitors all critical system voltages, fan speed, processor and system temperatures. The number of parameters monitor varies depending on the system. For instance the J2 580 monitors eight voltages where the J2 560 only monitors six. Other parameters maybe monitored on future systems.

Registry Keys

The registry key values are stored under ***HKEY_LOCAL_MACHINE\HARDWARE\DISCRIPTION\J2Health***. Below is an example of the key values.

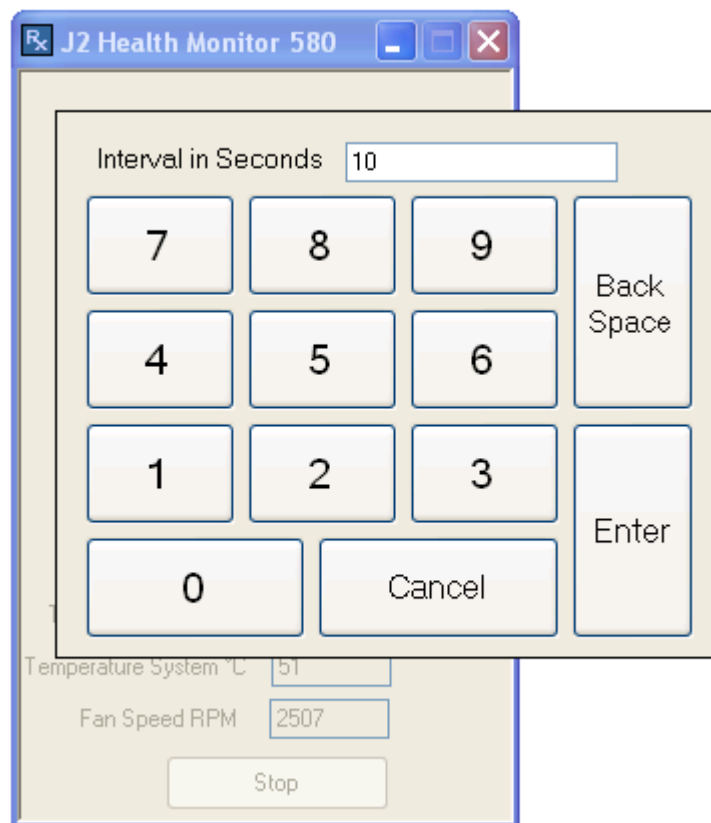


Register keys that are followed with the letters ***MAX*** or ***MIN*** are the J2 recommend maximum or minimum value for the register key with the same name. Some values may only have a maximum or minimum value like ***Voltage Battery*** or ***Temperature CPU*** as the other extreme has no relevant meaning.

Voltages are assumed to have a minimum and maximum value of plus or minus 5% of the rated voltage. For example for ***Voltage +3.3v*** the maximum voltage that should be read is 3.47v and the minimum value of 3.13v to be within J2's operating specification.

Refresh Interval

The refresh interval controls how often the hardware monitor values are updated. This value can be set in the Health Monitor program window. Touch the area of the screen shown the current value and a touch keypad will pop up to allow you to change the interval as show below. The value can also be changed by modifying the registry key *HKEY_LOCAL_MACHINE\HARDWARE\DISCRIPTION\J2Health\interval*. The value is the number of seconds between updates. The default value is 5 seconds.



Applications

The J2 hardware monitoring software was designed to be used as a simple diagnostic tool by itself or in conjunction with a much more sophisticated program for local and remote system monitoring. Please contact J2 if you require additional feature or functions not currently supported.

Support: www.j2reatilsystems.com