

# CPU MONITORING CIRCUIT

Excess heat too much can cause damage to the electronics. Similarly, on a computer or laptop, so monitor the temperature of CPU and other computer components are very important.

In order for a laptop computer temperature monitoring program to function for most of this type, then you need to activate the ACPI BIOS motherboard. This program serves as a controller of the *computer temperature monitor* connected electronically to a temperature sensor and system protection. So it serves to monitor the circuit board, air, and the CPU temperature to protect the system from overheating.

To provide an understanding and a global picture of the computer temperature monitor electronically, the following is examples of *computer temperature monitor* circuit that originates from the MAX6656 IC Application Note, A single temperature sensor and voltage monitor IC can monitor temperatures in multiple locations.

## MAX6656 Computer Temperature Monitor Circuit Diagram

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The MAX6656 includes an on-chip “local” temperature sensor and can also measure the temperatures of two remote thermal diodes (either discrete or on the die of a device like a CPU or FPGA). In addition, the MAX6656’s voltage monitoring inputs can monitor the temperature of an external thermistor. The result is constant thermal monitoring of a board, die, and air temperature.

The computer temperature monitor circuit shown below protects a system from overheating by monitoring temperature in at least three locations using three different temperature measurement techniques. Thermal problems can be identified in three completely different environments; by measuring the temperature of a PCB, the die temperature of a CPU or other IC with a thermal sensing transistor, and chassis air. Monitoring PC board temperature helps to identify overheating of chips close to the sensor. Monitoring the die temperature of a CPU, FPGA, or other high-power chip that has an on-chip thermal monitoring diode can very quickly detect dangerous thermal conditions before an expensive device is damaged by heat. Air temperature can indicate such conditions as a failed or blocked cooling fan.

## MAX6656 Computer Temperature Monitor Circuit Diagram

The *computer temperature monitor* circuit diagram shown above lets you measure and monitor CPU, circuit board, and ambient temperature. IC1 is a temperature and voltage monitor that continuously captures the temperature of two external thermal sense transistors, its own temperature, its supply voltage, and three external voltages. All measured quantities are compared against programmable temperature and voltage limits; if a value falls outside its limits, the ALERT pin asserts. Please download MAX6656 Application Note (PDF) or visit MAX6656 Application Note page to read more about the information of computer temperature monitor.

Source: <http://todayscircuits.blogspot.com/2012/01/cpu-monitoring-circuit.html#.VUCLCGqqko>