

Get real-time temperature of Raspberry Pi

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[environment](#)

[Ideas](#)

[Get temperature parameters](#)

[actual effect](#)

Enter the command through the terminal to check the current CPU temperature of the Raspberry Pi.

environment

System: Raspberry Pi OS

Raspbian is the old name of Raspberry Pi's official Debian-based operating system, and Raspberry Pi OS is its new name after its name change in 2020.

Ideas

The CPU temperature information of the Raspberry Pi is located in the file `/sys/class/thermal/thermal_zone0/temp`, which is a read-only file; we can read the value and convert it to the actual temperature.

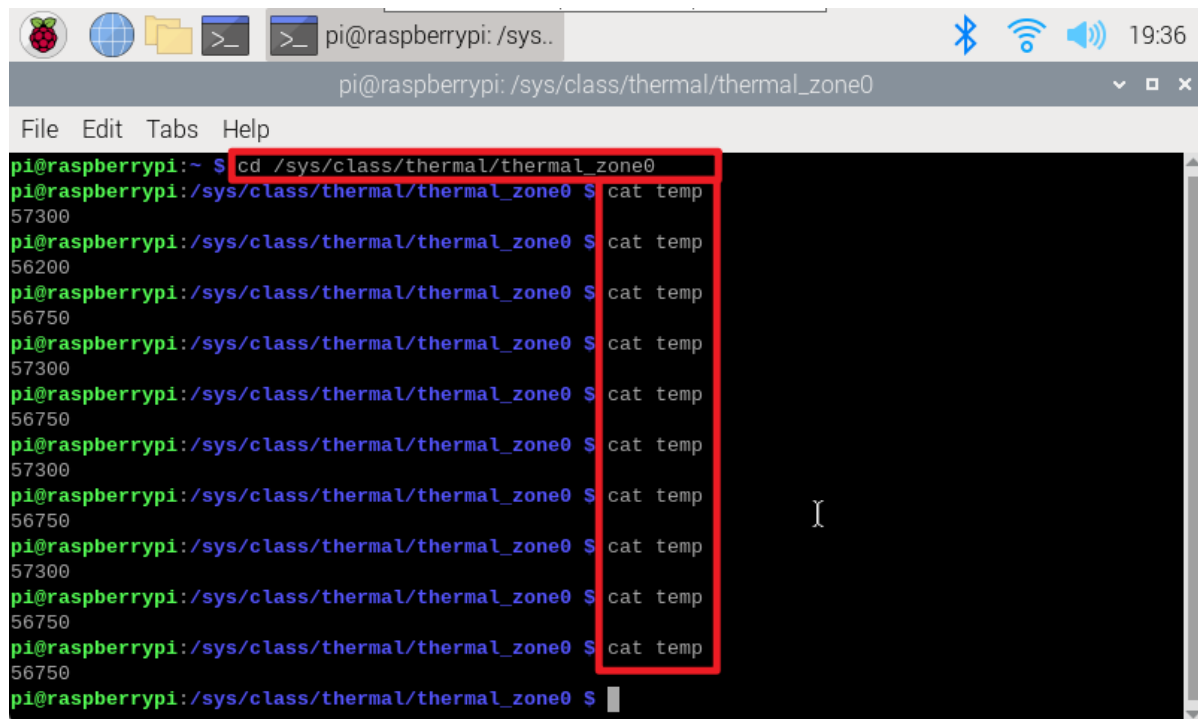
Get temperature parameters

Open the terminal and run the following two commands to obtain the temperature parameters:

```
cd /sys/class/thermal/thermal_zone0
cat temp
```

$$T_{actualtemperature} = \frac{temperatureparameter}{1000}$$

actual effect



The screenshot shows a terminal window titled "pi@raspberrypi: /sys..". The window contains a series of commands and their outputs. A red rectangle highlights the first two lines of the command sequence: `cd /sys/class/thermal/thermal_zone0` and `cat temp`. The output of the first `cat temp` command is `57300`. The subsequent `cat temp` commands output `56200`, `56750`, `57300`, `56750`, `57300`, `56750`, `57300`, `56750`, `57300`, `56750`, and `56750`. The terminal window has a menu bar with "File", "Edit", "Tabs", and "Help". The status bar at the top right shows the time as 19:36 and icons for Bluetooth, Wi-Fi, and a speaker.

```
pi@raspberrypi:~ $ cd /sys/class/thermal/thermal_zone0
pi@raspberrypi:/sys/class/thermal/thermal_zone0 $ cat temp
57300
pi@raspberrypi:/sys/class/thermal/thermal_zone0 $ cat temp
56200
pi@raspberrypi:/sys/class/thermal/thermal_zone0 $ cat temp
56750
pi@raspberrypi:/sys/class/thermal/thermal_zone0 $ cat temp
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pi@raspberrypi:/sys/class/thermal/thermal_zone0 $ cat temp
56750
pi@raspberrypi:/sys/class/thermal/thermal_zone0 $ cat temp
56750
pi@raspberrypi:/sys/class/thermal/thermal_zone0 $
```