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Too Hot ? ?

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- ：『歐姆定律』 $V = I \cdot R$ 比較偏愛樹莓派的嗎？
- ：『熱功當量』 $P = I^2 \cdot R$ 依然不變！

自 Make 雜誌的一篇訪談中

《 RPi Founder Eben Upton Talks About the New Raspberry Pi 2 》

Although **while idling** the new Pi will not consume any more power than the previous generation of boards, when all four cores are being used the new board will consume more power and — due to increased leakage — will get much hotter. Hot enough that **you might want to think about adding a heat sink**, especially if you intend to **overclock** the chip.

While the new board ships with the cores clocked at 900MHz we've been told that it'll run comfortably overclocked to higher speeds. So comfortably in fact that **it was originally intended to ship the boards clocked to 800MHz** and this was only changed in the last few days leading up to launch — no doubt there will be some people that'll want to push the boundaries even further, to higher speeds.

“We were being conservative on the frequency in case we encountered issues in production. In practice, we've found we're fine at 900MHz, with significant overclocking headroom over that.” — Eben Upton, CEO at Raspberry Pi

假使問『樹莓派 2B』需不需要『散熱片』，學究一點的說法，就像《【Sonic π 】電聲學補充《三》上》所講的：

德國物理學家保羅·卡爾·路德維希·德汝德 Paul Karl Ludwig Drude 於一九零零年提出了一個『電傳導』的模型。他想從『微觀』的角度來推導『歐姆定律』。雖然在今天或許需要一些量子力學的修正，這個古典簡單的模型卻提供了『金屬』中『直流電』和『交流電』的傳導、磁場的『霍爾效應』，以及『熱傳導』種種現象非常好的解釋。

在同樣大小的晶片，要是消耗更多的電流，溫度定然是升高的了。

事實上《 **Under-voltage warnings** 》論壇中，dom 說：

I've also added a warning symbol to the existing over-temperature condition (> 85°C), which also disabled turbo mode.

Currently the symbols are:

Red square: over-temperature

Rainbow square: under-voltage

As usual you can override the behaviour in config.txt if you understand the risks:

avoid_warnings=1 removes the warning overlay.

avoid_warnings=2 additionally allows turbo when low-voltage is present.

For testing you can make the temperature warning trigger more easily with "temp_limit=50".

You can probably trigger the under-voltage check by using an insufficient power supply (perhaps USB socket from PC), or a dodgy micro-usb cable from ebay.

如果想知道『當下溫度』，參考《等待『韋蘭』！！》一文：

【樹莓派的溫度】：

『vcgencmd measure_temp』的命令能夠量測當下的工作溫度，讓人們可以『判斷』是否可能發生『熱當機』？或者是真的有需要用『散熱片』嗎？

要是打算『超頻』，請閱讀《[Raspberry Pi 2 Overclock](#)》。

若探一個『聲色宇宙』能容多少粉絲？？也許只可在『有情世界』觀自在耶！！