

Cluster HAT / Cluster CTRL

Can the Pi Zero 2 W be used in the Cluster HAT with a Pi5/Pi4?

When using a **Pi 5** and 4x Pi Zero 2 with the official 27W Pi 5 I wouldn't expect any power issues unless you're connecting other high power devices to the Pi 5.

With four **Pi Zero 2** using 3.4W each and 7W for the Pi 5 (all five running stress) it would total 20.6W which would leave a margin for keyboards/HDMI/etc.

For light/average use the Cluster HAT should work OK in a **Pi 4** with four of the newer Pi Zero 2 W, the main thing to be aware of is the potential power consumption.

We've taken the following measurements with a Ethernet connected **Pi 4**.

Idle Pi 4 ~2.4 Watts and ~5.8 Watts running stress.

Idle Pi Zero 2 W ~1.3 Watts and ~3.4 Watts running stress.

Idle Pi Zero ~1.3 Watts and ~1.6 Watts running stress.

Which means a Pi4 and 4xPi02W could use between ~7.2 Watts when idle and ~19.4 Watts with all 5 machines running stress.

The 19.4 Watts is higher than the official Pi 4 Power supplies rating of 15.3 Watts (vs the Pi4+4*Pi0 ~7.6 to ~12.2 Watts).

For those running lighter or non-concurrent loading - say a Pi4 running stress, two idle Pi02W and two Pi02W running stress the power usage (15.2 Watts) fits within the rating.

Please remember peripherals such as USB Flash drives, Cameras, Mouse, Keyboards, using WiFi, overclocking, etc. will all require more power.

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Author: n/a

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