7 reasons to buy Raspberry Pi Zero 2 W

After a series of rumors, the Raspberry Pi Foundation has officially released a highly anticipated new product line called Raspberry Pi Zero 2 W.

Raspberry Pi Zero 2 W is the latest product in the Zero (ie smaller) single-board computer line from the Raspberry Pi company. It offers several improvements over its predecessor, but is priced similarly.

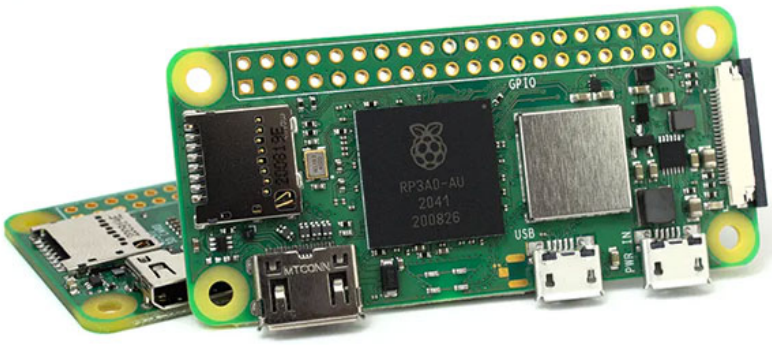
Below is information about the Raspberry Pi Zero 2 W and 7 reasons you should consider choosing this model, whether you are buying a Pi for the first time or upgrading an existing device.

Technical specifications of Raspberry Pi Zero 2 W

After a series of rumors, the Raspberry Pi Foundation has officially released a highly anticipated new product line called Raspberry Pi Zero 2 W. The new model comes with a powerful configuration, while the price is still extremely high. As affordable as 'tradition', only 15 USD.

The highlight of the new Raspberry Pi Zero 2 W lies in the quad-core Arm Cortex-A53 processor clocked at 1.0 GHz. This is clearly a 'heavy' upgrade compared to the 1GHz single-core processor on the previously launched Zero W model. Adding additional cores will give this mini computer model more processing power and the ability to deploy more flexible tasks, which can then be used for more work situations.

Besides the improved processor, the Raspberry Pi Zero 2 W is also equipped with the Raspberry Pi RP3A0 system package with the BCM2710A1 die, which can deliver significantly improved performance levels. Although the RAM capacity remains at 512MB LPDDR2 SDRAM similar to its predecessor, this is enough for the work requirements of Raspberry Pi computer models in general.



Regarding included utilities, the Raspberry Pi Zero 2 W supports 802.11n WiFi and Bluetooth 4.2 connectivity with Bluetooth Low Energy. The list of supported connection ports includes 1 mini HDMI port, 1 micro-USB port, 1 micro-SD slot and 1 USB 2.0 OTG port. There is also a 40-pin GPIO header that can be used in DIY

projects.

Notably, the Raspberry Pi Foundation says this board will be in production until 2028, so you can rest assured that the device will maintain long-term support.

The Raspberry Pi Zero 2 W is available now for $15 in the UK, EU, US, Canada, Hong Kong, and will be coming to other countries in the future. Due to the global chip shortage, the Raspberry Pi Foundation will ship a limited number of 200,000 Raspberry Pi Zero 2 W units this year, with an additional 250,000 units to be shipped in the first half of 2022.

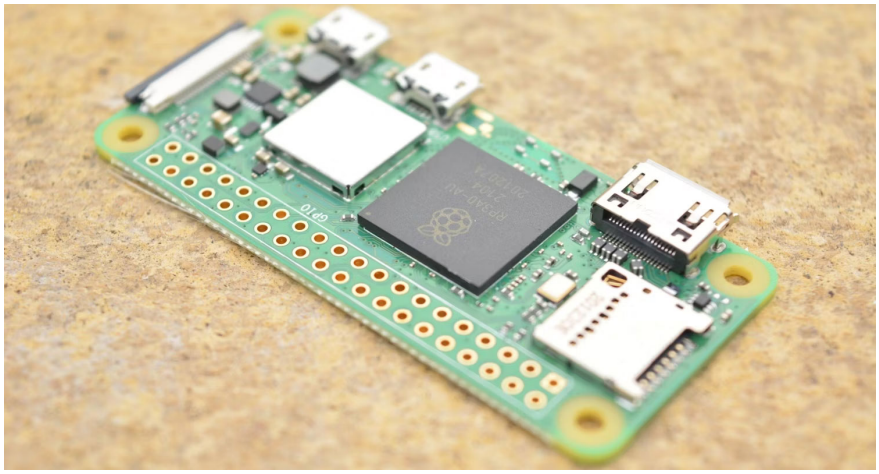
7 reasons to buy Raspberry Pi Zero 2 W

1. ?Cheap price

The Raspberry Pi Zero 2 W is a very inexpensive single-board computer, so much so that it ranks first on the list of cheapest SBCs available. The official retail price is 15 USD, much lower than the price of the basic Raspberry Pi 4B model (35 USD).

This affordable price makes the Raspberry Pi Zero 2 W more suitable for your more experimental, sophisticated projects. It also works with a minimal Raspberry Pi cluster, which can open up some interesting applications.

2. ?Powerful for its small size



Raspberry Pi Zero 2 W can be described as a compact powerhouse. The Zero 2 W is up to 5 times faster than the original Pi Zero in most applications.

The hardware is based on the Raspberry Pi 3A0, a proprietary system package from the Raspberry Pi company. It uses a 64-bit quad-core ARM Cortex-A53 processor clocked at 1 GHz and has 512 MB SDRAM. Given its small size, the performance of this board is quite impressive.

According to benchmark tests conducted by Gareth Halfacree for Hackster, the Pi Zero 2 W offers comparable performance to the much larger 3A+ board but is easily overshadowed by the Raspberry Pi 3B+.

While 512MB RAM is quite low and may be limiting in some applications, compromises are needed to get a more affordable and compact form factor.

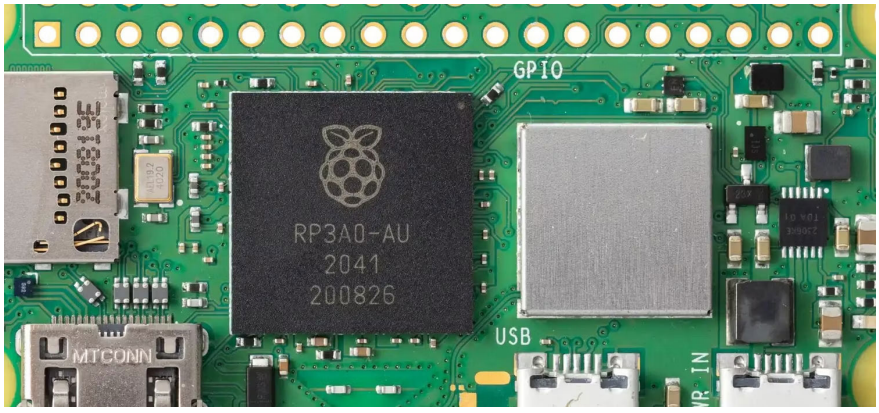
3. ?This is the Raspberry Pi with the best performance

The Raspberry Pi Zero 2 W is the cheapest, most compact and power-efficient Raspberry Pi single-board computer you can buy today. Compared to its larger brothers, the Pi Zero 2 W consumes the most power.

Hackaday conducted various tests on different Raspberry Pi models - Pi 3B+, Pi 4B, Pi Zero and Pi Zero 2 W - to determine which offered the highest performance per watt. The Raspberry Pi Zero 2 W comes out on top: It has comparable performance to the Pi 3B+ while using only slightly more power than the Pi Zero.

This high-performance design not only saves you money on electricity, but also makes it an ideal choice for portable and battery-powered projects. Therefore, the Pi Zero 2 W is very suitable for low-power projects such as handheld console games or remote sensor nodes.

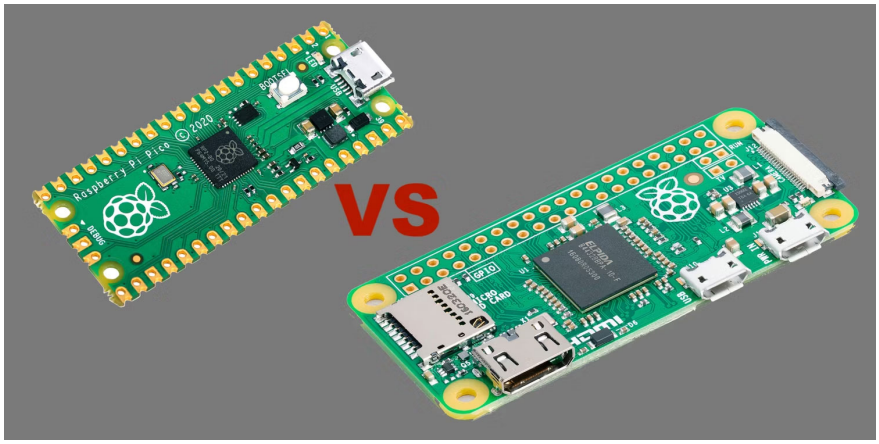
4. Provides wireless connectivity



The 'W' in Raspberry Pi Zero 2 W stands for 'Wireless'. You won't find an Ethernet port on the Zero 2 W, but it does have a Synaptics BCM43436/8 radio module for WiFi (2.4 GHz 802.11 b/g/n Wireless LAN) and Bluetooth (Bluetooth 4.2, BLE).

Unlike the original Pi Zero, there is no version of this board without wireless connectivity. The ability to connect to the Internet without a dongle or adapter opens up countless possibilities for the Raspberry Pi Zero 2 W in IoT and home automation projects.

5. ?Only slightly larger than the Pico



The Raspberry Pi Zero 2 W has a similar design to the Zero W, but is a bit heavier due to the thick copper layers inside used to regulate temperature. While the Raspberry Pi Pico microcontroller is the smallest computing product of the Raspberry Pi, the Zero 2 W is a close second and is a complete computer.

The Raspberry Pi Zero 2 W measures 2.6 × 1.2 × 0.2 inches, roughly the size of a laptop RAM stick. It is half the size of the Pi A+ board and several times smaller than the Raspberry Pi 4B.

Although only as small as a bookmark, the Zero 2 W still has a 40-pin GPIO header, a quad-core processor and wireless connectivity. This small size will be useful for projects with space constraints, portability needs, or aesthetic considerations. The Raspberry Pi Zero 2 W is concrete proof that good things come in compact devices.

6. Raspberry Pi ecosystem and support

Raspberry Pi offers excellent support for its products compared to the competition. While an alternative single-board computer can compete with the Raspberry Pi on price or even performance, it is often difficult to achieve

the same level of official and community support as the Raspberry Pi.

Raspberry Pi Zero is no exception to this trend. For just $15, it provides all the official hardware and software support you need to get the most out of your single-board PC. You also benefit from a community of developers, enthusiasts, and practitioners in Raspberry Pi education and support.

7. ?Usability has been improved

Not long ago, the Raspberry Pi Zero 2 W was considered a fairly rare Pokémon, but the availability of this board (and other Raspberry Pi models) has recently improved.

If you've always wanted a Raspberry Pi Zero 2 W but were confused by its availability, now is the best time to buy one.