

# 5 things Raspberry Pi does better than any other computer.

Despite the emergence of many new SBCs, the Raspberry Pi still stands out for its hardware customization capabilities, power efficiency, and vast ecosystem.

The first time I held a Raspberry Pi in my hands was... right when the first generation of Raspberry Pis was released. At the time, I was working in higher education, and the Pi was introduced as a true learning tool: helping people learn programming and tinker with hardware without financial risk.

But the Raspberry Pi quickly proved it could do much more. Even though there are countless single-board computers (SBCs) and other mini-PCs today, there are still things the Raspberry Pi does better than any competitor.

**Build the project without causing any problems.**

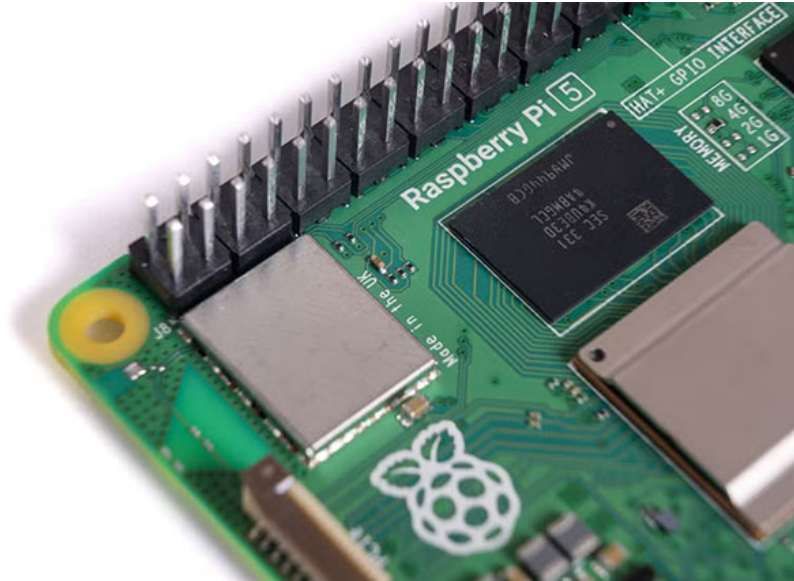


Aside from instances where the Raspberry Pi is used as a true PC and becomes the center of everything, most projects using the Pi are so imperceptible that you barely notice its existence. Inside is a fully functional computer that can be repurposed for any use, as long as it's within its processing power limits.

In many cases, you don't even need a protective case or active cooling. The Raspberry Pi can be neatly hidden almost anywhere, making it particularly suitable for 'headless' applications (no screen, no keyboard). While the current SBC market is much more competitive than when the Pi first launched, the Raspberry Pi is, to some extent, a victim of its own success. However, the Raspberry Pi Foundation now offers several different boards to

compete directly, such as the Pi Zero – significantly cheaper but still capable of appearing in interesting projects like DIY handheld gaming consoles.

## **Hardware and GPIO tinkering capabilities**



While you can absolutely use a Raspberry Pi like a regular computer (and I do too), there are many things that traditional PCs can't do right out of the box, while the Pi can. The GPIO (General-Purpose Input/Output) pins allow you to control, connect, and "sense" almost anything. As long as the device communicates via electrical pulses, the Raspberry Pi can be programmed to interact.

This is what makes the Raspberry Pi a favorite among the maker community and DIY enthusiasts. You have a versatile computer that also acts as a programmable microcontroller. While specialized platforms like Arduino are often the better choice for finished products, the Raspberry Pi is ideal for the development and testing phase. Once the project is complete, you can continue using the Pi or switch to a dedicated microcontroller if needed.

## **Encourage experimentation without fear of failure.**

From the beginning, the core philosophy of the Raspberry Pi was to be affordable enough that users wouldn't mind damaging or losing it. Using an SD card as the operating system installation location (though not the only option) made system recovery or switching between OS versions incredibly simple.

That's also why Raspberry Pi often appears in risky projects like DIY drones, for example Navio2, where the chance of crashing is very high. When the cost per experiment is low, people are more willing to take risks, and as a result, the community has more interesting ideas and products. Simply put, the more people try, the more cool things are born.

## **Ideal for 24/7 operation, quiet and energy-efficient.**



Raspberry Pi is known for its extreme power efficiency and typically doesn't require active cooling, unless you want to exploit maximum performance for extended periods. This makes the Pi a perfect choice for tasks that are always on, running 24/7, and only need to perform a few stable functions.

Combined with the almost indestructible durability of Linux, it's no surprise that Raspberry Pi is used as a home web server, a DIY NAS, or a network-wide ad blocker through projects like Pi-hole.

**The Raspberry Pi ecosystem is larger than just the hardware.**



It could be argued that there are now many other SBCs that are direct alternatives to the Raspberry Pi – and that's absolutely true. In individual aspects, you can find a board that's faster, cheaper, or has more suitable ports for a particular project.

However, thanks to its first-mover advantage and immense popularity, the Raspberry Pi ecosystem is virtually unrivaled. The number of accessories, expansion modules, software, and community resources available for the Pi is enormous. This means that, overall, the Raspberry Pi offers far greater long-term value and flexibility than

its competitors.

It also explains why you almost never need to 'discard' your old Pis when a new version comes out. Just transfer them to other tasks or niche projects, and you can rest assured that there will always be a supportive community.

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