

Arduino derivatives out there. But in contrast to closed business models that can wring money out of the system over many years because there is no competition, Arduino founders saw competition as keeping them honest, and aimed for an environment of collaboration. A benefit of open over closed is the many new ideas and designs others have contributed back to the Arduino ecosystem, ideas and designs that Arduino and the Arduino community use and incorporate into new products.

Over time, the range of Arduino products has diversified, changing and adapting to new needs and challenges. In addition to simple entry level boards, new products have been added ranging from enhanced boards that provide advanced functionality and faster performance, to boards for creating Internet of Things applications, wearables, and 3-D printing. The full range of official Arduino products includes boards, modules (a smaller form-factor of classic boards), shields (elements that can be plugged onto a board to give it extra features), and kits.¹

THE OPEN-SOURCE NATURE OF ARDUINO EMPOWERS USERS TO MODIFY IT AND CREATE A LOT OF DIFFERENT VARIATIONS, STRENGTHENING THE PLATFORM FAR BEYOND WHAT THE FOUNDERS THOUGHT OF BUILDING.

Arduino's focus is on high-quality boards, well-designed support materials, and the

building of community; this focus is one of the keys to their success. And being open lets you build a real community. David says Arduino's community is a big strength and something that really does matter—in his words, "It's good business." When they started, the Arduino team had almost entirely no idea how to build a community. They started by conducting numerous workshops, working directly with people using the platform to make sure the hardware and software worked the way it was meant to work and solved people's problems. The community grew organically from there.

A key decision for Arduino was trademarking the name. The founders needed a way to guarantee to people that they were buying a quality product from a company committed to open-source values and knowledge sharing. Trademarking the Arduino name and logo expresses that guarantee and helps customers easily identify their products, and the products sanctioned by them. If others want to sell boards using the Arduino name and logo, they have to pay a small fee to Arduino. This allows Arduino to scale up manufacturing and distribution while at the same time ensuring the Arduino brand isn't hurt by low-quality copies.

Current official manufacturers are Smart Projects in Italy, SparkFun in the United States, and Dog Hunter in Taiwan/China. These are the only manufacturers that are allowed to use the Arduino logo on their boards. Trademarking their brand provided the founders with a way to protect Arduino, build it out further, and fund software and tutorial development. The trademark-licensing fee for the brand became Arduino's revenue-generating model.

How far to open things up wasn't always something the founders perfectly agreed on. David, who was always one to advocate for opening things up more, had some fears about protecting the Arduino name, thinking people would be mad if they policed their brand. There was some early backlash with