Introducing the Donduino, by Techspace Learning Inc!

Techspace Learning manufactures its own microcontroller development board to design robotics projects as a replacement for the Arduino Uno. The reasons for moving away from the standard Arduino Uno come from years of teaching and over ten years of building projects through the Robotics Club.

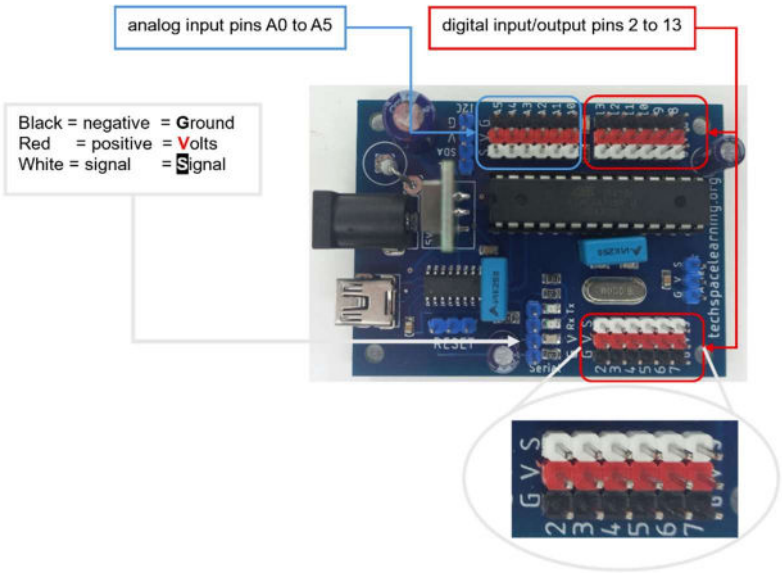
While the Arduino Uno has been a great development and resource for teaching, experimenting, tinkering, and building, there are a few frustrating restrictions that can limit the development of some projects. These include;

- The boards IO, as it only has two common negatives and a single 5V output, meaning that you must buy a sensor shield for projects beyond quick prototyping that require more ground and 5v pins.
- The Uno's design, encourages the use of breadboards, which are fragile and often not suited for building robots.
- An inefficient voltage regulator that can only handle up to 800 milliamps, making it inadequate for more power-intensive components, and restricting the voltage of the input power supply.
- Limited reverse current protection, meaning a component plugged in incorrectly could cause significant damage to the board.
- Obscure board size plus the addition of a sensor shield makes integration with Lego© cumbersome.

Taking all these factors into consideration, Don Eickhoff and the Techspace team, designed and developed the Dondunio, creating a new ATmega328P based development board that was robust, efficient, compact, and highly suited towards teaching and building Lego robots.

The Donduino features;

- A compact form factor, designed to fit exactly onto a 6x8 Lego plate.
- More powerful and efficient switch-mode voltage regulator capable of up to 2 amps of throughput.
- Increased reverse polarity protection, leading to less burnt boards during teaching and development.
- GVS breakout pins are integrated directly on the board removing the need for a sensor shield.



- A USB mini connector, instead of the large USB-B connector.
- Cheaper to produce and more common USB conversion chip (CH340).

The Donduino platform is versatile and battle tested, and Techspace Learning encourages course and club participants to explore different components and learn how they work, as well as provide the comfort and convenience of plugging in all robotics components.

A tiny computer that inspires creativity and ingenuity to build amazing projects no-one has ever seen before.

Techspace Learning
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