

## **Individual**

During the semester break I have done some researches about pin multiplier options, signal amplifiers and omniwheels.

Since we plan to use omniwheels and also there will be a shooting mechanism, we need 20 I/O pin MCU on the robot. In order to have that, we can use some logical circuits such as multiplexers, shift registers or we can connect two Arduino together and use all pins of both of them. However, this wouldn't be the right way because there would be many sources to have errors. So, at the end of my researches the best solution seems like using a MCU having more than 20 pin. That's why, Arduino Mega would be the best choice for us.

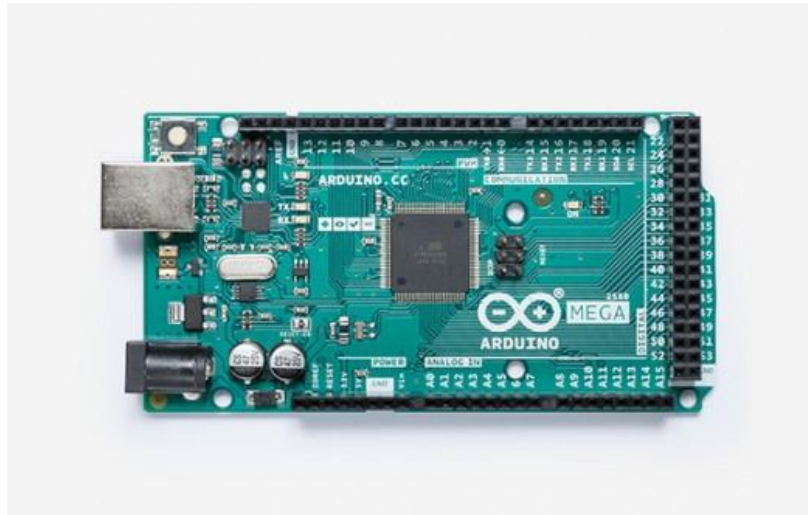


Figure 1: Arduino Mega (53 pin)

Because we think on using omniwheels I did some researches on that. At the robotistan.com it is \$5 per each. Total is  $3 \times 5 = \$15$ .



Figure 2: Omniwheel

## Group

During the semester, each of the member did his own research about that what we can improve our system and what we can do the rest of the project. And then, we are going to decide the further plans for shooting system, range and omniwheel.

Also we ordered the signal amplifier from banggood.com

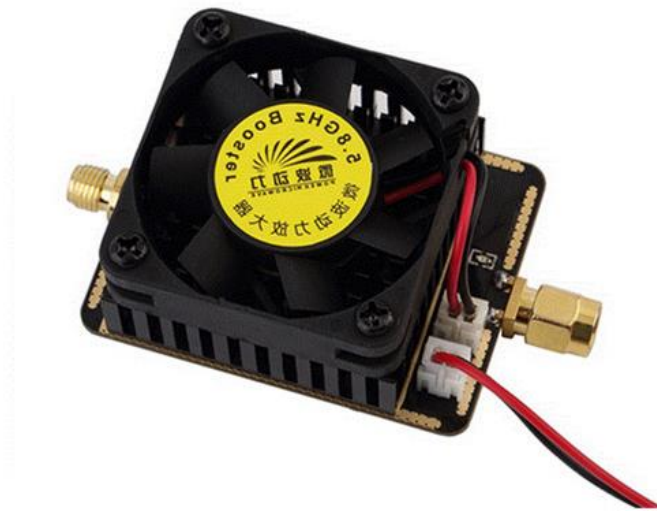


Figure 2: 5.8G signal amplifier