*Projects and Stuff*

Beer Pong Sense

Project Log

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# 2012/04/24

Today began fleshing out the BOM based on known needs. For instance, I know I will require the following basic parts:

* **Battery Controller (currently looking for a rechargeable Li-Ion battery at around 5V and 2000mAh)**
* **AVR Microcontroller capable of QMatrix/QTouch and with a good amount of memory and peripherals for hacking**
* **Display drivers for the 47+ RBG LEDs used in this project**
* **A Voltage Regulator that can source enough current for all of the LEDs and other components**

I used the parametric search tools on Digikey to start finding components that would meet my needs. For instance, if I assume each LED (3x47=141 LEDs due to 3 LEDs per RGB) is 10mA, that’s 141\*0.01= 1.41A – A lot of current. Now in reality, we won’t allow all the LEDs to be on at once, and we’ll use PWN or other methods to adjust their brightness, so the end result will be much less than 1.41Amps, but we’ll still be using a lot of current.

Once these parts have been identified and I’ve gone through the datasheets to verify that everything meets my needs and will be compatible, I’ll move on toward starting the basic schematics in KiCad. I prefer KiCad over Cadsoft Eagle for several reasons, including the fact that KiCad is open source, and it doesn’t limit users to a specific board size.