

Dynamic IO Controller (DyIO)

A IO controller that allows access to it's IO through out reflective RPC based protocol.

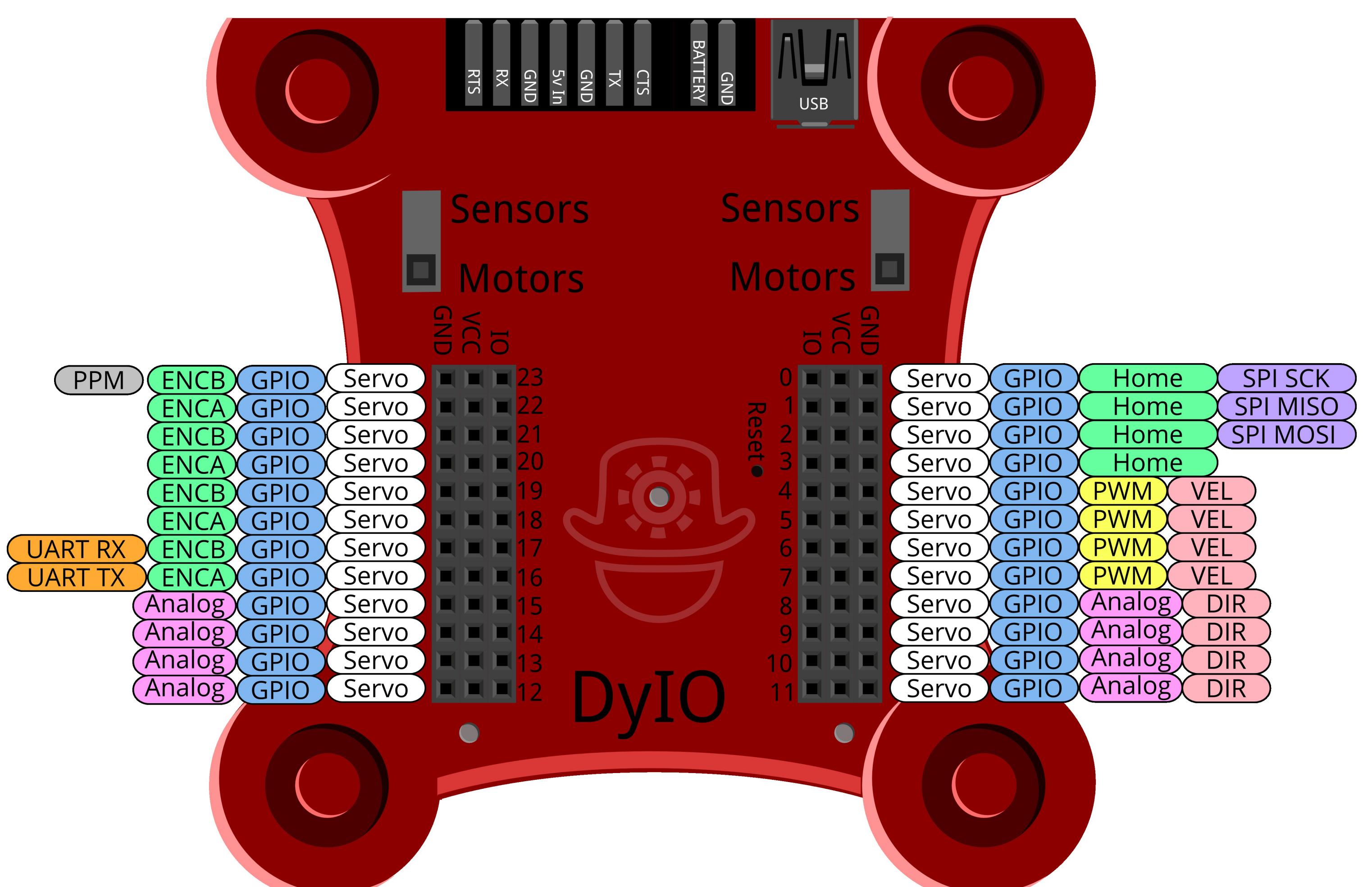
Dynamic IO

The Dynamic Input / Output module is a piece of hardware, a USB computer peripheral, that allows users to quickly and easily connect any computer with the physical world. It contains two cores, One manipulates IO and the other handles "reflexes" such as PID control loops, Servo Position Interpolation, and PPM Decoding

The DyIO has 24 channels that can configure to be whatever mix of inputs and outputs is need. The inputs can be set to asynchronous modes so that the DyIO will send alerts when there are changes verses having to poll inputs constantly. The outputs can use the USB line for power or can use the external battery connection for higher current applications (i.e. servos) up to 24 servos simultaneously

Bowler Protocol

The DyIO uses the bowler protocol which was designed to allow a PC to communicate with a Co-Processor through RPC calls which can be collected into groups to indicate specific sets of functionality. These RPCs, their arguments and groupings can be queried by the software to figure out what capabilities a connected co-processor has. For Example, a co-processor can expose a "PID Controller" interface and the PC can set gains and command motions in a device agnostic way.

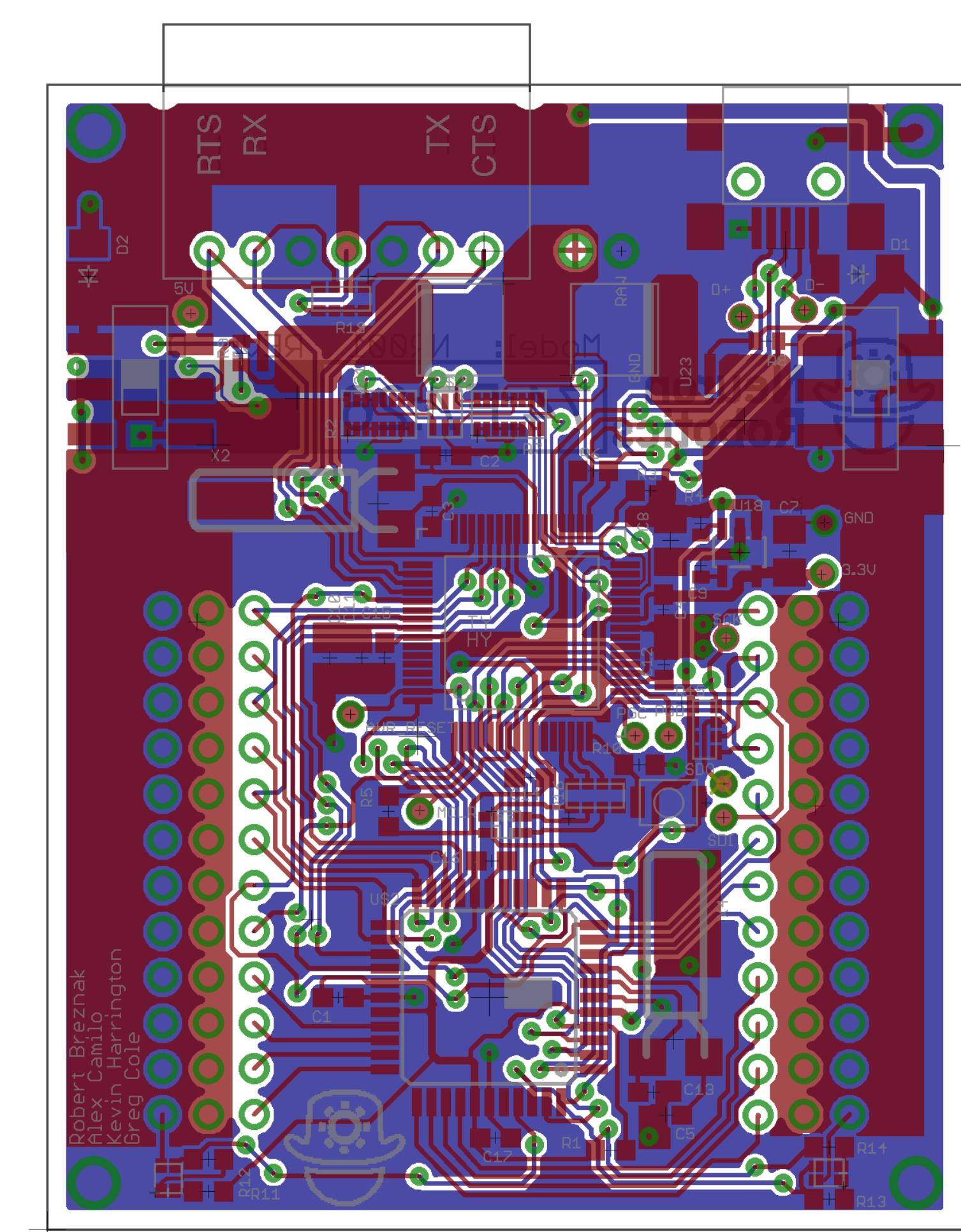
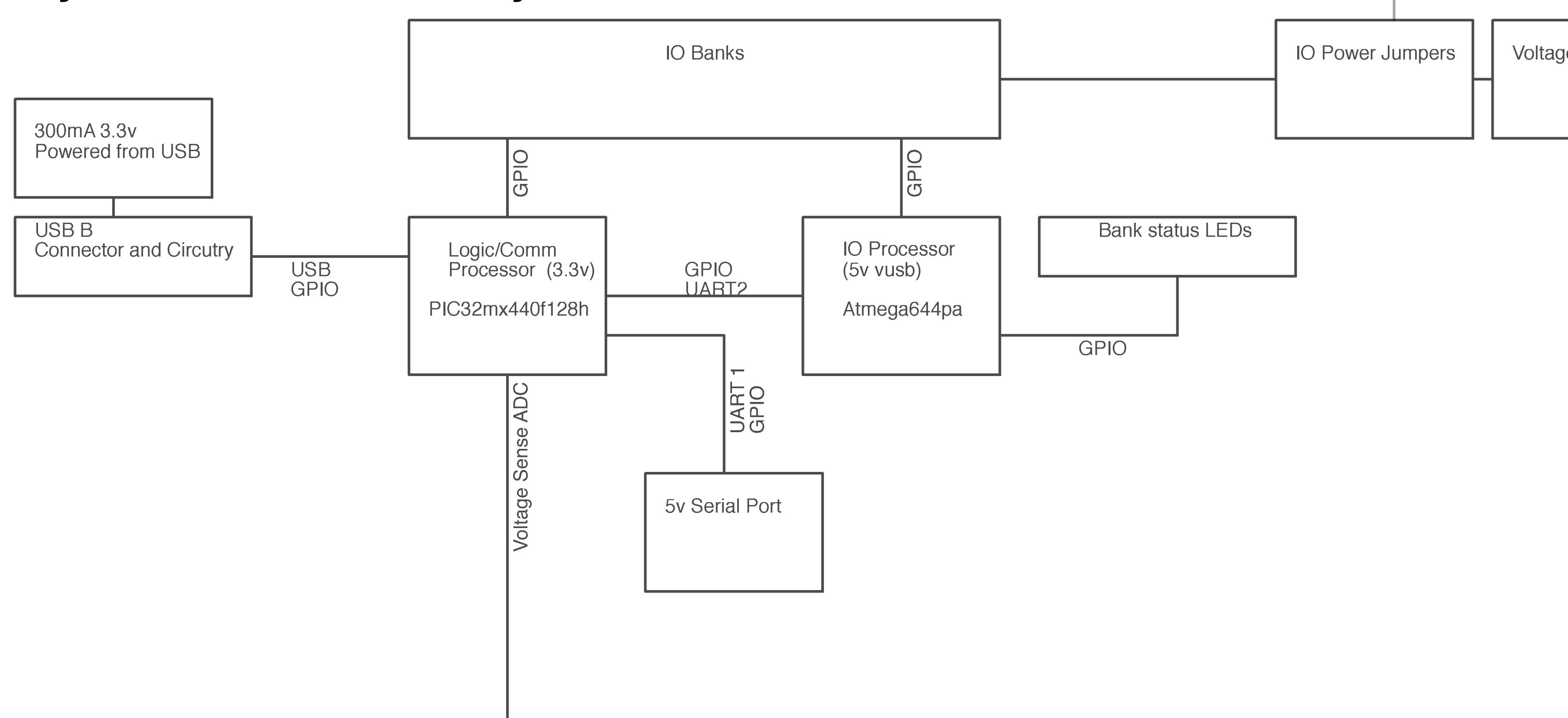


Open Source

The DyIO's Firmware, Software, and Hardware is completely open source, Released under the BSD license, and available on github.



DyIO Rev D. (currently for sale)



DyIO Rev F. (Kickstarter Version)

