

ARC-Controller Checklist

Below is a checklist of work that needs to be completed. It is separated into sections for hardware design, firmware design, and high level software libraries. Some of these items are more broad than they appear and will be elaborated on once more information and testing is done. All items in each category are listed in order of importance.

Hardware

- Power supply design and testing
- Development board prototype
- PCB design and layout
- PCB testing
- Revise for production

Firmware

- Communications interface design (UART, USB, I²C)
- Motor H-Bridge functions (PWMs, direction, etc)
- Motor PID/Quadrature
- Servo control
- GPIO control
- ADC DMA
- ADC reallocation (convert analog to digital if not needed)
- Comm. Reallocation (disable UART, USB, or I²C to gain GPIO)
- Battery monitor
- Back EMF feedback

Software

- Python user libraries
- C++ user libraries
- Python ROS integration
- C++ ROS integration