CC3501 weekly report example

**Group number:** 2 **Team members:** Hunter Kruger-Ilingworth, Thomas Mehes, Quentin Bouet   
**Week number:** 8

**Progress this week:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Task** | **Who did it?** | **What were the outcomes?** | **Who did the peer review?** | **What did you learn?** |
| Work on Schematic & PCB | Quentin | Connect pins to RP2040 (debug, DAC, flash, SDI-12/tranceiver, dew point generator (DPG)). Add layout notes. Add decoupling capacitors. Fix errors and mistakes. Clean up schematic. Add JLCPCB part numbers and verify some components. Move RP2040 power supply from USB to barrel jack. Add silkscreen labels to headers. | Thomas, Hunter | Reviewed the schematic and board with Laurance, to apply fixes and changes later. |
| PCB component arrangement, tracking and design rule checking. | Thomas | Rearranged components, particularly the headers, to significantly reduce board sized and wasted PCB space. Tracks were wired, 4 layers were set like assignment 1. Polygons were poured, realised I missed many unrouted nets. Added a many 3V3 and GND vias and moved silk until there wasn’t any fixable design rule errors left. | Quentin, Hunter | Reviewed the board with Laurance, to apply fixes and changes later. |
| BOM & JLC | Quentin | Exported Gerber files, NC Drill files, BOM file and pick & place file. Checked them with JLCPCB and corrected component rotation errors. | Thomas, Hunter | Confirmed and approved final product and sent to Terence. |
| Writing to SD card | Hunter |  | Quentin |  |
|  |  |  |  |  |
|  |  |  |  |  |

**Overall project tracking:**

|  |  |
| --- | --- |
| **Week number** | **Milestones** |
| 4 | Confirm project topic |
| 5 | Begin Overview and planning |
| 6 | Hardware design: Microcontroller, DAC, SD card, flash and usb interface |
| 7 | Hardware design: Voltage regulators, loadcell circuit layout and testing, SDI-12 testing and interfacing and Informal check with Laurance |
| 8 | Hardware design: write working SDI-12 code, start PCB layout  Finalise draft schematic for Laurance to review. |
| 9 | Finish PCB layout and review to make sure all design rules pass. Implement fixes to the PCB. Final PCB design submitted on Friday to Terence |
| LR | Software: Begin development that doesn’t require hardware testing |
| 10 | Hardware: Solder components to PCB and begin interfacing  Software: Coding to receive data from I^2C DAC and optimise more SDI-12 sensor code |
| 11 | Software: data logging applications including averaging, variable sampling periods and clean exported data. |
| 12 | Verify all hardware functionality, perform testing of existing software on the physical board. Polish the software. |
| 13 | Implement final bug fixes.  Write the report.  Demo day during Friday lab. |