
EE/CprE/SE 492

wDAQ (sddec24-19)

Status Report 3

September 20th - October 3rd, 2024

Client: Avishek Das

Faculty Advisor: Manojit Pramanik

TEAM MEMBERS

Adam Shoberg [EE] - Circuit Design & Simulation, PCB Design, Team Communications Leader

Henry Chamberlain [EE] - PCB Design & Construction

Lisa Tordai [SE] - Software Development, Wireless Data Sharing

Vaughn Miller [CprE] - Computer Engineering

SUMMARY

Over the past two weeks, our team made considerable progress on the hardware and software fronts. On the hardware side, we ordered the assembled PCBs for our ADC circuit, which we finalized during the previous reporting period. After confirmation from our client that the circuit was ready to be ordered for testing, we exported the Gerber, PickAndPlace, and BOM files for the circuit from EasyEDA and emailed them to ETG to order five of the boards with assembly included. We are still waiting on confirmation from ETG that the order has been placed. A few of the components from the ADC board were non-stock items on JLCPCB that will have to be ordered from a separate supplier, LCSC Electronics, and manually soldered onto the boards by our team once the otherwise assembled PCBs arrive at ETG.

MILESTONES REACHED

Adam:

- Finalized ADC board layout

Henry:

- Ordered PCBs from JLCPCB through ETG
 - Ordered five (5) boards for the ADC with assembly service included
 - Exported Gerber, PickAndPlace, and BOM files for ETG to place order

Lisa:

- Created six Arduino test programs to simulate pulse for 8 and 12 bits
- Updated website

Vaughn:

- Programmed STM to read in 8 bits then 12 bits

INDIVIDUAL CONTRIBUTIONS

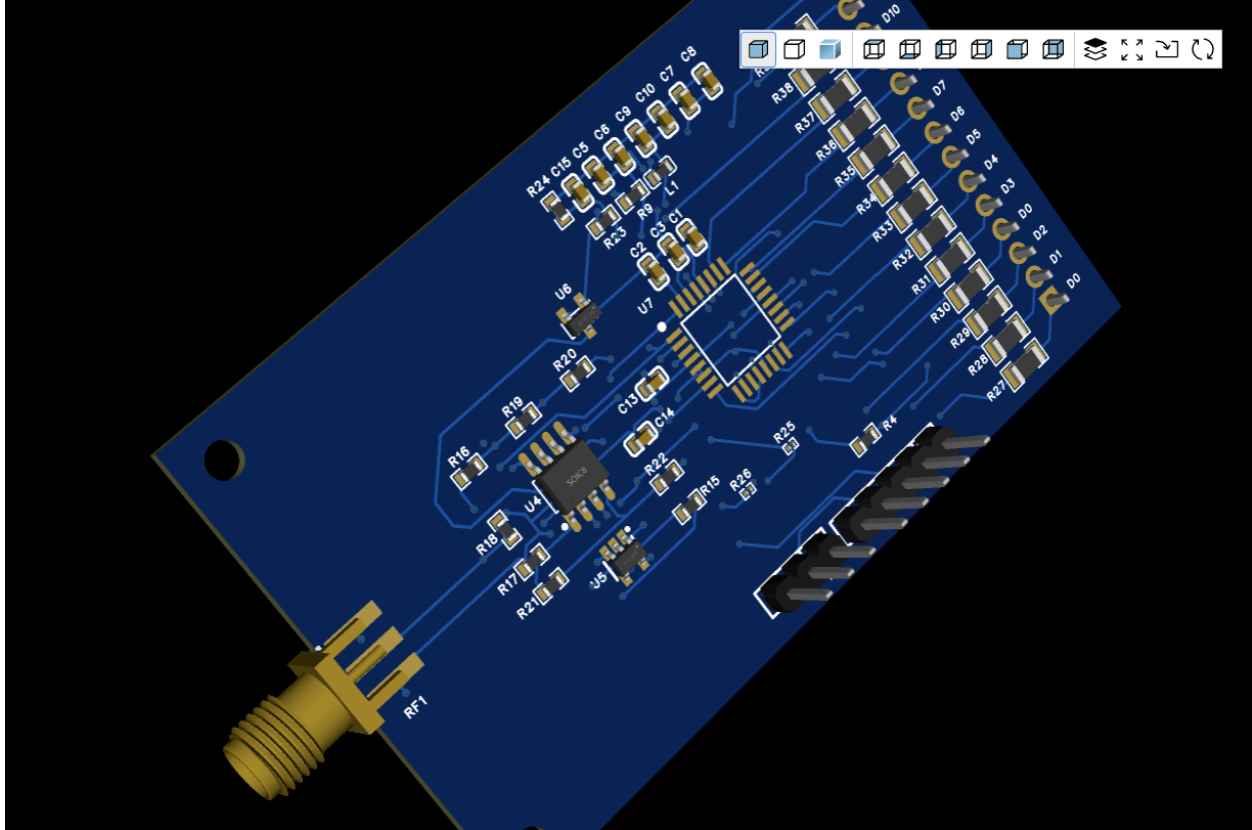
Member	Contributions	Period Hours	Total Hours
Adam	Finalized ADC Board	4	75
Henry	Verified final ADC Design, Ordered PCBs for ADC through ETG	5	76
Lisa	Test programmed STM with Arduino Pulse Simulation, Update Website	5	74
Vaughn	Test programmed STM with Arduino Pulse Simulation	8	70

PLANS FOR NEXT REPORTING PERIOD

Item	Member(s) Assigned	Desired Completion
Test ADC Board	Adam, Henry	Upon arrival of ADC boards
STM to LabVIEW	Lisa, Vaughn	10/16
STM using Wi-Fi to LabVIEW	Lisa, Vaughn	10/30

PROJECT WORK

Final ADC PCB Ordered



SUMMARY OF MEETINGS

Weekly Team/Client Workday (09/26/2024):

- Official workday was canceled by client due to limited availability of team members
- Adam and Henry met at ASC to order PCBs from JLCPCB through ETG
 - Five (5) ADC Circuit PCBs ordered with assembly
 - Waiting on order confirmation from ETG

Biweekly Team/Advisor Meeting (10/01/2024): CANCELED

Weekly Team/Client Workday (10/03/2024):

- Checked up on progress of STM32 bit reading
- Connected digital outputs of ADC9220 to breadboard and viewed waveforms to match digital output waveforms to pins on the board and decipher the binary bit encoding