

Summary report

I. Upcoming schedule

- Nov 2: Phone meeting with Matt Lauer(TI) and his design engineer to discuss pcb issues
- Nov 6 : Meeting with developer of MAVRK module.
- Nov 11 : Team Technical Lecture
- Application notes due to facilitator next week

II. Progress on Project (Technical)

Circuit Design (Min Jae)

DC-DC step up booster was in 8-pin MSOP package. Bought MSOP to DIP adapter to be able to test it on proto board. Sent chips to adapter manufacturer (Proto-Advantage) to be soldered onto adapter. (Expected arrival 11/4)

Op Amp selection made. THS4511RGTT

Criteria considered :

- i. Voltage supply in range of 3.75 to 5.25V
- ii. Operation on single supply.
- iii. Amplifier type : differential
- iV. Manufacturer : TI or National Semiconductor

Chip ordered with adapter via Proto-advantage

Test environment (Jordan)

All the items to be included in a testing environment are gathered. Received a temperature sensor from the ECE shop, hot plate will be borrowed from ECE477 lab, and a different (smaller) container has been chosen for accessibility and for the hot plate to be able to heat the material more uniformly.

Found a project box to house our prototype with the AA batteries. The box will be in at the end of next week.

TINA Simulation (Jordan)

Some component files are not created, can't build the entire circuit. Simulations of the op amp can only be obtained. Called TI and they do not currently have all simulation models for each component they offer.

PCB fabrication(Kyle, Kevin)

Have completed all of the circuit schematic, but having trouble with software and placing some simple components that are supposed to be in the Cadence Library (gnd, pwr).

Some component choices have changed, so Kyle had to update those in the schematic.

Rtd sensor package, resistor package, and dc-dc package has been made.

Syncing schematic to TI's files is not working.

Have phone meeting scheduled for 11-2-11 with TI contact(Matt) and his design engineer to resolve this as well as other issues, such as software not recognizing connections.

uMAVRK programming

No progress since last week meeting. Expecting progress after meeting with MAVRK developer on Nov 6. Received confirmation that the boards were sent on Monday. Two boards are needed for the programming to be complete: Ti's version of the Sensor board, which will work with their code specifically. The other board is the rf-1101 board. This board is a transceiver attached to the mavrk motherboard.

For next week: We will use their boards to finish programming the boards and we will begin looking into accommodating the code for our version of the sensor board.

III. Progress on Project (non-technical)

Presentation :

Technical lecture topic divided among each member.

Lecture topic : How to use MAVRK module.

- What is MAVRK module (General description, advantage over competitor)
- typical application(what can be done using MAVRK module)
- design procedure on analog interface
 - software : How to program MAVRK/uMAVRK using Code Composer 5
 - hardware : building procedure. How to use uMAVRK debugger module.

Pin layout of uMAVRK

Documentation :

Application note topic : need to be discussed in today's meeting.

Design Issue paper assigned.(Oct 31) In process of picking the topic.

Webpage (Kyle):

Webpage updated to include:

PPT slides from oral presentation

Pictures

Final written proposal

Project Progress on front page

Calendar on front page

Gantt chart

Progress reports

Useful links

Management :

Got meeting with Matt(developer of MAVRK) to resolve issues with MAVRK module.(Nov 7)

3 lab meetings :

Oct 29 : 2 ~ 7pm -> attendant : Min Jae, Kevin

Kyle was at interview

Oct 30 : 2 ~ 7pm -> attendant : Kyle, Jordan

Nov 2 : 2 ~ 9pm -> attendant : All