THE PROTEINATOR

Bringing gains to nerds and geeks around the globe

EE 256 Product Design Document

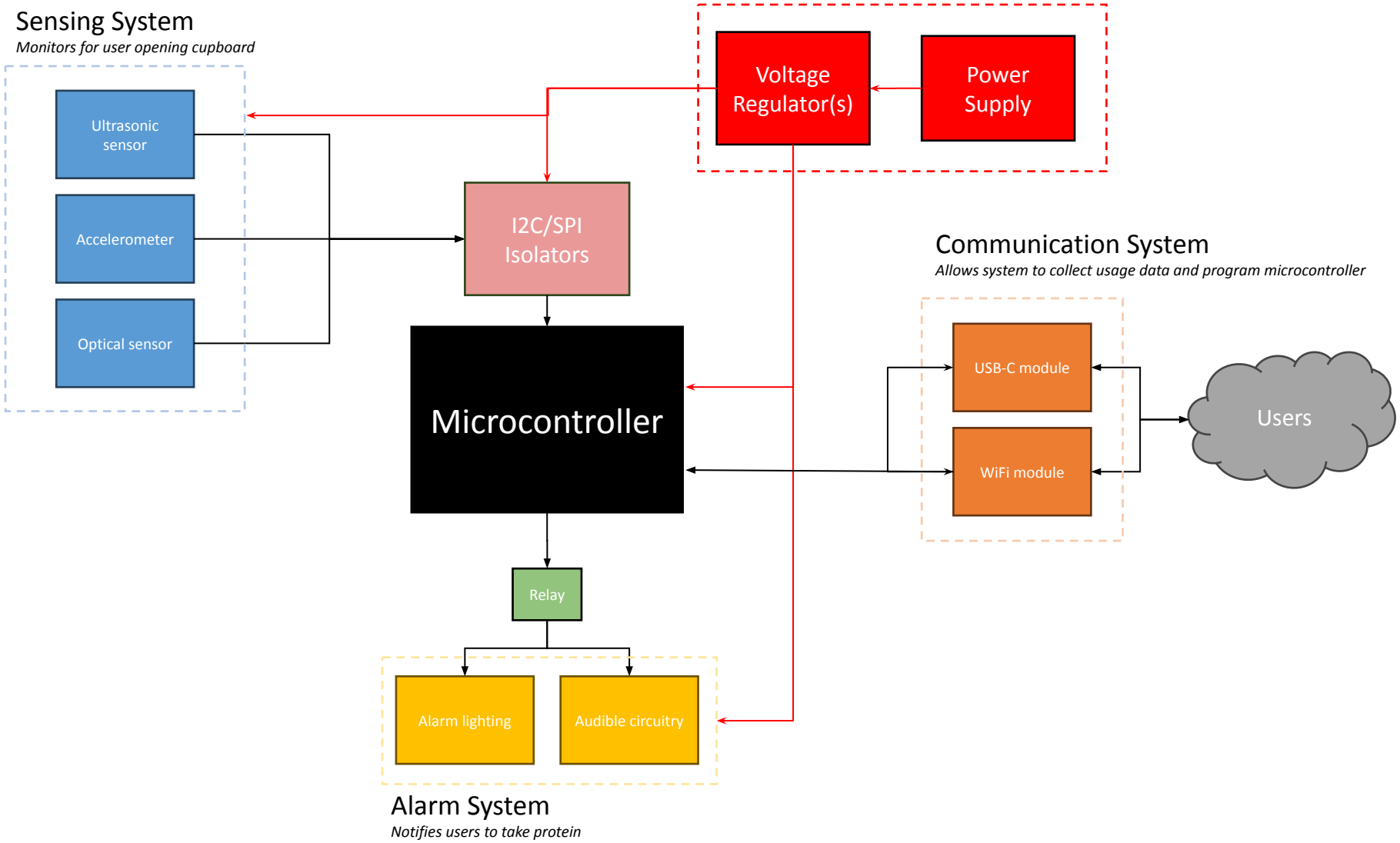
Maxwell Fite and Joshuah Chen – 10/24/23

Power System

Provides adequate power to the whole system

Sensing System

Monitors for user opening cupboard



Communication System

Allows system to collect usage data and program microcontroller

Alarm System

Notifies users to take protein

Overall project requirements

A suitable project shall have:
- a microcontroller
- at least two (2) sensors
- the ability to log sensor data
- at least two (2) communication modalities
- a power system
- fits on a 99 mm x 99 mm PCB

A suitable project may have:
- one or more actuators
- a display (may be touch sensitive)
- one or more buttons
- one or more knobs
- an ADC external to the µC

How to write the Design Specification

- As you make the block diagram and schematic, record all of the decisions you made. Are there some with interesting tradeoffs? Discuss those.
- Any clever design features that are hard to pick up in the sea of boxes and resistors? Let your light shine.
- Think about how you will bringup and test the circuit against the requirements. Let this inform some of the discussion.
- If the circuit malfunctions later, does the design specification help identify correct signals and voltages at various block I/O's?