

# EE496 Dragon fruit Preliminary Design Review

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# Agenda

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- Introduction
- Design Overview
- Problems
- Updated Schedule
- What's Next?



# What is Dragon fruit?

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# Dragon Fruit

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Dragon fruit is the bleeding edge is weatherbox design. Created to be the next iteration/successor to Cranberry.

Short-term Goals:

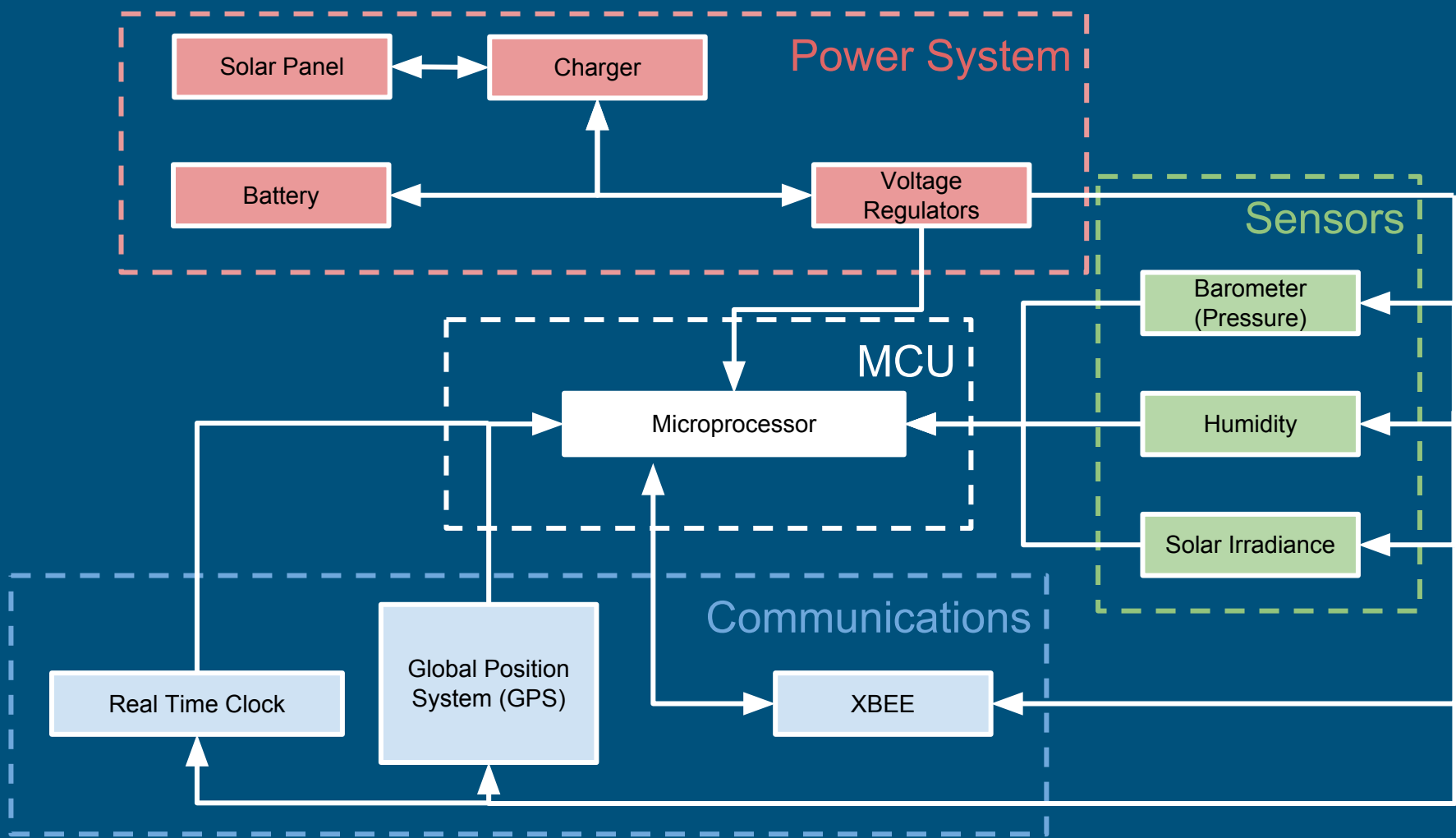
- begin prototyping/testing this month



# Hardware Design Overview

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# Parts chosen

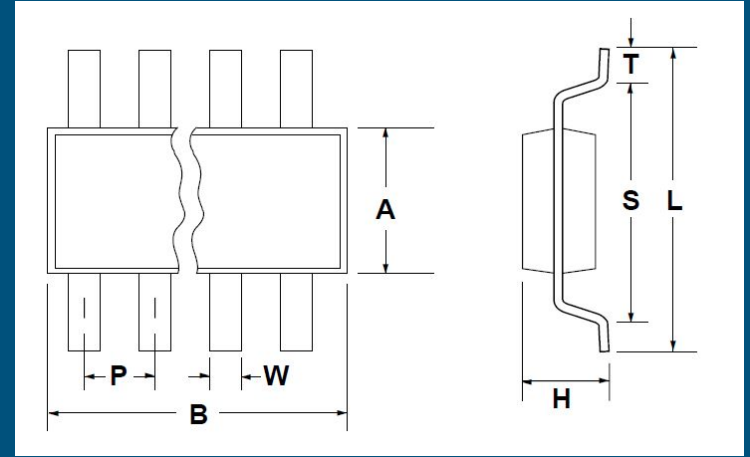


<u>Purpose</u>	<u>Part Number</u>
Solar Charging	Microchip MCP73871
Pressure/Temperature Sensor	Bosch BME 280
Humidity Sensor	Honeywell HIH6131
Solar Irradiance Sensor	APOGEE SP212/215
Microprocessor	Atmel ATmega 644PA
Communications	XBEE Pro S2B



# Problems We Foresee

- Missing parts
- Finding the correct land pattern
- Choosing parts
- Difficulty Soldering





# Updated Schedule

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# Updated Schedule

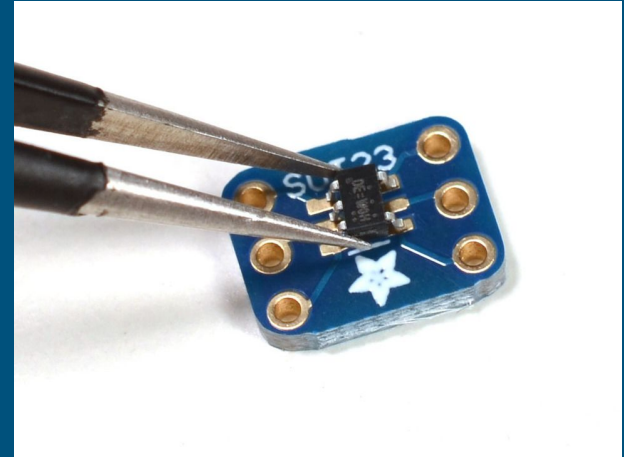
<u>October</u>	<u>November</u>	<u>December</u>
Choose and order Parts	Complete and order first design	Continue debugging (if needed)
Read datasheet and test parts	Debug board	Make next iteration of design
Begin first iteration of design	Work on poster presentation	Continue working hard



# What's Next?

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- Test the Charging Chip
- Receive new parts to test
- Begin routing the rest of the sensors
- Test the new ATmega644PA



# Recap

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- Design Overview
- Problems
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- What's Next?



# Questions?

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