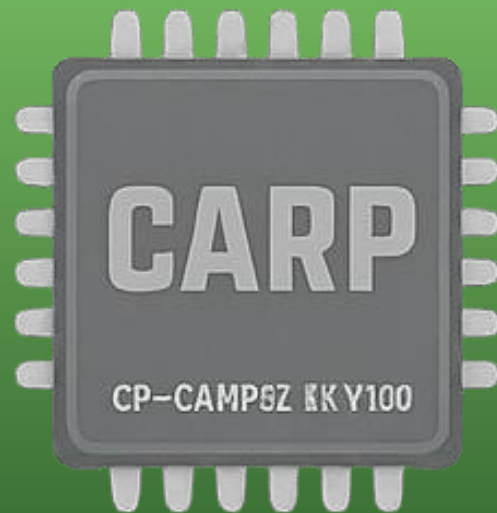




CAL POLY CARP

COMPUTER ARCHITECTURE RESEARCH PROJECT

MEETING #1

What is CAL POLY **CARP** ?

COMPUTER ARCHITECTURE RESEARCH PROJECT

CARP is an open-hardware community devoted to providing students with access to computer architecture research

Projects:

- CARP Core
- TinyTapeouts
- Choose Your Own Research

Education:

- Presentations
- Workshops
- Labs Year Round



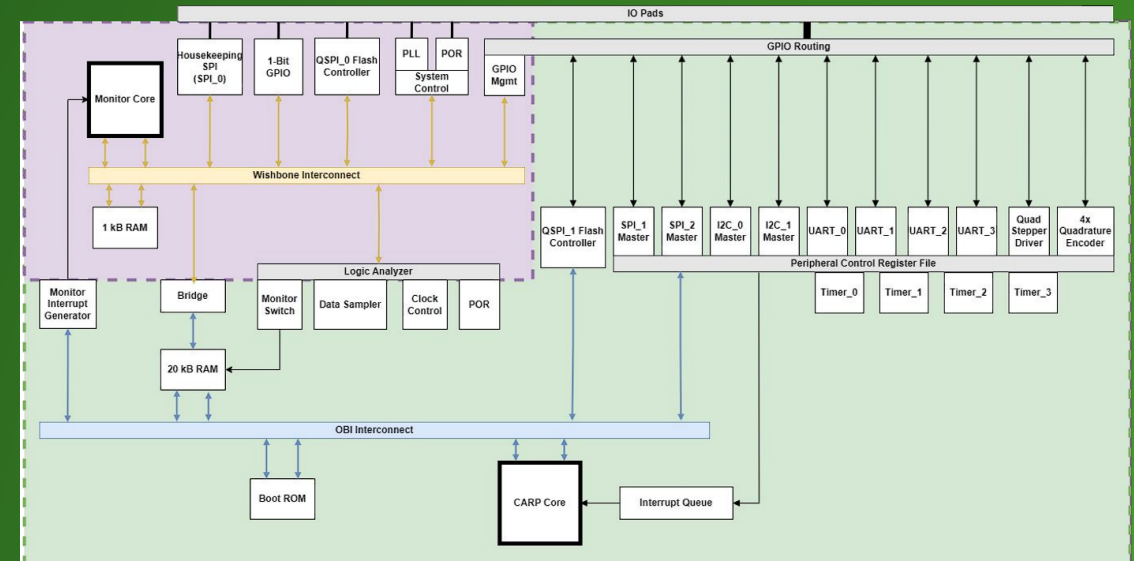
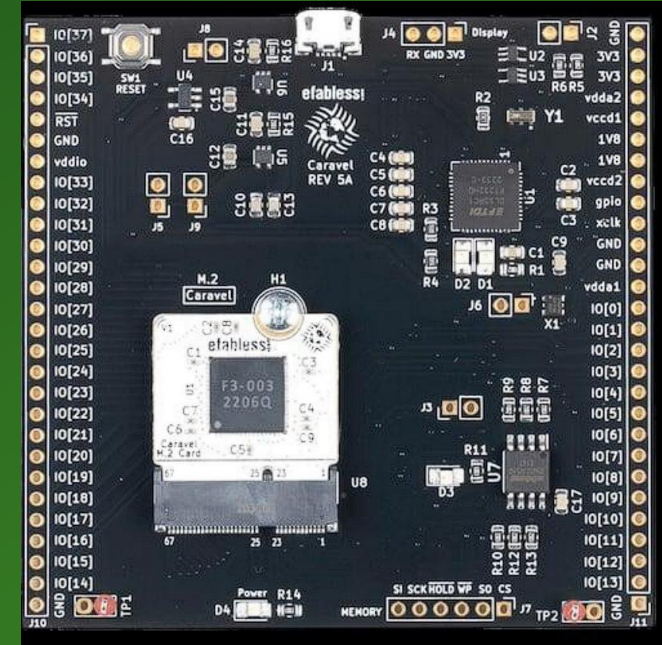
Why join **CAL POLY** **CARP** ? COMPUTER ARCHITECTURE RESEARCH PROJECT

1. Professional Development
2. 1st/2nd Years Exposed to Future Course Topics
3. Access to funded* research projects
4. Meet others with similar interests
5. Enhance your resume
6. Get skills and knowledge

History of



- CARP originated as a SURP Project in 2023
- CARP designed multiple processor cores, and taped out as an SoC in 2024.
- What ended CARP?
 - No new recruiting
 - Lack of faculty leadership
 - Tragic circumstances



1. Be Open to All Cal Poly Students (All Majors)
2. Give Students Access to Rare and Unique Research Opportunities
3. Complement Existing Cal Poly Computer Architecture Education
4. Familiarize Students with Industry Standard Practices
5. Provide Mentorship

How to get involved in



- Join the CARP Discord
 - Weekly updates
 - Project links
- Come to meetings
 - 15-20 minute lecture
 - 40 minute lab
- Work on the project
- Study the documentation



CARP Core (similar to CPE 333 Otter)

- Pipelined, 32-bit RISC-V
- ISA extensions to support bare-metal OS (FreeRTOS)
- ASIC manufacturable

Project Roles:

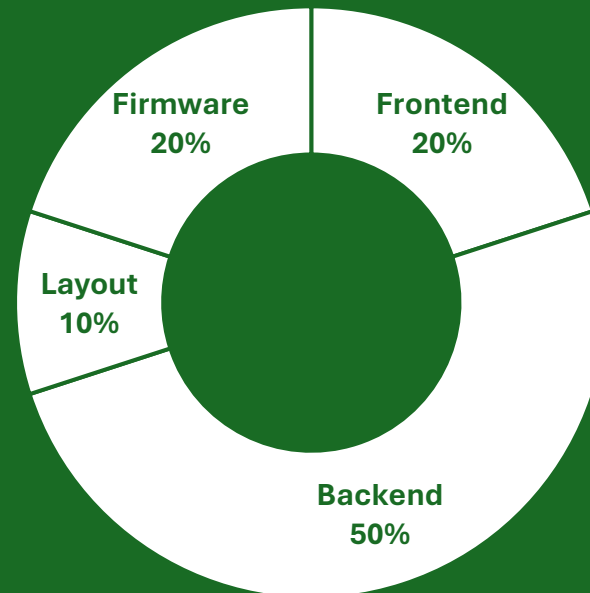
Frontend Design (RTL)

Backend Verification

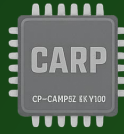
Layout

Firmware/Software

TEAMS



Meet the



CAL POLY
CARP
COMPUTER ARCHITECTURE RESEARCH PROJECT

board



Ryan Cramer

President



Robert Burns

Corporate Outreach Officer



Stanley To

Graduate Officer



Toni Valencia

Technical Lead



Robert Bloomfield

Secretary



Micah Miller

Treasurer