Headquartered in Rancho Bernardo, California, D&K Engineering provides contract engineering and manufacturing solutions for products and instruments that require highly innovative designs or complex manufacturing lifecycles. D&K Engineering provides their customers with professional support throughout the entire product lifecycle process spanning from requirements and specifications definition to manufacturing and after-market support. The professional support they provide was evident during the inception and creation of the current iteration of the smart granola vending kiosk.

Meet the Sponsor

D&K Engineering are interested in creating a self-dispensing granola kiosk with up to 12 automated hoppers, each containing a unique ingredient. A tablet, mounted to the front of the kiosk, running our custom app will be used to provide information to customers about the granola stored in each hopper, and will be the main ordering interface.

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The Manufacturing Process

- Water Jetting
- Laser Cutting
- Manual Machining
- Dispenser Assembly

The team thanks Dr. Shaffar and Dr. Dorr for arranging and advising this project. In addition, the team thanks everyone at D&K Engineering who supported this project, specifically Wayne Jackson, Victor Escobedo, Dusty Fisk, and John Reep. Finally, the team thanks The Granola Goats (2022) for the use of their animated video highlighting the project’s overview.

Acknowledgments

Smart Granola Vending Kiosk
Team Granola to Go

PCB and Web-Application

- CAD Renderine of PCB
- PCB Block Diagram
- Picture of PCB
- GUI of Web-Application

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Meet the Granola to Go Team

Mechanical Engineering Team

- Dylan Mazzarella
  ME Team Lead
- Jarlen Nichols
  External Interface Lead
- Joshua Alanzalon
  Dispensing System Lead
- Nate Dockswell
  Manufacturing Lead
- Jian Cai
  Design Lead

Electrical / Computer Engineering Team

- Rylan Bumbasi
  ECE Team Design Lead
- Manuel Medina
  Hardware
- Lauren Halbach
  Hardware
- Joseph-Gerard Placido
  Firmware / System
- Rodrigo Sosa
  Software