

## Robot Builders Night Virtual for May 19th, 2026

<https://www.youtube.com/watch?v=k9uUbG7TAKw&pp=0gcJCQQLAYcqIYzv>

**Trish C:** VEX Worlds Competition Success. Trish shared a highly successful update regarding the Leo Robotics teams' performance at the VEX Worlds Competition. Competing against an initial field of roughly 10,000 teams, two of their teams made it to the division finals. Team 1082M made history by winning their division and reaching the world semifinals, placing in the top eight globally. They were the only public-school team to reach the final "dome" stage. Students from these teams plan to present their robots and discuss their design processes at the upcoming Moon Day event. Additionally, the students were visited by the Secretary of the Air Force and will be featured in a forthcoming Air Force robotics recruiting video. The meeting attendees also reviewed gameplay footage, highlighting the defensive nature of the competition and the strategic challenge of being randomly paired with alliance partners.

**Mark D:** discussed local parts availability and broader supply chain constraints. MicroEnter is currently offering discounts on Pi Dog robot kits and has Raspberry Pi 02 units with headers in stock for \$17.99. However, the group raised concerns about a reported shortage of printed circuit boards (PCBs) caused by scarcity in necessary processing chemicals and helium gas, prompting a brief discussion on historic helium reserves in Moab, Utah.

**Advanced Sensor Technology** The meeting concluded with a showcase of two advanced sensors:

- **Ray C:** presented a 64x8 dot matrix sensor from DF Robot. It boasts a 5-meter range, a wide 120-degree horizontal field of view, and can process 64 frames per second for a single line. The group noted that while it is vastly faster than mechanical rotating rangefinders, it is currently backordered, heavily marked up on secondary sites like Amazon and AliExpress, and subject to high shipping fees to places like Canada.
- **Mark D:** discussed a new Time of Flight Image Sensor, 1.2-megapixel CMOS smart image sensor that integrates time-of-flight technology to simultaneously capture grayscale imagery and depth data. While the technology is promising and available as a raw chip, participants agreed that its ball grid array (BGA) packaging makes it incredibly difficult for hobbyists to prototype.](<https://www.digikey.com/en/product-highlight/o/on-semi/af0130-image-sensors>)

## Conclusions and Insights

- The VEX Worlds recap provided by Trish Cook offered valuable insights into the latest trends and technological advancements in robotics competitions.
- The link to the AF0130 image sensors shared by Mark Dombrowski points to promising developments in sensory technology crucial for robotics projects.

### **Referenced Links**

- **Trish Cook:**
  - [VEX Worlds Recap Video](#)
- **Mark Dombrowski (madone):**
  - [ON Semiconductor AF0130 Image Sensors](#)