

# DESIGNING THE ELECTRONICS FOR AUGMENTED REALITY (AR) GLASSES:

Launched on schedule in time for CES

**Voler** SYSTEMS

## OVERVIEW



Established in 2014 as a Hangzhou company, Rokid specializes in the research and product development of Mixed Reality and Artificial Intelligence. With its mission of "leave nobody behind", Rokid provides the extreme user experience, superior products, and robust enterprise solutions for development communities.

## THE CHALLENGE



Rokid reached out to Voler to design the electronics for the Rokid Glass, augmented reality glasses, as resources in China did not have the skill to create a complex product ready for volume production.

## VOLER AS THE ELECTRONICS DESIGN PARTNER



Voler worked with Rokid to create the entire electronics design. We integrated multiple sensor technologies—HD Camera, Time-of-flight camera (3D), audio (play and record), and included WiFi and Bluetooth connectivity. There is an HD video display projected on the lens in front of your eye. Given the multiple use cases planned—from mission critical tasks to hands-free operations, the battery life was critical and we were able to deliver a custom board that just sipped power.

Over the course of one year, we designed and built two versions of the Glass. The first was a proof of concept for several key technologies. Rokid tested the prototype, provided new requirements, and Voler designed and built a new version. Voler was instrumental in Rokid launching the product on schedule at CES. The board is extremely compact and light weight, and it has all the capabilities of a smart phone except for the cellular modem.

Our electronic design also delivered extremely sensitive touch capability for micro-detailed handling of tasks.

Voler installed the Android operating system so Rokid could put their software on the device. Of the many uses for AR glasses, one the Rokid Glass can do is to recognize the person in front of you, look them up in your contacts list, and give you their name and other information on the screen in front of your eyes. This can be done while you are saying hello. You don't need to stop looking at the person to read the information and act like you remembered it.

Rokid was highly satisfied with the results of Voler's work.



## RESULTS



**An AR glass with a custom designed electronics board that was:**

- ✓ Power efficient
- ✓ Extremely compact
- ✓ Lightweight
- ✓ Fully featured with all the capabilities of a smart phone except for the cellular modem
- ✓ Extremely sensitive touch capability for micro-detailed handling of tasks