A Self-driven Courier at Your Doorstep

High-performance Memory for Autonomous Delivery Robots

Introduction

Marble, a manufacturer of autonomous delivery robots, partnered with Innodisk for a high-performance DRAM solution that satisfied their AIoT requirements.

Marble is a California-based startup that designs and manufactures autonomous vehicles. Their newest lineup of autonomous delivery robots is already busy delivering all kind of goods in an environmentally friendly and innovative fashion. The robots employ a host of sensors to gather data from the environment which is analyzed in real time. This allows the robot to interact with its environment and make snapshot decisions.

During the design process, the Marble engineering team opted for industrial-grade hardware and components to realize this AIoT application. The onboard sensors and computational workload also called for high performance and high capacity memory. Innodisk met both requirements in a compact and easily integrated solution.

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Our Roadmap to Success

Compact DRAM

· 4 x small form factor SODIMM per robot
· 16GB of capacity
· DDR4 2400MT/s transfer speed
· Optimized for industrial embedded applications

Challenges

· Heavy workload: Real-time computing is heavy work and sufficient memory is essential
· Tough environmental conditions: Working outside can be tough on a robot and the components have to handle changing weather conditions, and shock and vibration
· Space constraints: Saving-space is key to reducing both weight and bulk size

Solutions

· High performance and capacity: Innodisk provided memory that delivered the needed performance to handle the robot's onboard computation
· Industrial-grade solution: Innodisk DRAM is designed to handle the hardships of edge applications
· Compact form factor: The small sized SODIMM form factor was a perfect fit a robot needing to save space

Result

Marble is an exciting startup with big dreams. Their autonomous robots are the first step in their plans to offer widespread affordable, environmentally friendly and reliable delivery. They are passionate about using cutting-edge technology as an answer to the logistical challenges of our modern day society. In partnership with Innodisk, they have found memory and storage that fulfills the need of AI applications in IoT environments.

Our Promise

We at Innodisk believe that through cooperation we can overcome any challenge. By maintaining a strong line of communication all the way from inquiry to implementation, we ensure a tailor-made solution that fits your application. We remain committed to innovation with our continual focus on hardware, firmware and software integration.

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