Letting AI Take Care of your Garbage

Storage and AI Platform for Automated Garbage Handling

Innodisk with subsidiary Aetina delivered a combined surveillance-optimized storage and AI platform solution to an Australian manufacturer of automated garbage trucks.

Introduction

In Australia, one company has specialized in single-operator garbage trucks where garbage bin handling is done by a robotic arm. Due to the many tasks of operating such a vehicle, the manufacturer was concerned about accidents and damages caused by mismanagement and human error.

This is the reason why the manufacturer opted for a smart, 360-degree in-vehicle surveillance solution that would use AI to power object detection through a mobile vision system. This solution ensured that the robot arm handling waste bins on the garbage truck will react to changes in its environment both to avoid accidents and to improve performance.

www.innodisk.com
T +886-7703-3000 / E sales@innodisk.com

innodisk

Our Roadmap to Success

Innodisk:
3MV2-P 2.5" Surveillance SSD
· RECLine firmware optimization for surveillance applications
· Ensures steady performance without any frame-loss
· 2TB capacity

Aetina:
N310 + Jetson TX2 Module
· Up to 6x MIPI cameras supported
· 1.3TFLOPS (FP16) at 7.5W-15W
· Pre-integrated with CSI-II or FPD-LINK III camera modules

Challenges

· Frame Loss: Low-quality footage would threaten object capture performance
· Automated Response: The system needed to determine by itself when to halt operations as a security measure and not rely on human input

Solutions

· Optimized Surveillance SSD: Innodisk has developed a proprietary storage solution that minimizes frame loss and enhances surveillance systems
· High-Performance AI Platform: Aetina's AI solution delivers rapid data analytics on visual input for efficient AI decision making

Result

The object detection and high-quality video provided through Innodisk's and Aetina's components proved crucial to the implementation of this AIoT system. 360 degrees of vision around the truck enabled the vehicle to be operated by a single person assisted by an onboard AI – ultimately lowering costs while also improving performance and safety. This case amply demonstrates how industrial-grade components are used to create the core architecture of AI at the edge.

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.

www.innodisk.com
T +886-7703-3000 / E sales@innodisk.com

innodisk