

# Improving EV Charging Reliability and Efficiency with Innodisk's DDR4 16GB RDIMM DRAM



## Introduction

Innodisk's DDR4 16GB RDIMM DRAM offers a reliable solution for the challenges faced by electric vehicle (EV) charging monitoring systems, including grid security and uneven utilization rate.

As the world moves towards a more sustainable future, electric vehicles (EVs) are becoming increasingly popular. However, with the growth in the number of EVs, the need for efficient and reliable EV charging infrastructure is more critical than ever. Innodisk, a leading provider of industrial embedded FLASH and DRAM solutions, is at the forefront of developing technology for EV charging applications. In order to accurately manage the charging piles located in various districts, the back-end monitoring system needs a stable system to check the user's charging and overall power consumption status. Innodisk's DDR4 16GB RDIMM DRAM was applied in EV charging backend servers to improve the reliability and efficiency of the charging process.

---

# Our Roadmap to Success

## DDR4 16GB RDIMM

- Register for Enhancing Clock, Command, and Control Signals
  - Single Error Correction and Detection Available
  - Fully Tested and Optimized for Stability and Performance
  - Uses Original IC to Meet Strict Industrial Standards
  - Anti-Sulfuration Protection Against Harsh Environments
  - JEDEC Standard 1.2V (1.26V~1.14V)
  - Operating Environment : 0°C ~ 85°C
  - 30μ" Gold Finger
  - RoHS Compliance
  - CE/FCC Certification
- 

### Challenges

- Grid Security: When multiple vehicles are charging at high speed at the same time, it is very likely that an instantaneous overcurrent will cause a power trip or other accidents, which may further impact the balance of the original grid structure.
- Uneven Utilization Rate: The uneven utilization rate of public charging stations has resulted in unused charging stations in remote areas, while users in urban areas have to wait for a long time to get a spot. Effectively allocating charging stations and encouraging users to go to farther charging stations has become a difficult problem.

### Solutions

- In order to ensure that the original grid structure will not be impacted during EV vehicle charging, the back-end monitoring system of charging stations requires RDIMM products that can provide highly stable performance.
- In order to improve the utilization rate of charging stations, the back-end monitoring systems needs RDIMM products that accurately process a large amount of data to obtain charging station information in a timely manner and quickly provide customers with nearby alternative charging solutions.

### Conclusion

Innodisk's DDR4 16GB RDIMM DRAM offers a reliable solution for the challenges faced by electric vehicle charging servers, including highly stable performance and data processing. Innodisk's commitment to developing technology for EV charging applications can contribute to the growth of the electric vehicle industry and the global effort towards sustainability.

### Our Promise

At Innodisk, we believe that any challenge can be overcome through cooperation. 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 total hardware, firmware, and software integration.