

# Automatic Recovery for Electronic Toll Collection (ETC) Applications

Ensure Near Instant Recovery for ETC Applications, Reducing Traffic Jams & Increasing Profit



## Introduction

Innodisk worked with a Chinese manufacturer of electronic toll collection machines to create a system capable of automatic recovery.

Electronic toll collection (ETC) machines, which are automatic systems for collecting tolls and other usage fees from drivers are becoming ever more prevalent. Due to their rising dominance when compared to manned toll booths, it is becoming increasingly more important that these systems are up and running as often as possible. When these systems do go down, it is crucial that they can be recovered within minutes automatically, as it could take hours for engineers to drive to their often remote locations.

Innodisk partnered with an ETC system manufacturer in China to create an ETC system capable of automatic recovery, using InnosR's Auto-Reboot mode.

---

# Our Roadmap to Success

## InnoOSR SSD

- 2.5" SSD/ M.2 2280/ M.2 2242 form factors
  - 64GB to 1TB capacity
  - Sequential R/W (MB/sec, max.) of 560/340
  - Storage temperature of -40°C to +85°C
- 

## Challenges

- Year-round outdoor extreme weather conditions and temperatures
- Constant shock and vibrations from heavy trucks driving nearby
- Stores and processes huge amounts of vehicle data
- High accuracy with little room for error
- 24/7 unmanned monitoring

## Solution

- One-click or automatic recovery
- Patented firmware-level recovery technology
- No internet connection required
- No-fuss system implementation

## Conclusion

Innodisk and its partner created an unmanned ETC solution that was able to recover itself automatically after a crash, resulting in less traffic jams whilst drivers waited for the solution to be fixed, and higher revenues for the ETC operator, as more cars were able to pass through. In addition to the recovery benefits offered by InnoOSR, the ETC system was also able to process data at high speeds, and without having to worry about shock, vibrations or high temperatures due to InnoOSR's industrial design.

## 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.