



# Case Study

## Edge AI Computer for Automatic Number Plate Recognition

## Various applications of automatic number plate recognition

Thanks to the maturity of artificial intelligence and edge computing, automatic number plate recognition (ANPR) has achieved faster and more accurate recognition. With a compact but powerful edge AI system and an IP camera, the edge-AI-based ANPR solution is beneficial for traffic management in various manners, such as law enforcement, parking lot charging and traffic monitoring and analysis.

## Challenges

The customer was looking for a compact edge AI computer powered by the NVIDIA® Jetson Nano™ module for Automatic Number Plate Recognition (ANPR). The system should come with rich I/O interfaces and feature consistent computing capability in any circumstance. It also needs to be integrated with the number plate recognition software development kit from the customer, thus flexible and fast customer support will be a great help.

## Main Requirements

- NVIDIA® Jetson Nano™, 128-core NVIDIA Maxwell™ GPU
- At least one PoE and one GbE LAN ports
- Powerful performance under any circumstances
- Supports customer's software
- Fast and flexible customer support

## The compact system delivers high performance for edge AI computing

Axiomtek has proposed its AIE100-903-FL, an ultra-compact edge AI system, which is designed for intelligent edge AI applications, such as AI computing, edge computing, smart retail, smart city, and more. The system is based on the NVIDIA® Jetson Nano module, with 128-core NVIDIA Maxwell™ GPU. To easily install and deploy an IP camera, this user-friendly AI-enabled system is equipped with a 15W GbE PoE port for both power and video transmission. To enable operation under any circumstances, the operating temperature ranges from -30°C to +60°C. The storage includes onboard 16GB eMMC and M.2 Key B NVMe slot.



## Application

### Edge AI for automation number plate recognition

Axiomtek's AIE100-903-FL has integrated with the IP camera via the PoE LAN port and the customer's proprietary automatic plate number recognition software can run smoothly thanks to the high performance. The turnkey solution is ideal for applications such as technology law enforcement, parking lots, or traffic monitoring at busy intersections.



## System Configurations of the AIE100-903-FL

- NVIDIA® Jetson Nano™
- 128-core NVIDIA Maxwell™ GPU
- High AI computing performance for GPU-accelerated processing
- Fanless and rugged design
- Optional IP42 cover kit for semi-outdoor applications
- Supports one 15W GbE PoE for the camera and one GbE LAN
- Wide operating temperature from -30°C to +60°C
- JetPack supported

\*For detailed specifications, please visit [www.axiomtek.com](http://www.axiomtek.com) or go to Products > Systems and Platforms > [Edge AI System](#) for the [AIE100-903-FL](#)

## Why Axiomtek

As a prominent leader in IPC, Axiomtek values the market of AI edge computing seriously and puts a tremendous amount of effort into designing value-added systems that help customers create value in their solutions. Axiomtek provides various edge AI systems with different features. Customers can find the most suitable one from us.

“To penetrate to a new and challenging market, Axiomtek’s AIE100-903-FL has been a game-changer for our ANPR business expansion. Its powerful AI capabilities enabled real-time data acquisition and analysis which makes our ANPR solution superior to competitors. We would highly recommend the great products and the great team of Axiomtek,” said the procurement manager of the customer.

## About Axiomtek Co., Ltd.

Axiomtek has experienced extraordinary growth in the past 30 years because of our people, our years of learning which resulted in our tremendous industry experience, and our desire to deliver well-rounded, easy-to-integrate solutions to our customers. These factors have influenced us to invest in a growing team of engineers including software, hardware, firmware, and application engineers. For the next few decades, our success will be determined by our ability to lead with unique technologies

for AIoT and serve our key markets with innovatively-designed solution packages of hardware and software – coupled with unmatched engineering and value-added services that will help lessen the challenges faced by our systems integrator, OEM and ODM customers and prospects alike. We will continue to enlist more technology partners and increase collaborations with our growing ecosystem who are leaders in their fields. With such alliances, we will create synergy and better deliver solutions, value, and the expertise our customers need.