SMART BORDER

ASUS IoT

SUCCESS STORY

ASUS IoT PE4000G empowers smart border management across Southeast Asia

As a vital international business and trade hub, traffic congestion at the borders of Southeast Asian countries poses an urgent challenge. This is reflected in the delays in traffic, which can lead to delays in goods – thus severely affecting the flow of goods through international business and trade hubs. At the same time, border traffic congestion may affect the quality of public services, especially in terms of medical and emergency services. In critical situations, rescue vehicles may be hindered, affecting the speed of arrival at the scene and thereby endangering lives.

To address this urgent challenge, ASUS IoT quickly responded to government client's needs by providing an efficient and compact solution with advanced artificial intelligence (AI) computing capabilities to address the pain points and challenges faced by border managers.

The one-stop solution that unlocks technological bottlenecks

The ASUS IoT team carefully analyzed our customer's requirements and realized that a powerful solution was required – one that could handle intense AI computing demands while also meeting the harsh environmental conditions of the border, and capable of operating 24/7 without pause. Moreover, the particular use case demanded a small device size, compact design and well-designed cooling systems to ensure optimal performance in limited space and complex environmental conditions. Additionally, due to time constraints, a rapid deployment period was required – so the customer imposed a very tight timeframe.

ASUS IoT recognized this as an opportunity to showcase its prowess in producing compact industrial-grade edge AI computers, and made it our mission to meet the customer's every requirement to address border-congestion issues.

A high-performance edge AI computer beyond expectations

In response to this challenge, ASUS IoT quickly launched the PE4000G edge AI computer. It is equipped with 12th-generation Intel® Core™ IoT desktop processor, integrating high-performance cores and efficiency cores, plus Intel Thread Director technology, into one chip. Compared to 10th-generation Core processors, this version runs up to 1.36X faster in single-threaded performance and 1.35X faster in multi-threaded IoT use.

Furthermore, to meet both our customer and wider commercial demands for AI computing power, the solution is paired with the latest NVIDIA® Ada Lovelace architecture GPU card, with 3072 CUDA cores and fourth-generation Tensor Cores, achieving an AI performance of 242 TOPS. It can easily handle multiple concurrent AI-inference threads. Moreover, the design of ASUS IoT PE4000G allows for integration of full-size GPU cards, providing customers with more choice and scalability for future increases in computing requirements, enhancing investments.

It's worth mentioning that PE4000G reserves multiple high-speed interfaces for connecting sensors, allowing users to quickly deploy their AI applications, meeting ever-increasing demands for shorter deployment cycles.

Furthermore, PE4000G is designed to operate within a wide temperature range, from -20°C to 60°C, allowing it to operate stably even in extreme climate conditions, meeting rigorous operational environmental requirements. In addition, PE4000G complies with exacting MIL-STD-810H standards, meaning it has passed military-grade shock and vibration tests, ensuring reliability and durability in harsh conditions.

ASUS IoT: Your trusted partner for a solid guarantee of reliability and performance

In the field of industrial computers, ASUS IoT has quickly emerged with its unique brand advantages. Compared to other manufacturers, ASUS has a more complete business strategy and deployment in the IT industry chain, including highly-regarded motherboard and GPU products, providing customers with comprehensive solutions.

As a global brand, ASUS IoT provides users with convenience and consistency through its comprehensive after-sales service network. Wherever users are, they can enjoy professional support and services from the ASUS group – globally. This unified after-sales service ensures that customers can receive timely and efficient support during use, ensuring the long-term reliability of the solution.

Assisting global border challenges to pursue unparalleled technological innovation

The project was successfully deployed at border sites in one of the major Southeast Asian countries in the fourth quarter of 2023. ASUS IoT's agile and prompt support, commitment to meeting unique requirements, and provision of reliable and compact industrial-grade edge AI computers have received praise from users.

The successful implementation of this project demonstrates how the outstanding performance and innovative design of ASUS IoT products create value for customers in solving real-world challenges. ASUS IoT looks forward to continuing to leverage its strengths in similar challenging projects to provide customers with more innovative solutions in the future.

▸ **PE4000G**

ASUS IoT
IN SEARCH OF INCREDIBLE