

SUCCESS STORY

AI-Powered Vehicle Inspection Solution with PE4000G Edge AI System

**REGION:** EMEA**APPLICATION:** Vehicle Inspection Solution**BUSINESS NEED**

The customer sought a long-term, supply-stable vehicle inspection solution supporting deep-learning-based computer-vision applications. The system needed to enable real-time image capture, AI inference, and classification while delivering accurate, consistent data to support informed technician decision-making.

CHALLENGES

The solution had to operate reliably in real-world environments and maintain stable performance in all weather conditions, day and night. Additionally, the platform required PCIe GPU expansion to meet high-performance AI computing demands and ensure trustworthy data output for mission-critical tasks.

WHY PE4000G WAS CHOSEN:**1. Engineered for Challenging Environments**

Designed for demanding deployments, the PE4000G edge AI computer operates reliably in temperatures from -20°C to 60°C and supports a wide 8–48V power input range. It adapts easily to diverse site conditions, ensuring stable 24/7 performance.

2. Scalable AI Performance

Powered by the Intel® Core™ i9-14900 processor and supporting PCIe expansion for graphics cards up to 200W, the PE4000G delivers the performance required for real-time deep learning inference and image analysis.

3. Flexible Expansion for Advanced Inspection

With PoE expansion support, the system connects multiple industrial cameras to enable multi-angle, high-coverage visual inspection architectures.

4. Optimized Image Quality

COM port support allows seamless integration with lighting control systems, ensuring consistent illumination and high-quality visual input for accurate AI analysis.

5. Trusted Local Support and Long-Term Supply

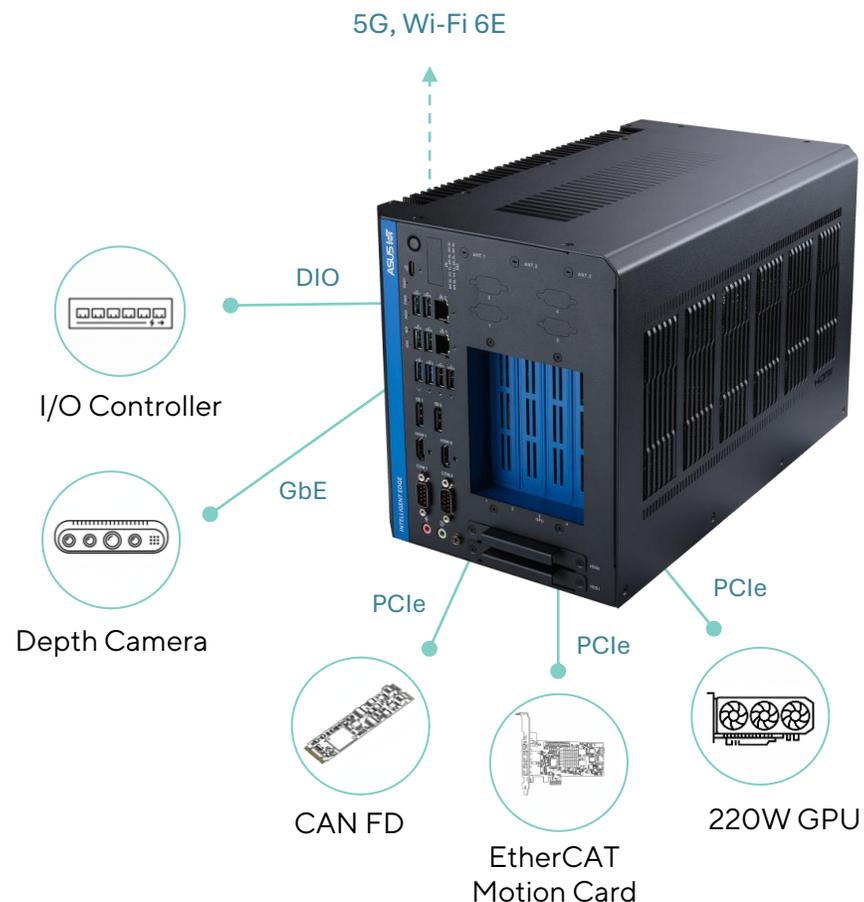
ASUS provides localized technical service and stable supply, ensuring smooth deployment and dependable long-term operation.



Rugged Edge AI Computer
PE4000G

Vehicle Inspection

Real-time vision identification powered by PE4000G



FEATURES OF PE4000G

- Intel® Core™ Processors Series 2 or Intel® 14th /13th / 12th Gen Core™ CPU
- Support up to 220 W GPU
- Two hot-swappable 2.5" SSD
- 8~48V wide-range DC-in w/ built-in Ignition power control
- - 20°C to 60°C thermal design for rugged operation
- Adheres to MIL-STD-810H standard for resilience to shocks and vibrations
- IP4X dust protection

APPLICATIONS

- Machine Vision
- Autonomous Vehicle
- Intelligent Video Analysis