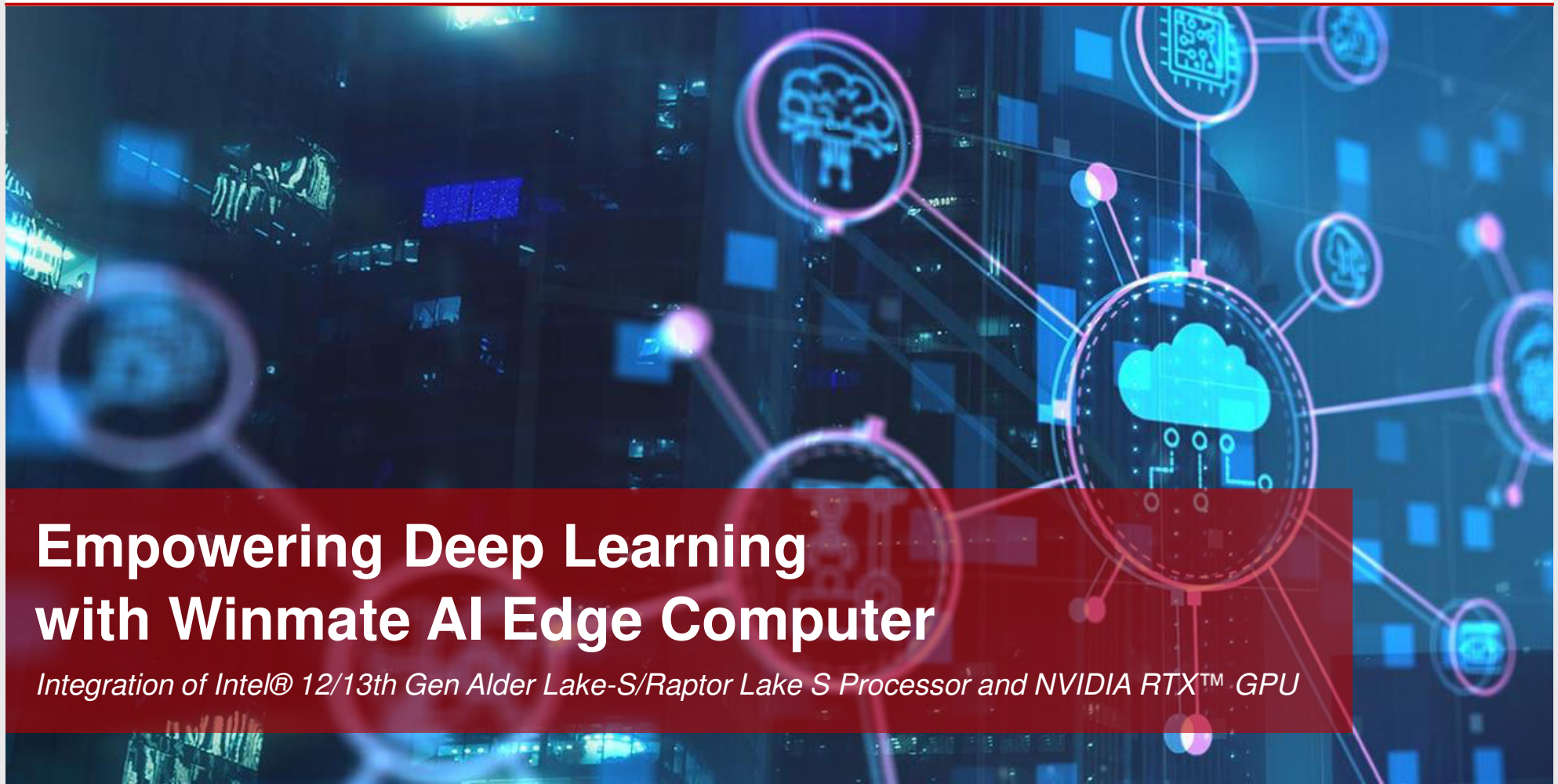
Success Stories



Empowering Deep Learning with Winmate AI Edge Computer

Integration of Intel® 12/13th Gen Alder Lake-S/Raptor Lake S Processor and NVIDIA RTX™ GPU

Background

Winmate AI Edge Computer's triumph in deep learning applications is showcased through its remarkable performance, reliability, and innovative integration of the latest hardware technologies. This includes the Intel® 12/13th Gen Alder Lake-S/Raptor Lake S processors and NVIDIA RTX™ GPUs. This solution, designed to support high-speed DDR5 memory, multiple network connections, and rugged operations in extreme environments, delivers exceptional performance and scalability, especially in the realm of deep learning. A pioneering technology research company specializing in the development of deep learning-based visual recognition systems. They sought a high-performance AI Edge Computer that seamlessly integrates the latest processors and GPUs to handle complex visual tasks through deep learning.

Core Product

- WNAI-E800 - Intel® 12th/ 13th Gen Core™ Processor with NVIDIA® RTX™ GPU Industrial Edge AI Computer

Main Challenges

The application required high-performance processors and GPUs for real-time visual recognition, along with a system capable of operating stably in extreme environments. The client also desired diverse network connections and scalable memory configurations.

Why Winmate

Winmate introduced an AI Edge computer equipped with advanced machine vision capabilities specifically tailored for the agricultural sector. The system utilized high-resolution cameras and AI algorithms capable of recognizing and classifying various agricultural products based on size, shape, color, and quality. The edge computing architecture ensured real-time processing of data, reducing latency and enabling swift decision-making.

Efficient Deep Learning Processing: Intel® Alder Lake-S/Raptor Lake S processors provide outstanding computational performance, crucial for efficient execution of deep learning tasks in real-time visual recognition.

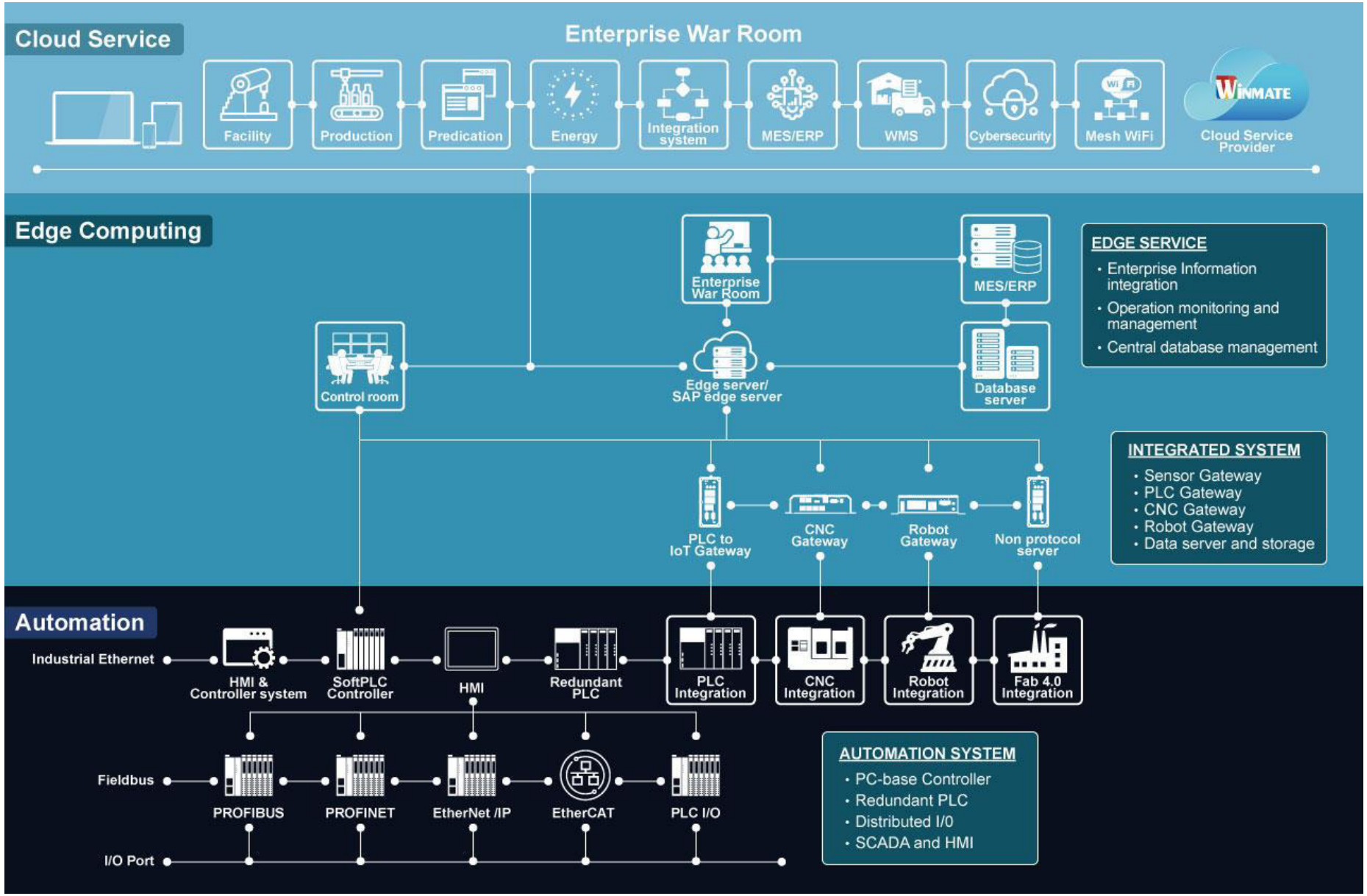
Powerful GPU Support for Deep Learning: NVIDIA RTX™ GPU delivers robust computing capabilities, contributing significantly to deep learning tasks such as model training and inference.

Versatile Network Connections: 2 x Intel 2.5 Gigabit LAN and optional additional 4 Gigabit LAN offer diverse network connection options, catering to the varying needs of different applications.

Extreme Environment Operation: The optional rugged design ensures the AI Edge Computer operates reliably in extreme temperature conditions, ranging from -40°C to 60°C.

Winmate AI Edge Computer's success in integrating deep learning capabilities with Intel® Alder Lake-S/Raptor Lake S processors and NVIDIA RTX™ GPUs exemplifies its commitment to providing high-performance, versatile, and rugged AI Edge Computing solutions. This case emphasizes Winmate's excellence in harnessing cutting-edge hardware technologies to address the evolving needs of deep learning applications.

Application Diagram



Related Product

Winmate **WNAI-E800**

- Intel® 12th/ 13th Gen Core™ Processor with NVIDIA® RTX™ GPU Industrial Edge AI Computer
- Supports Intel® 12/13th generation Alder LakeS/Raptor Lake S processor (LGA 1700)
- Supports single NVIDIA RTX™A4000/A5000/A6000 GPU
- Up to 2 x 262pin SODIMM DDR5 4800MHz up to 64GB(32GB per Slot)
- 2 x Intel 2.5 Gigabit LAN. Optional addtional 4 Gigabit LAN.
- Supports Two display, 1 x HDMI 2.0, 1 x DP 1.4a
- Supports Intel® vPro
- Rugged Design, -40°C to 60°C operation (Optional)