

WNAI-E800

Intel® 12th/ 14th Gen Core™ Processor with NVIDIA® RTX™ GPU Industrial Edge AI Computer



CE

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KEY FEATURES

- Supports Intel® 12/14th 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 additional 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)

INTRODUCTION

Winmate Edge AI Computing empowers industries with advanced AIoT capabilities by combining powerful processors, integrated AI acceleration, and robust connectivity. Designed for diverse applications such as manufacturing, healthcare, and smart cities, it supports seamless cloud integration and AI-assisted analytics for real-time insights. With optional support for Intel®, Hailo AI chips, and NVIDIA GPUs, along with low-latency AI inferencing and rugged designs, Winmate's solutions offer scalability, efficiency, and adaptability, redefining performance standards for AI-driven industrial IoT.

OVERVIEW



Advanced Processing Performance

Powered by Intel's processor and chipset, Winmate's AI Edge Computing demonstrates advanced computing capabilities, facilitating quicker data processing and analysis. It supports the execution of advanced AI algorithms and models, while also optimizing power consumption, a critical factor in AIoT deployments where energy efficiency is a priority.

I/O Diversity with Intelligent Gateway Design

Winmate's AI Edge Computing offers a range of I/O inputs designed to efficiently interface with and process data from various sensors. It provides flexibility to adapt to different industry needs and offers scalability, allowing for the seamless integration of new sensors or devices. Additionally, it facilitates diverse connectivity options.





Efficient Temperature Management

Effective temperature management is vital for preventing excessive heat buildup, a factor that can lead to hardware degradation over time. By sustaining a controlled operating temperature, Winmate's AI Edge Computing ensures enhanced longevity and durability, thereby minimizing the risk of component failures.

Seamless Cloud Connectivity

Winnate's AI Edge Computing features a Cloud integration, provide a seamless scalability option for AI applications. The integration with Cloud facilitates collaborative learning, allowing the AI Edge Computing to share data and insights with other cloud-connected devices.



AI-Driven Analysis with NVIDIA GPU Power

Winnate's AI Edge Computing is compatible with NVIDIA RTX™ A4000/A5000/A6000 GPUs, enhancing its capabilities for AI-assisted defect inspection. This compatibility ensures a remarkable visual experience for image projection while optimizing performance for AI machine and deep learning applications.

SPECIFICATIONS

System Specification

| | | | |
|----------------------------|--|---------------------|--|
| Processor | Intel® Core™ i7-12700TE(up to 4.6GHz) Intel® Core™ i9-12900TE(up to 4.80GHz) (Optional) Intel® Core™ i7-14700T(up to 5.2GHz) (Optional) Intel® Core™ i9-14900T(up to 5.5GHz) (Optional) | Chipset | Intel® R680E |
| Memory | SO-DIMM, DDR5 4800 MHz, 8+8GB 16+16GB (Optional) 32+32GB (Optional) | Storage | 1 x M.2 2280 M-Key NVMe SSD, 512GB 1TB (Optional) 2TB (Optional) |
| Ethernet controller | 2 x Intel® 2.5 Gigabit Ethernet Controller | Security | TPM 2.0 |
| Operating System | Windows 11 IoT Enterprise (64 bit) (Optional) Windows 11 Pro 64 bit (Optional) Linux Ubuntu 22.04(Do not support Wake on Touch) (Optional) | WLAN | Support (Optional) |
| BT | Support (Optional) | Graphic Card | NVIDIA® RTX A6000 48GB Graphic Card (Optional) NVIDIA® RTX A5000 24GB Graphic Card (Optional) NVIDIA® RTX A5000 24GB Graphic Card (Optional) NVIDIA® RTX A4500 20GB Graphic Card (Optional) NVIDIA® GeForce RTX 4060 8GB Graphic Card (Optional) NVIDIA® RTX A4000 16GB Graphic Card (Optional) |

Mechanical

| | | | |
|-----------------------|----------------------|------------------|---------------|
| Dimension | 323.5 x 230 x 200 mm | Weight | 7.85kg |
| Mounting | Desk mount | Enclosure | Metal Housing |
| Cooling System | Fan Design | | |

Environment

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|----------------------------|---|------------------------------|---|
| Operating Humidity | 10% to 90% RH, Non-Condensing | Operating Temperature | -20°C to 50°C -40°C to 60°C (Optional) |
| Storage Temperature | -20°C to 60°C -40°C to 70°C (Optional) | | |

Certification

| | |
|----------------------|---------|
| Certification | CE, FCC |
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IO Ports

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|-----------------------|---|----------------------|---------------------------------|
| Power Input | 1 x 3 Pin AC Plug | USB Port | 6 x USB3.2 Gen 2x1 (Type-A) |
| Serial Port | 2 x RS232/422/485 (Default RS232) | SIM Card Slot | 1 x nano SIM slot |
| Video | 1 x DP1.4a DP++ , Max resolution up to 4096x2160@60Hz 1 x HDMI 2.0b , Max resolution up to 4096x2160@60Hz (Optional) | Audio | Mic in Line out |
| Expansion Port | 1 x M.2 2280 M-Key Slot (for NVME SSD) 1 x M.2 2230 E-Key Slot (for Wi-Fi module) 1 x M.2 3042/3052 B-Key Slot (for WWAN module) 1 x PCIe 5.0 (x16) slot 1 x PCIe 4.0 (x4) slot 1 x PCIe 4.0 (x8) slot(Only available when PCIe x16 signal is not present) 1 x Swappable 2.5" HDD/SSD Slot (Optional) | LAN | 3 x 2.5 Giga LAN RJ45 Connector |
| DIDO | Digital input: 8ch dry contact DI0 ~ DI7, 1.5kV Isolation Logic 1 : Open ; Logic 0 : close to GND Digital output: 8ch DO0 ~ DO7, 1.5kV Isolation, 20mA max/channel | | |

by internal com 12V or 5V

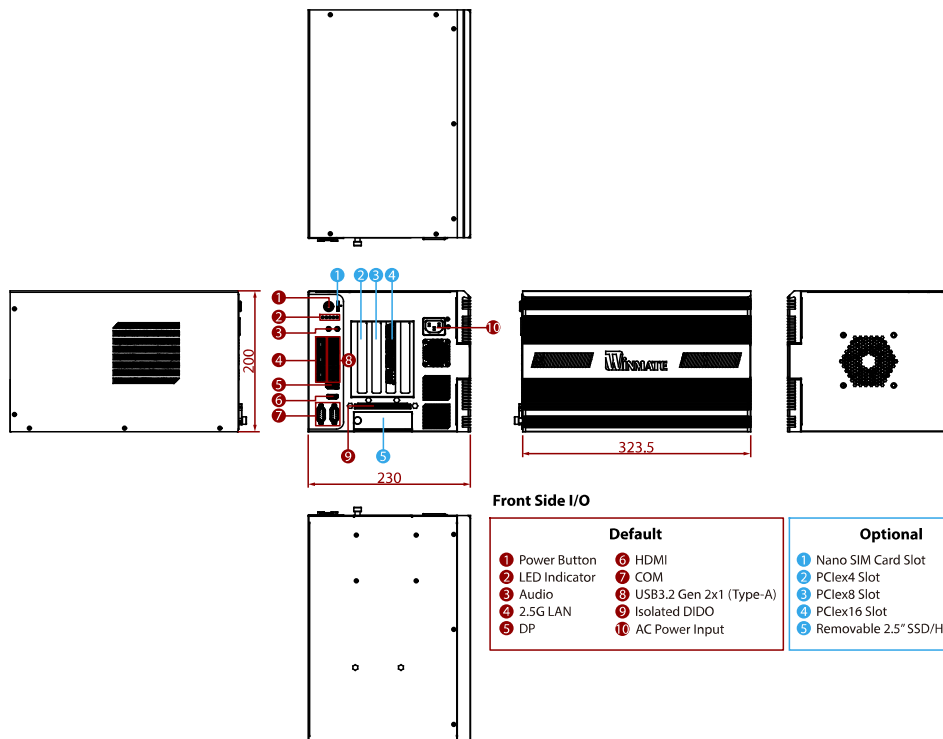
Control

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|---------------|--|
| Button | 1 x Power Button with LED Indicator 1 x Clear CMOS Button |
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Accessory

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| Accessory | Power Cord Desk Mount Bracket |
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DIMENSIONS UNIT:MM



Front Side I/O

Default

- | | |
|-----------------|---------------------------|
| 1 Power Button | 6 HDMI |
| 2 LED Indicator | 7 COM |
| 3 Audio | 8 USB3.2 Gen 2x1 (Type-A) |
| 4 2.5G LAN | 9 Isolated DIDO |
| 5 DP | 10 AC Power Input |

Optional

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|-------------------------------|
| 1 Nano SIM Card Slot |
| 2 PCIe4 Slot |
| 3 PCIe8 Slot |
| 4 PCIe16 Slot |
| 5 Removable 2.5" SSD/HDD Slot |

NOTE

- 1.This is a simplified drawing and some components are not marked in detail.
- 2.Please contact our sales representative if you need further product information.
- 3.All specifications are subject to change without prior notice.
- 4.The product shown in this datasheet is a standard model.For diagrams that contain customized or optional I/ O, please contact the Winmate Sales Team for more information.