WNAI-E800S

Industrial Edge AI Computer with Intel® Raptor Lake-S processor



KEY FEATURES

- Supports Intel® 12/14th generation Raptor Lake S processor (LGA 1700)
- Supports single NVIDIA RTX PRO 6000 Blackwell/RTX5080 GPU
- Up to 2 x 262pin SODIMM DDR up to 96GB(48GB per Slot)
- Supports 6 x USB3.2, 3 x Intel 2.5 Gigabit LAN
- Supports Two display, 1 x HDMI 2.0, 1 x DP 1.4a
- Supports Intel® vPro
- Rugged Design, -25°C to 60°C operation

INTRODUCTION

The Winmate WNAI-E800S is a high-performance Industrial Edge AI Computer designed to accelerate machine vision, AI-assisted defect inspection, deep learning, robotics, and industrial automation applications. Powered by Intel® 12th and 14th Gen Raptor Lake-S processors with support for up to 96GB DDR memory and a single high-end NVIDIA RTX™ GPU, including NVIDIA RTX PRO 6000 Blackwell or GeForce RTX 5080 options, it delivers the computing capability required for real-time AI inference and visual analytics at the edge. Built for reliable AIoT deployment, the WNAI-E800S provides six USB 3.2 ports, three Intel® 2.5GbE LAN ports, HDMI and DisplayPort outputs, optional wireless connectivity, and Intel® vPro support for secure remote management. Its rugged metal enclosure and wide-temperature design enable dependable operation in demanding industrial environments, making it an ideal platform for smart manufacturing, automated inspection, sensor integration, and mission-critical edge computing.

SPECIFICATIONS

System Specification

Processor	Supporting Intel® 12/14th-Gen Core™ CPU (LGA1700 socket, 65W/45W/35W TDP) Intel® Core™ i7-14700T(up to 5.2GHz) (Default) (Default) Intel® Core™ i7-12700TE(up to 4.6GHz) (Optional) Intel® Core™ i9-12900TE(up to 4.8GHz) (Optional) Intel® Core™ i5-14500T(up to 4.8GHz) (Optional) Intel® Core™ i9-14900T(up to 5.5GHz) (Optional) Intel® Core™ i9-14500(up to 5.0GHz) (Optional) Intel® Core™ i7-14700(up to 5.4GHz) (Optional) Intel® Core™ i9-14900(up to 5.8GHz) (Optional)	**Chipset**	Intel® R680E
Memory	2 x non-ECC SO-DIMM RAM, up to 96GB (48GB per DIMM)	**Storage**	128GB SSD (Default) 256GB SSD (Optional) 512GB SSD (Optional) 1TB (Optional) 2TB (Optional) 4TB 2 x SATA III for 2.5" SSD/HDD up to 2TB(RAID support) (Optional)
Ethernet controller	3 x Intel® 2.5 Gigabit Ethernet Controller	**Security**	TPM 2.0
Operating System	Windows 10 IoT Enterprise (64 bit) (Optional) Windows 11 IoT Enterprise (64 bit) (Optional) Windows 11 Pro 64 bit (Optional)	**WLAN**	Support (Optional)

	Linux Ubuntu 24.04(Do not support Wake on Touch) (Optional)		
	Support (Optional)	**Graphic Card**	Supports high-end NVIDIA RTX GPUs (e.g., GeForce RTX 5080 or RTX PRO 6000 Blackwell) Other GPU options are available upon request. (Optional)
	360 x 170 x 196 mm	**Weight**	7.85kg
Mounting	Desk mount	**Enclosure**	Metal Housing
Cooling System	Fan Design		

Environment

Operating Humidity	10% to 90% RH, Non-Condensing	**Operating Temperature**	-25°C to 60°C
Storage Temperature	-40°C to 70°C		

Certification

Certification	CE, FCC

IO Ports

Power Input	3+4 pin terminal block for DC 8-48V input.Max. to 1000W	**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 (Default) 1 x HDMI 2.0b , Max resolution up to 4096x2160@60Hz (Optional)	**Audio**	Mic in Line out
Expansion Port	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 x16 slot, 16-lanes, for NVIDIA® RTX™ GPU cards 1 x PCIe x8 slot, 8-lanes (Only available when PCIe x16 signal is not present) 2 x PCIe x8 slot, 4-lanes	**LAN**	3 x 2.5 Giga LAN RJ45 Connector
Drive Bay	Swappable 2.5” HDD/SSD Bay Slot		

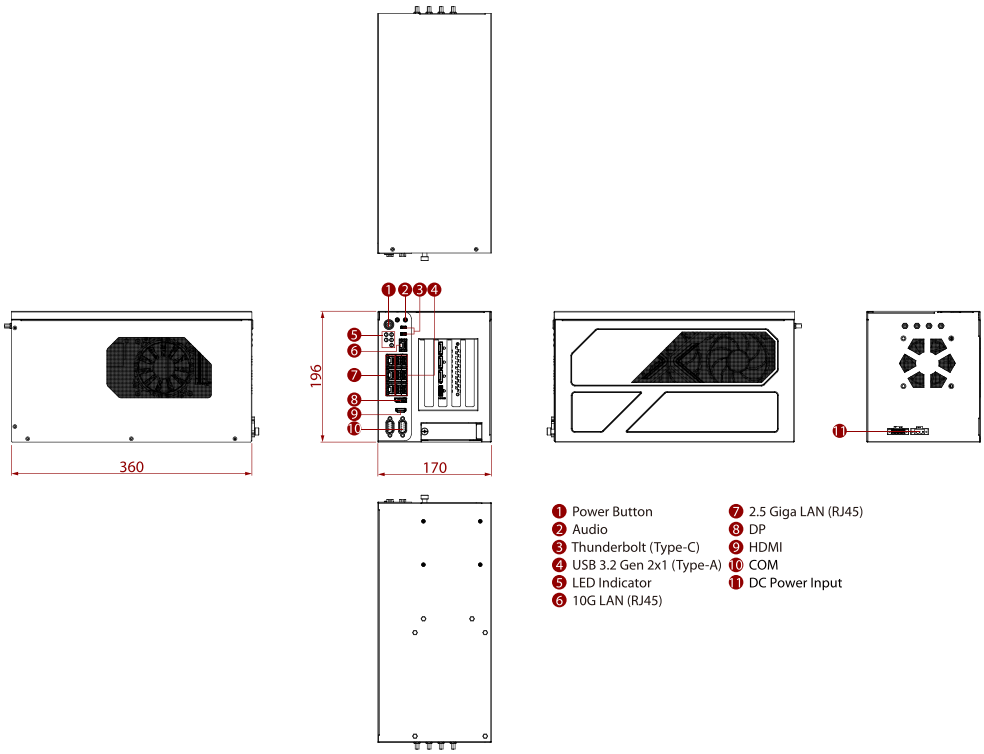
Control

Button	1 x Power Button with LED Indicator 1 x Clear CMOS Button

Accessory

Accessory	1 x Terminal Block 3pin connector for Power 1 x Terminal Block 4pin connector for Power 1 x Open Wire Cable

DIMENSIONS UNIT:MM



1. Power Button
2. Audio
3. Thunderbolt (Type-C)
4. USB 3.2 Gen 2x1 (Type-A)
5. LED Indicator
6. 10G LAN (RJ45)
7. 2.5 Giga LAN (RJ45)
8. DP
9. HDMI
10. COM
11. DC Power Input

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.

* Some images or content on this page are created or enhanced using generative AI technology. All AI-generated content has been reviewed before publication.