W4U-IRP-SC

4U Industrial Rack Server with Intel Q670E

KEY FEATURES

- Supports Intel® 12th/13th/14th generation Core™ i9/i7/i5/i3 processors with Q670E chipset, up to 125W
- Equipped with 4 x DDR5 U-DIMM slots, supporting a maximum capacity of up to 128GB
- Supports a single high-performance graphics card up to 300W (such as NVIDIA RTX series) for AI and heavy workload acceleration
- Supports single ATX power supply options ranging from 500W to 1300W
- Hot-swappable driver design with RAID 0/1 ensures continuous 24/7 mission-critical operations without service interruption
- Lockable front panel and intrusion buzzer work together to block unauthorized access and provide instant alerts if the case is opened
- Highly expandable platform supporting 1x PCIe x16, 1x PCIe x8, 3x PCIe x4, and 2x PCI slots for diverse industrial applications
- Support Intel® AMT and Intel vPro®

INTRODUCTION

The Winmate W4U-IRP-SC is a high-performance 4U industrial rack server built on the Intel® Q670E chipset and supporting 12th, 13th, and 14th Gen Intel® Core™ processors. Designed for demanding industrial computing, machine vision, Edge AI, and data-intensive applications, it supports up to 128GB DDR5 memory, a high-performance GPU up to 300W, and extensive PCIe/PCI expansion. Hot-swappable drives with RAID 0/1, flexible 500W to 1300W ATX power supply options, and Intel® AMT/vPro® support enhance serviceability, scalability, and remote manageability for reliable 24/7 operation.

SPECIFICATIONS

System Specification

Processor	Intel® Core™ i7 processor 14700 (up to 5.40 GHz) (Default) Intel® socket 1700 for 14th/ 13th/12th Gen Intel® Core™ i9/ i7/ i5/ i3 processors Supports up to 125W TDP	**Chipset**	Intel® Q670E
Memory	2 x U-DIMM, DDR5 5600 MHz, 32GB (16GB per DIMM) (Default) 4 x U-DIMM, DDR5 5600 MHz, max. 128GB(Max. 32GB per DIMM)	**Storage**	256GB SSD (Default) 512GB SSD (Optional) 1TB (Optional) 2TB (Optional) 4TB (Optional) 7 x SATA III for 2.5" SSD/HDD up to 8TB (Supports RAID 0,1,5,10) (Optional)
Ethernet controller	1 x Intel®1GbE by i210AT 2 x Intel® 2.5GbE by I226-LM and I226-V	**Security**	1 x Internal SPI TPM header
Operating System	Windows 11 IoT Enterprise (64 bit) (Optional)	**WLAN**	Support (Optional)

WINMATE
No. 18, Zhongxing S. St., Sanchong Dist., New Taipei City 241017 , Taiwan (R.O.C.)
Tel: +886-2-8511-0288
Website: www.winmate.com

Revised:V.261019.261007

	Windows 10 IoT Enterprise (64 bit) (Optional) Windows 11 Pro 64 bit (Optional) Linux Ubuntu 24.04 (Optional)		
BT	Support (Optional)	**Sensors**	Chassis Intrusion Detection
Expansion Port	1 x M.2 2230 E-Key Slot for WIFI/BT device (only support Intel® CNVi) 1 x PCIe 5.0 x16 Slot (x16 mode.When PCIe 5.0 x8 slot being used, this slot will change to x8 mode) 1 x PCIe 5.0 x16 Slot (x8 mode) 1 x PCIe 4.0 x4 Slot (x4 mode) 1 x PCIe 4.0 x4 Slot (x4 mode) 1 x PCIe 3.0 x4 Slot (x4 mode) 2 x PCI	**Graphic Card**	NVIDIA RTX A1000 Graphic Card (Optional) NVIDIA RTX A2000E 12 GB Graphic Card (Optional) NVIDIA RTX 2000E Ada Graphic Card (Optional) NVIDIA RTX PRO 2000 BlackwellGraphic Card (Optional) NVIDIA RTX PRO 4000 Blackwell SFF Graphic Card (Optional) NVIDIA RTX 4000E Ada Graphic Card (Optional) NVIDIA RTX A4000E Graphic Card (Optional) NVIDIA RTX PRO 4000 Blackwell Graphic Card (Optional) NVIDIA RTX PRO 4500 BlackWell 32GB Graphic Card (Optional) NVIDIA RTX PRO 5000 BlackWell 48GB /72GB Graphic Card (Optional) NVIDIA RTX PRO 6000 Blackwell Max-Q Workstation Edition (96GB) Graphic Card (Optional) NVIDIA WinFast RTX 5060 HURRICANE 8GB Graphic Card (Optional)
OOB Management	Support Intel® AMT and Intel vPro® (Varies by CPU SKU)		

Mechanical

Dimension	483 x 177 x 451mm	**Weight**	35 kg
Mounting	4U Rack mounting	**Enclosure**	Electroplated steel
Cooling System	Fan Design		

Environment

Operating Humidity	10% to 90% RH, Non-Condensing	**Operating Temperature**	0°C to 50°C
Storage Temperature	-10°C to 60°C		

Certification

Certification	CE, FCC

IO Ports

Power Input	VAC 90-264, 500W, ATX P/S, 80 PLUS® Bronze (Default) VAC 90-264, 650W~850W, ATX P/S, 80 PLUS® Gold (Without GPU) (Optional) VAC 90-264, 850W/1300W, ATX P/S, 80 PLUS® Gold (With GPU) (Optional)	**USB Port**	Front side 2 x USB2.0 (Type-A) Rear side 6 x USB3.2 (5 x Type-A, 1 x Type C)
Serial Port	Rear side: 1 x RS232/422/485 (Default RS232)	**Video**	2 x DisplayPort 1.4 output. Maximum resolution of 4096 x 2160 @ 60 Hz 1 x HDMI 2.1 output. Maximum resolution of 4096 x 2160 @ 30 Hz 1 x VGA output.Maximum resolution of 1920 x 1200 @ 60 Hz
Audio	Mic in Line in Line out	**Expansion Port**	1 x M.2 2230 E-Key Slot for WIFI/BT device (only support Intel® CNVi) 1 x PCIe 5.0 x16 Slot (x16 mode.When PCIe 5.0 x8 slot being used, this slot will change to x8 mode) 1 x PCIe 5.0 x16 Slot (x8 mode) 1 x PCIe 4.0 x4 Slot (x4 mode) 1 x PCIe 4.0 x4 Slot (x4 mode) 1 x PCIe 3.0 x4 Slot (x4 mode) 2 x PCI
LAN	1 x Intel®1GbE by i210AT 2 x Intel® 2.5GbE by I226-LM and I226-V	**Indicator**	1 x LED Indicator for power 1 x LED Indicator for storage
Drive Bay	1 x Hot-swap RAID BOX for SATAIII/SATAII or NVMe (Optional) 1 x 3.5 (Optional) 1 x 24X Slim DVD (Optional)	**Internal connector**	2 x Headers Support Additional 4 x USB3.2 Gen1 2 x Headers Support Additional 2 x USB2.0 5 x COM Headers (1 x RS232/422/485,4 x RS232)

Control

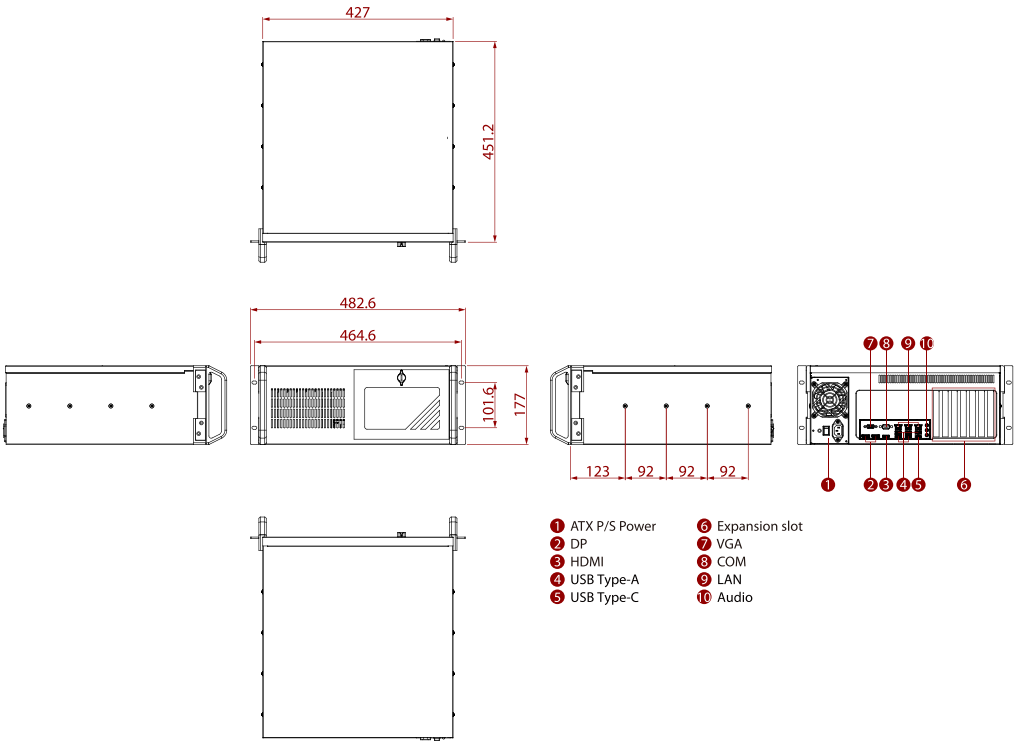
Button	1 x Front side Power Switch 1 x Rear side Power Switch(power input control)

Accessory

Accessory	Power Cord Quick Start Guide

DIMENSIONS UNIT:MM

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.