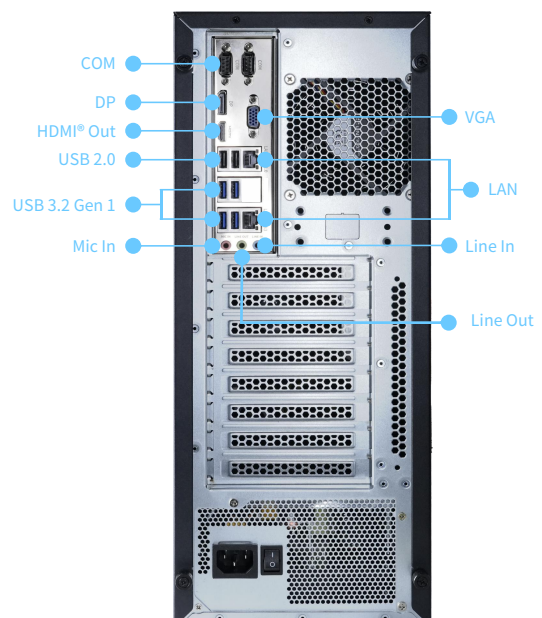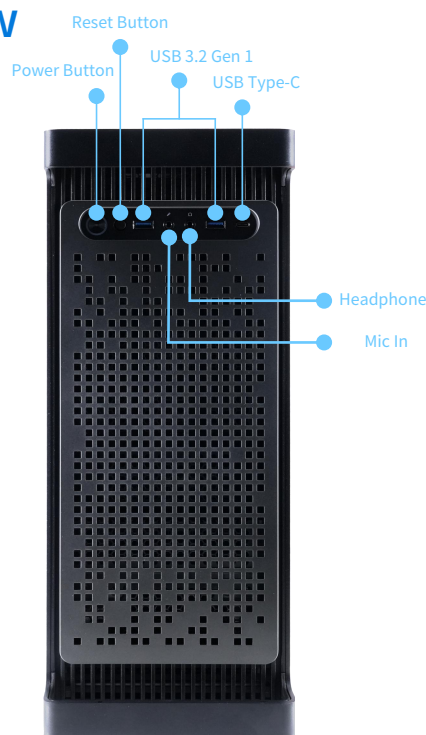# WA02 Specification

Overview

Decenta AI Tower-Swap All-in-One Machine is an information-carrying platform for edge computing scenarios. It supports enterprise-level storage and networking, features security and reliability, and enables video encoding/decoding as well as edge-side deep learning inference applications, meeting AI application needs in campuses, hospitals, finance, enterprises, industry and other environments.

- Intel® LGA 1851 Socket: Ready for Core™ Ultra Processors (Series 2)
- Support Intel® Q870 Chipset
- Support 4x DDR5 6400MT/s U-DIMM, Dual channel, Up to 192GB
- Support VGA/HDMI®/DP/eDP Quad-display
- 1x M.2 E-Key 2230 Slot, for installing wireless network cards supporting Wi-Fi 7 and Bluetooth 5.4 technologies
- 2x M.2 M-Key 2242/2280 Slots, for installing solid-state drives
- 2x PCIe 5.0 X16 Slots(Support 1x16 or 2x8 mode), 2x PCIe 4.0 X4 Slots(X4 Signal), 2x PCIe 4.0 X4 Slots(X2 Signal), 1x PCI Slot
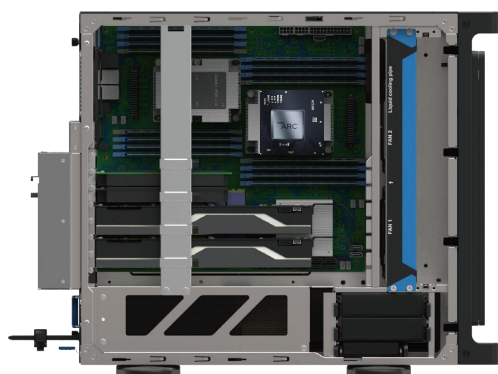- Support TPM 2.0 encryption technology

I/O Overview

Reset Button
Power Button
USB 3.2 Gen 1
USB Type-C
Headphone
Mic In

COM
DP
HDMI® Out
USB 2.0
USB 3.2 Gen 1
Mic In
VGA
LAN
Line In
Line Out

Specifications

Model			S25-ARLS-WA02
Processor			Intel® Core™ Ultra Processors(Series 2), TDP 125W, LGA 1851
Chipset			Intel® Q870, TDP 6W
Power Phase			8+1+1 Phase-switching voltage regulator *Monitors for CPU Cores, Chipset Voltages, Memory
AI Performance	NPU		13TOPS
	GPU		9TOPS
	CPU		15TOPS
Memory	Type		4x DDR5 6400*MT/s U-DIMM memory, Dual channel
	Capacity		Max.192GB
Graphic	Controller		Intel® Xe LPG Graphics
	Connector		HDMI®/DP/VGA/eDP
Network	Ethernet	Controller	1xIntel® i219V, Co-lay with Intel® i219-LM 1x Intel® i210 1x Intel® i210, Reserved
		Connector	1GbE RJ45
	Wi-Fi		1x M.2 E-Key 2230 Slot for Wi-Fi 7 & BT 5.4, Support PCIe 4.0 & CNVi mode
Audio	Controller		Realtek ALC897
Storage	SSD		M.2_1: M-Key 2242/2280 Slot, Support PCIe 5.0 X4(NVMe) mode M.2_2: M-Key 2242/2280 Slot, Support PCIe 4.0 X4(NVMe) & SATA mode
	SATA		4
Expansion Slot	PCIe		2x PCIe 5.0 X16 Slots(Support 1x16 or 2x8 mode) 2x PCIe 4.0 X4 Slots(X4 Signal) 2x PCIe 4.0 X4 Slots(X2 Signal)
	PCI		1
I/O	Front	Power Button	1
		Reset Button	1
		USB 3.2 Gen 1	2
		USB Type-C	1
		Mic in	1x 3.5mm Audio Jack
		Headphone	1x 3.5mm Audio Jack
	Rear	LAN	2x RJ45
		VGA	1, with resolution of 1080P
		HDMI® Out	1, with resolution of 4K@60Hz
		DP	1, with resolution of 4K@60Hz
		USB 3.2 Gen 1	4
		USB 2.0	2
		COM	2x DB9(RS232/422/485)
		Mic in	1x 3.5mm Audio Jack
		Line in	1x 3.5mm Audio Jack
		Line out	1x 3.5mm Audio Jack
Feature	dTPM		V2.0
	Watchdog Timer		Programmable 1 ~ 255 sec
Environment	Temperature	Operating	0 ~ 60 °C
		Non-operating	-40 ~ 85 °C
	Humidity	Operating	95%@ 40 °C RH non-condensing
		Non-operating	95% @ 60 °C RH non-condensing
Power			Standard ATX PSU
OS			Win 11/Linux(ubuntu)
Bios			Insyde

Specifications

Model	S25-ARLS-WA02
Dimensions(D x W x H)	500mm x 435mm x 175mm
Accessory	3x M.2 Screws 1x I/O Shield 2x 430mm SATA Cables
Remark	* Ultra 7 & Above support 6400MT/s, Ultra 5 supports 5600MT/s only. 1SPC support 6400MT/s, 2SPC support 5600MT/s. Support of up to 6400MT/s with CUDIMM/CSODIMM Only and certain DIMM capacities (24Gb) pending eco-system readiness of memory modules and Intel validation.

Hardware Structure

Dual - channel Motherboard Support for ATX (12"×9.6")

ATX PS2 standard power supply / CRPS redundant power supply*2 dual specifications, offering both user-friendly selection and professional reliability; rear window supports 9225 exhaust fan