

# WEBS-45J1

Embedded Rugged Fan-less System with  
14<sup>th</sup>/13<sup>th</sup>/12<sup>th</sup> Generation Intel® Core™ i3/i5/i7/i9  
based Mini-ITX Board



Portwell's WEBS-45J1 is an industrial grade, rugged and fan-less embedded system designed with 14<sup>th</sup>/13<sup>th</sup>/12<sup>th</sup> Generation Intel® Core™ i3/i5/i7/i9 desktop processors and Intel® Q670E chipset. Feature dual DDR5 memory, four COM ports, two Gigabit Ethernet ports, two M.2 sockets for expansion and multiple display interfaces. With rich I/Os, wide range of power inputs and operating temperatures, WEBS-45J1 is an ideal embedded platform for factory automation, industrial automation, and diverse IIoT and edge computing applications.

## FEATURES

- 14<sup>th</sup>/13<sup>th</sup>/12<sup>th</sup> Generation Intel® Core™ i3/i5/i7/i9 processors
- Two DDR5 5600/DDR5 5200 SO-DIMM up to 96GB
- Triple DP and one HDMI displays
- One M.2 E Key and one M.2 M Key
- 4x COM ports (2x RS-232/422/485)
- 2x Antenna holes for WiFi module

## ORDERING GUIDE

AS5-3645	(R).ATO.WEBS-45J1. MINI-ITX System. Intel Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S Core i3/i5/i7/i9
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## System

M/B	WADE-8213 Supporting 14th/13th/12th Gen Intel® Core™ CPU (LGA1700 socket, 35W TDP) - Intel® Core™ i9-14900T - Intel® Core™ i7-14700T - Intel® Core™ i5-14500T - Intel® Core™ i3-14100T
CPU	- Intel® Core™ i9-13900TE - Intel® Core™ i7-13700TE - Intel® Core™ i5-13500TE - Intel® Core™ i3-13100TE - Intel® Core™ i9-12900TE - Intel® Core™ i7-12700TE - Intel® Core™ i5-12500TE - Intel® Core™ i3-12100TE
BIOS	AMI uEFI BIOS
Memory	- Supports two DDR5 dual channel up to 96GB SO-DIMM sockets - Supports DDR5-5600 MT/s 1DPC 1R and DDR5-5200 MT/s 1DPC 2R SO-DIMM memory on all i9, i7 and selected i5 SKUs
Storage	2x SATAIII ports
Watchdog Timer	Programmable watchdog timer
TPM	TPM2.0 (Optional)
H/W Status Monitor	System monitor (Voltage and Temperature)
Expansion	- 1x M.2 E Key 2230 with PCIe x1, CNVI for Wireless - 1x M.2 M Key 2242/2260/2280 with PCIe x4 and SATA3 for SSD

## External I/O

Serial Port	4x COM ports (2x RS-232/422/485)
Display	- 3x DP, resolution up to 8K - 1x HDMI
USB	- 3x USB 3.2 Gen 2 (2x Type A + 1x Type C) - 1x USB 3.2 Gen 1 - 4x USB 2.0
Audio	Audio Jack with Line-out / Line-in with Realtek ALC897 Audio controller
Ethernet	- Intel® I210AT(1GbE) and Intel® I225LM(2.5GbE) Ethernet controller - 2x RJ45 connectors
GPIO	1x Programmable 8-bit Digital I/O
Other	- 2x Antenna holes for WiFi module - 1x EXT Power Switch

## Power Supply Unit

Power Input	DC 12V ~ 36V with 3-pin Terminal Block Connector
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## Environmental

Operation Temperature	-20°C ~ 60°C
Storage Temperature	-40°C ~ 80°C
Relative Humidity	40°C, 95%RH non-condensing
Operation Vibration	1Grms/10-500Hz, IEC 60068-2-6
Operation Shock	50G, 11 msec, IEC 60068-2-27

## Mechanical

Dimension	253 (W) x 201(D) x 111.8 (H) mm
Weight	5.25 Kg
Mounting	Wall mounting

\*All information provided is subject to change without notice. Last updated: October 4, 2024

