

# WEBS-13D1

Embedded System Featuring Intel® Atom® Processor E3900 Series (Codenamed Apollo Lake) Built with Rugged, Compact and Fanless Design



The Portwell WEBS-13D1, a fanless embedded system designed with Intel® Atom® processor E3900 series (formerly Apollo Lake), features DDR3L SO-DIMM up to 8GB; 6x USB 3.0 ports; DisplayPort (DP); HDMI; smart COM port for RS-232/422/485 selected by BIOS; and storage interfaces via 2.5" HDD/SSD and mSATA. Moreover, it integrates Mini PCIe interface to provide wireless connectivity, such as WiFi, Bluetooth, NFC (near-field communication) and LTE/GPS functionalities, and can serve as an ideal IoT gateway. In addition, the WEBS-13D1's rugged, fanless design along with processing power of up to quad-core Intel processor Atom E3900 series make it a practical solution for applications in kiosk, image processing, digital signage, medical, and the harsh environments of factory automation.

## FEATURES

- Intel® Atom® processor E3900 series (formerly Apollo Lake)
- DDR3L 1866/1600 MHz memory, 1x 204-pin SODIMM socket, up to 8GB
- Triple displays via DisplayPort and HDMI
- 1x 2.5" SATA HDD/SSD, 1x mSATA (dual Mini PCIe slots)
- Mini PCIe interface to provide wireless connectivity
- 4x COM ports (1x RS-232/422/485)
- 2x reserved cutouts for wireless antenna
- Vibration: Operating, 5Grms, 5~500Hz
- Shock: Operating, 50G, 11msec

## ORDERING GUIDE

WEBS-13D1-E3950	WEBS-13D1 embedded system with Intel® Atom® x7-E3950 processor
WEBS-13D1-E3940	WEBS-13D1 embedded system with Intel® Atom® x5-E3940 processor

## System

<b>Motherboard</b>	PEB-2773 3.5" form factor embedded motherboard
<b>CPU</b>	Intel® Atom® processor E3900 series (formerly Apollo Lake) Atom x7-E3950, 1.6 GHz (2.00 GHz turbo), 2 MB, 12W TDP (4C/4T) Atom x5-E3940, 1.6 GHz (1.80 GHz turbo), 2 MB, 9.5W TDP (4C/4T)
<b>Chipset</b>	Integrated
<b>BIOS</b>	AMI UEFI BIOS
<b>System Memory</b>	DDR3L 1866/1600 MHz memory 1x 204-pin SODIMM socket, up to 8 GB
<b>Storage</b>	1x 2.5" SATA III HDD/SSD 1x mSATA
<b>Watchdog Timer</b>	Programmable 1 to 255 minutes/seconds interval
<b>Hardware Status Monitoring</b>	CPU & system temperature Onboard voltages (CPU Vcore, 12V, 5V, 3.3V, 1.35V)
<b>Expansion Interface</b>	2x Mini PCIe (1x full-size Mini PCIe supporting mSATA; 1x half-size Mini PCIe supporting WiFi/Bluetooth)

## External I/O

<b>Serial Port</b>	1x RS-232/422/485 (selectable by BIOS) 3x RS-232 (on rear I/O)
<b>Display</b>	1x HDMI, resolution up to 3840 x 2160 1x DisplayPort, resolution up to 4096 x 2160
<b>USB</b>	2x USB 3.0 on rear I/O 4x USB 3.0 on front I/O
<b>Audio</b>	Intel® High Definition Audio Realtek® ALC892 High Definition Audio Audio jack on rear I/O with Line-out; Line-in, Mic-in (pin header)
<b>Ethernet</b>	2x Gigabit Ethernet (Intel® Ethernet Controller I210-IT)
<b>Other</b>	2x reserved cutouts for wireless antenna 1x external power switch

## Power Supply Unit

<b>Power Input</b>	DC 12V~24V
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## Environmental

<b>Operating Temp</b>	-20°C to 60°C
<b>Storage Temp</b>	-40°C to 85°C
<b>Relative Humidity</b>	95%@40°C, non-condensing
<b>Shock Protection</b>	IEC 60068-2-64, 5Grms, 5-500Hz
<b>Vibration Protection</b>	IEC 60068-2-27, 50G, 11 msec

## Mechanical

<b>Dimension</b>	200(W) x 150(D) x 80(H) mm; 7.9"(W) x 5.9"(D) x 3.15"(H)
<b>Weight</b>	2 kg (4.4 lbs)
<b>Mounting</b>	Desk, wall, panel

\*All information provided is subject to change without notice. Last updated: Sep 20, 2017