

# V2201 Series

Intel® Atom® E3800 DIN-rail computer with 2 Mini PCIe expansion slots for wireless



## Features and Benefits

- Intel Atom® E3800 Series processor with three performance options
- Dual Mini PCIe sockets for wireless modules
- -40 to 85°C wide operating temperature
- Variety of interfaces: 2 serial ports, 2 Ethernet LAN ports, 4 DIs, 4 DOs, SD, USB, HDMI, wireless
- EN 61000-6-2 and EN 61000-6-4 certification<sup>1</sup> and meets the EMC standard for heavy industry
- Up to 5 Grms anti-vibration protection and 100 g/11 ms anti-shock protection

## Certifications



## Introduction

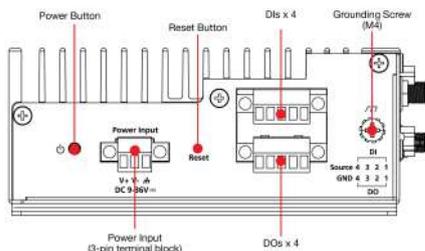
The V2201 Series ultra-compact x86 embedded computer is based on the Intel® Atom™ E3800 Series processor, features the most reliable I/O design to maximize connectivity, and supports dual wireless modules, making it suitable for a diverse range of communication applications.<sup>2</sup> The computer's thermal design ensures reliable system operation in temperatures ranging from -40 to 85°C (-40 to 70°C with a special purpose Moxa wireless module installed).

## Applications

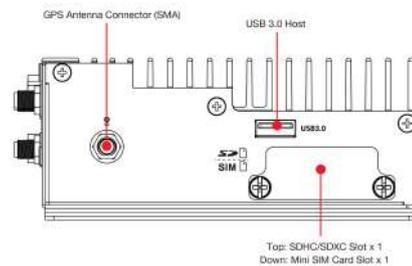
- Remote Terminal Unit (RTU)
- Data acquisition
- M2M communication (smart gateway)
- Digital signage
- Factory automation
- In-vehicle monitor/data logger (transportation)
- Programmable router
- Energy usage optimization
- Predictive maintenance
- Asset management

## Appearance

### Left-side View

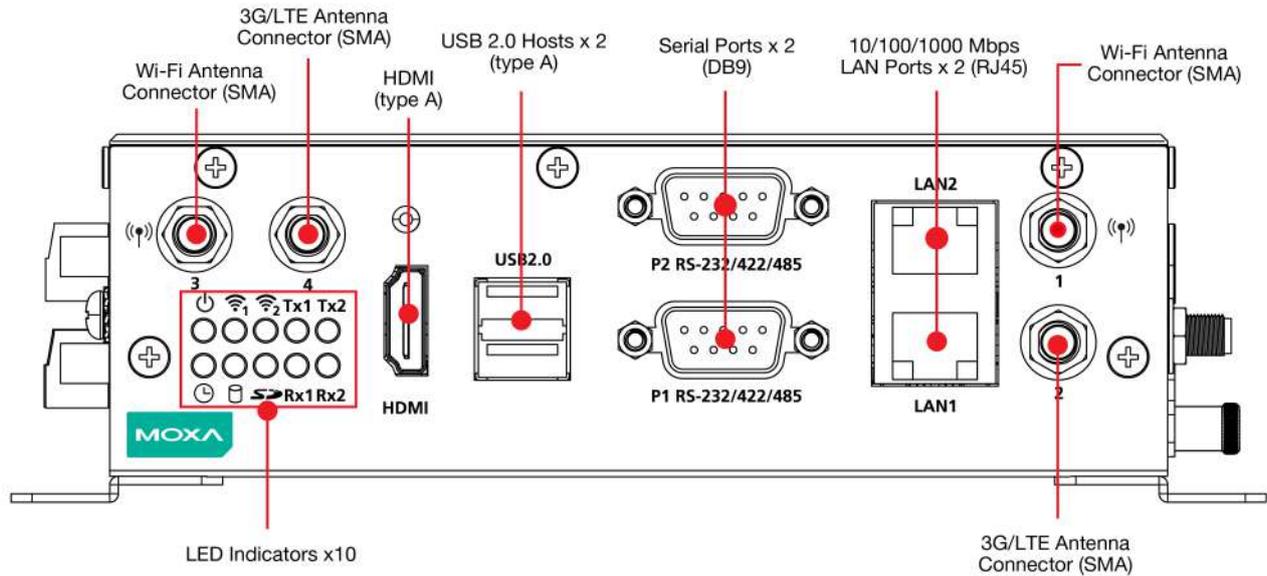


### Right-side View



1. Passed with AC/DC adapter.  
2. Wireless modules must be purchased separately.

## Front View



## Specifications

### Computer

CPU	E1 Models: Intel Atom® Processor E3815 (Single core, 512 K cache, 1.46 GHz) E2 Models: Intel Atom® Processor E3826 (Dual core, 1 M cache, 1.46 GHz) E4 Models: Intel Atom® Processor E3845 (Quad core, 2 M cache, 1.91 GHz)
System Memory Pre-installed	4 GB DDR3L
System Memory Slot	SODIMM DDR3/DDR3L slot x 1
Supported OS	Windows Embedded Standard 7 (WS7E) 64-bit Windows 10 Embedded IoT Enterprise 2016 LTSC Entry 64-bit Windows 10 Embedded IoT Enterprise 2019 LTSC Entry 64-bit Windows 10 Embedded IoT Enterprise 2021 LTSC Entry 64-bit Linux Debian 9 OS image (Kernel 4.9) Linux Debian 11/Ubuntu 20.04/CentOS 7.9 drivers
Storage Slot	mSATA slots x 1 SD 3.0 (SDHC/SDXC) socket x 1

### Computer Interface

Ethernet Ports	Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 2
Serial Ports	RS-232/422/485 ports x 2, software selectable (DB9 male)
USB 2.0	USB 2.0 hosts x 2, type-A connectors
USB 3.0	USB 3.0 hosts x 1, type-A connectors
Digital Input	DIs x 4
Digital Output	DOs x 4
Expansion Slots	mPCIe slots x 2
Video Output	HDMI x 1, HDMI connector (type A)
Wi-Fi Antenna Connector	RP-SMA x 2
Cellular Antenna Connector	SMA x 2

Number of SIMs	1
SIM Format	Mini
GPS Antenna Connector	SMA x 1

#### Digital Inputs

Isolation	3K VDC
Connector	Screw-fastened Euroblock terminal
Dry Contact	On: short to GND Off: open
I/O Mode	DI
Sensor Type	Dry contact Wet contact (NPN or PNP)
Wet Contact (DI to COM)	On: 10 to 30 VDC Off: 0 to 3 VDC

#### Digital Outputs

Connector	Screw-fastened Euroblock terminal
Current Rating	200 mA per channel
I/O Type	Sink
Voltage	24 to 30 VDC

#### LED Indicators

System	SD slots x 1 Power x 1 Storage x 1 Programmable x 1
Wireless Signal Strength	Cellular/Wi-Fi x 2
LAN	1 per port (10/100/1000 Mbps)
Serial	2 per port (Tx, Rx)

#### Serial Interface

Baudrate	50 bps to 115.2 kbps
Flow Control	RTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485, RTS Toggle (RS-232 only)
Isolation	N/A
Parity	None, Even, Odd, Space, Mark
Stop Bits	1, 1.5, 2

#### Serial Signals

RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND

## Power Parameters

Input Voltage	9 to 36 VDC
Power Connector	Terminal block (for DC models)
Power Consumption (Max.)	2000 mA @ 9 VDC
Power Consumption	18 W (max.)

## Physical Characteristics

Housing	Aluminum
IP Rating	IP30
Dimensions (with ears)	178 x 52.5 x 120.2 mm (7.01 x 2.07 x 4.73 in)
Dimensions (without ears)	150 x 48.8 x 120.2 mm (5.91 x 1.92 x 4.73 in)
Weight	940 g (2.09 lb)
Installation	V2201-E4-W-T-LX: DIN-rail mounting All Other Models: Wall mounting

## Environmental Limits

Operating Temperature	E1/E2 Models: -40 to 85°C (-40 to 185°F) E4 Models: -40 to 70°C (-40 to 158°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

## Standards and Certifications

EMC	EN 55032/35 EN 61000-6-2/-6-4
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Safety	EN 60950-1 UL 508 UL 60950-1
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-64

## Declaration

Green Product	RoHS, CRoHS, WEEE
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## MTBF

Time	408,275 hrs
Standards	Telcordia (Bellcore), GB

## Warranty

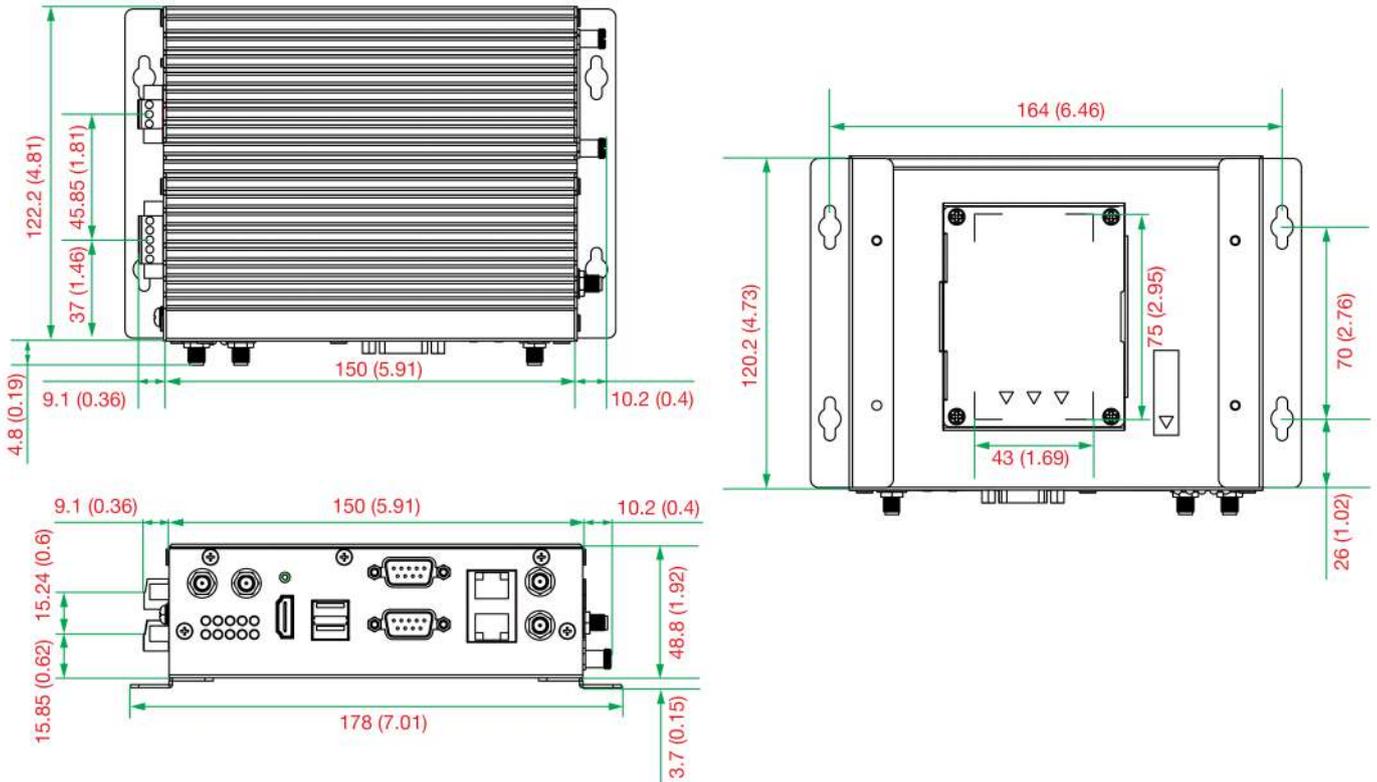
Warranty Period	3 years
Details	See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>

## Package Contents

Device	1 x V2201 Series computer
Installation Kit	V2201-E4-W-T-LX: DIN-rail mounting kit All Other Models: Wall-mounting kit
Cable	1 x terminal block to power jack converter
Documentation	1 x quick installation guide 1 x warranty card

## Dimensions

Unit: mm (inch)



## Ordering Information

Model Name	CPU	Memory (Default)	mSATA (Default)	SD Card Slots	Mini SIM Slot	Antenna Connectors	Default Mounting	Operating Temp.
V2201-E1-T	Intel Atom® E3815	4 GB	16 GB	1 (optional)	1	-	Wall-mounting	-40 to 85°C
V2201-E2-T	Intel Atom® E3826	4 GB	16 GB	1 (optional)	1	-	Wall-mounting	-40 to 85°C
V2201-E4-T	Intel Atom® E3845	4 GB	16 GB	1 (optional)	1	-	Wall-mounting	-40 to 70°C
V2201-E1-W-T	Intel Atom® E3815	4 GB	16 GB	1 (optional)	1	5	Wall-mounting	-40 to 85°C
V2201-E2-W-T	Intel Atom® E3826	4 GB	16 GB	1 (optional)	1	5	Wall-mounting	-40 to 85°C
V2201-E4-W-T	Intel Atom® E3845	4 GB	16 GB	1 (optional)	1	5	Wall-mounting	-40 to 70°C

Model Name	CPU	Memory (Default)	mSATA (Default)	SD Card Slots	Mini SIM Slot	Antenna Connectors	Default Mounting	Operating Temp.
V2201-E1-T-LX	Intel Atom® E3815	2 GB	16 GB	1 (optional)	1	–	Wall-mounting	-40 to 85°C
V2201-E1-T-W7E	Intel Atom® E3815	4 GB	16 GB	1 (optional)	1	–	Wall-mounting	-40 to 85°C
V2201-E4-W-T-LX	Intel Atom® E3845	4 GB	32 GB	16 GB	1	5	DIN-rail mounting	-40 to 70°C

## Accessories (sold separately)

### Power Adapters

PWR-24250-DT-S1	Power adapter, 90 to 264 VAC, 24 VDC, 2.5 A DC load
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### Power Cords

PWC-C13AU-3B-183	Power cord with AU plug, 1.83 m
PWC-C13CN-3B-183	Power cord with three-prong CN plug, 1.83 m
PWC-C13EU-3B-183	Power cord with EU plug, 1.83 m
PWC-C13UK-3B-183	Power cord with UK plug, 1.83 m
PWC-C13US-3B-183	Power cord with US plug, 1.83 m
PWC-C13JP-3B-183	Power cord with JP plug plug, 7A/125V, 1.83 m

### Wi-Fi Wireless Modules

V2201 Wi-Fi mini card	SparkLAN WPEA-252NI Wi-Fi mini card with 4 black screws
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### DIN-Rail Mounting Kits

DK-DC50131	DIN-rail mounting kit
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