BXP-A101 Series

Compact box computers with Intel Atom® x6211E/x6425E processor



Features and Benefits

- Box-type computer with fanless design
- Intel Atom® X Series processor
- Compact size to fit most field applications
- External dual storage with a removable cover design for easy maintenance
- -30 to 70°C operating temperature range

Certifications

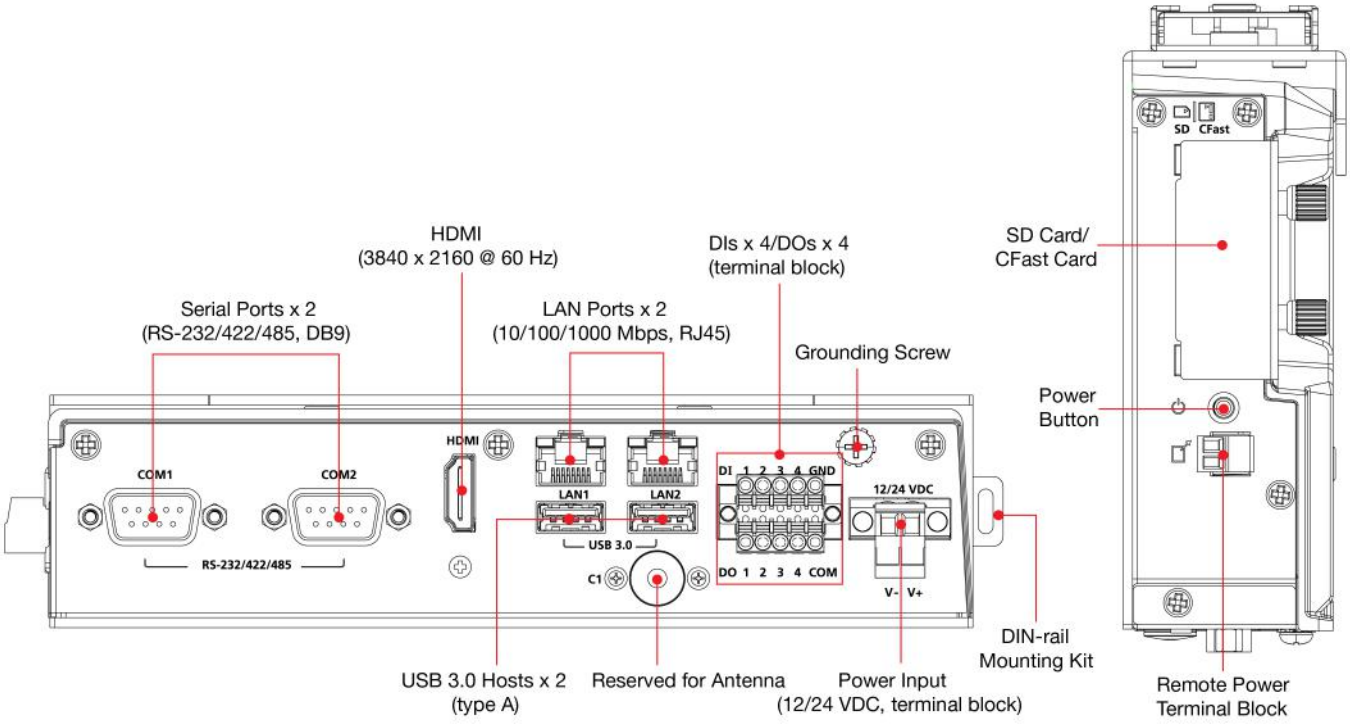
Introduction

The BXP-A101 computers are powered by an Intel Atom® X processor and come with 2 Gigabit Ethernet ports, 2 software-selectable RS-232/422/485 serial ports, 4 digital inputs, and 4 digital outputs. A dual-storage design that includes CFast and SD slots, and an internal M.2 socket enable easy storage expansion. A removeable cover design enables quick and easy storage swap, delivering one more user-friendly feature in a reliable, durable, and versatile platform.

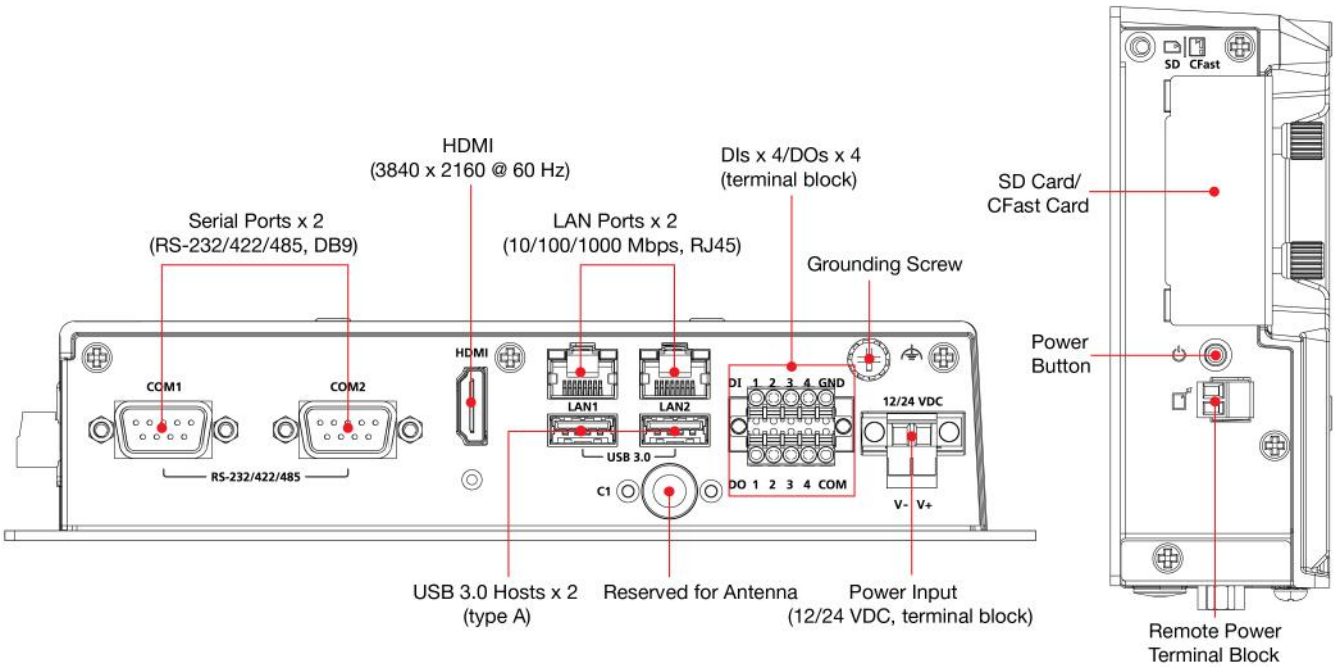
The BXP-A101 Series have compact wall-mounting and DIN-rail mounting models. The computers come in a fanless design and can withstand a temperature range of -30 to 70°C, making them a good fit for harsh operating environments. The built-in TPM 2.0 module secures the platform from unauthorized access. The BXP-A101 is an intelligent computing solution that perfectly fulfills both OT and IT requirements of industrial environments.

Appearance

DIN-rail Models (BXP-A101-E2-DR-T/E4-DR-T/E2-M2-DR-T/E4-M2-DR-T)



Wall-mount Models (BXP-A101-E2-T/E4-T/E2-M2-T/E4-M2-T)



Specifications

Computer

CPU	BXP-A101-E2 models: Intel Atom® x6211E processor (dual-core, 1.5 M cache, 1.30 GHz) BXP-A101-E4 models: Intel Atom® x6425E processor (quad-core, 1.5 M cache, 2.00 GHz)
System Memory Slot	SODIMM DDR4 slots x 1, up to 32 GB max.
System Memory Pre-installed	8 GB DDR4
Storage Slot	BXP-A101-E2-T/E4-T/E2-DR-T/E4-DR-T: CFast slot x 1 (SATAIII interface) SD slot x 1, SD 3.0 interface (SDHC/SDXC) BXP-A101-E2-M2-T/E4-M2-T/E2-M2-DR-T/E4-M2-DR-T: CFast slot x 1 (SATAIII interface) SD slot x 1, SD 3.0 interface (SDHC/SDXC) M.2 M-key 2242 slot x 1
Expansion Slots	mPCIe slots x 1
Supported OS	Windows images and drivers supported: - Windows 11 IoT Enterprise LTSC 2024 64-bit - Windows 11 Professional 64-bit - Windows 10 IoT Enterprise LTSC 2021 64-bit Linux image supported: - Debian 12 (kernel 6.10) Linux drivers supported: - Debian 12 (kernel 6.10) - Ubuntu 22.04 LTS (kernel 5.15) - RHEL 9 (kernel 5.14)
Graphics Controller	Intel® UHD Graphics

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 connector)
USB 3.0	USB 3.0 hosts x 2, type-A connectors
Digital Input	DIs x 4
Digital Output	DOs x 4
TPM	TPM v2.0
Video Output	HDMI 1.2a x 1, (type-A connector)
SIM Format	Nano
Number of SIMs	1
Buttons	Power button

Ethernet Interface

Magnetic Isolation Protection	1.5 kV (built-in)

Serial Interface

Baudrate	50 bps to 115.2 kbps
Connector	DB9 male
Data Bits	5, 6, 7, 8

Parity	None, Even, Odd, Space, Mark
Stop Bits	1, 1.5, 2
Flow Control	RTS/CTS, XON/XOFF, Automatic Data Direction Control (ADDC) for RS-485, RTS Toggle (RS-232 only)

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

Digital Inputs

Connector	Spring-type Euroblock terminal
Sensor Type	Dry contact Wet contact (NPN)
Dry Contact	Logic 0: Close to GND Logic 1: Open
Wet Contact (COM to DI)	Logic 0: 10 to 30 VDC Logic 1: 3 VDC max

Digital Outputs

Connector	Spring-type Euroblock terminal
I/O Type	Sink
Current Rating	200 mA per channel
Voltage	Logic 0: 200mA max. per channel, sink Logic 1: 24 VDC (typ.), 30 VDC (max.), open collector

LED Indicators

System	Power x 1
LAN	2 per port (10/100/1000 Mbps)

Power Parameters

Input Voltage	12/24 VDC
Power Connector	Screw-fastened Euroblock terminal
Power Consumption	50 W

Physical Characteristics

Housing	Metal
IP Rating	IP20
Dimensions	BXP-A101-E2-T/E4-T/E2-M2-T/E4-M2-T: 207 x 116.1 x 44.5 mm (8.14 x 4.57 x 1.75 in) BXP-A101-E2-DR-T/E4-DR-T/E2-M2-DR-T/E4-M2-DR-T: 186 x 121 x 46.7 mm (7.32 x 4.76 x 1.84 in)

Weight	BXP-A101-E2-T/E4-T/E2-M2-T/E4-M2-T: 1,225 g (2.7 lb) BXP-A101-E2-DR-T/E4-DR-T/E2-M2-DR-T/E4-M2-DR-T: 1,500 g (3.3 lb)
Installation	BXP-A101-E2-T/E4-T/E2-M2-T/E4-M2-T: Wall mounting BXP-A101-E2-DR-T/E4-DR-T/E2-M2-DR-T/E4-M2-DR-T: DIN-rail mounting

Environmental Limits

Operating Temperature	-30 to 70°C (-22 to 158°F)
Storage Temperature	-40 to 70°C (-40 to 158°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A BSMI
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 0.5 kV, Signal: 1 kV IEC 61000-4-6 CS: 3 V IEC 61000-4-8 PFMF: 1 A/m at 50 to 60 Hz
Safety	BSMI IEC 62368-1 UL 62368-1
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6 IEC 60068-2-64
Package Drop Test	ISTA 1A
Package Vibration Test	ISTA 1A

Declaration

Green Product	RoHS, CRoHS, WEEE

Reliability

Time Source	Built-in RTC (real-time clock) with lithium-battery backup
Automatic Reboot Trigger	Built-in WDT

MTBF

Time	1,581,038 hrs
Standards	Telcordia (Bellcore), GB

Warranty

Warranty Period	3 years
Details	See www.moxa.com/warranty

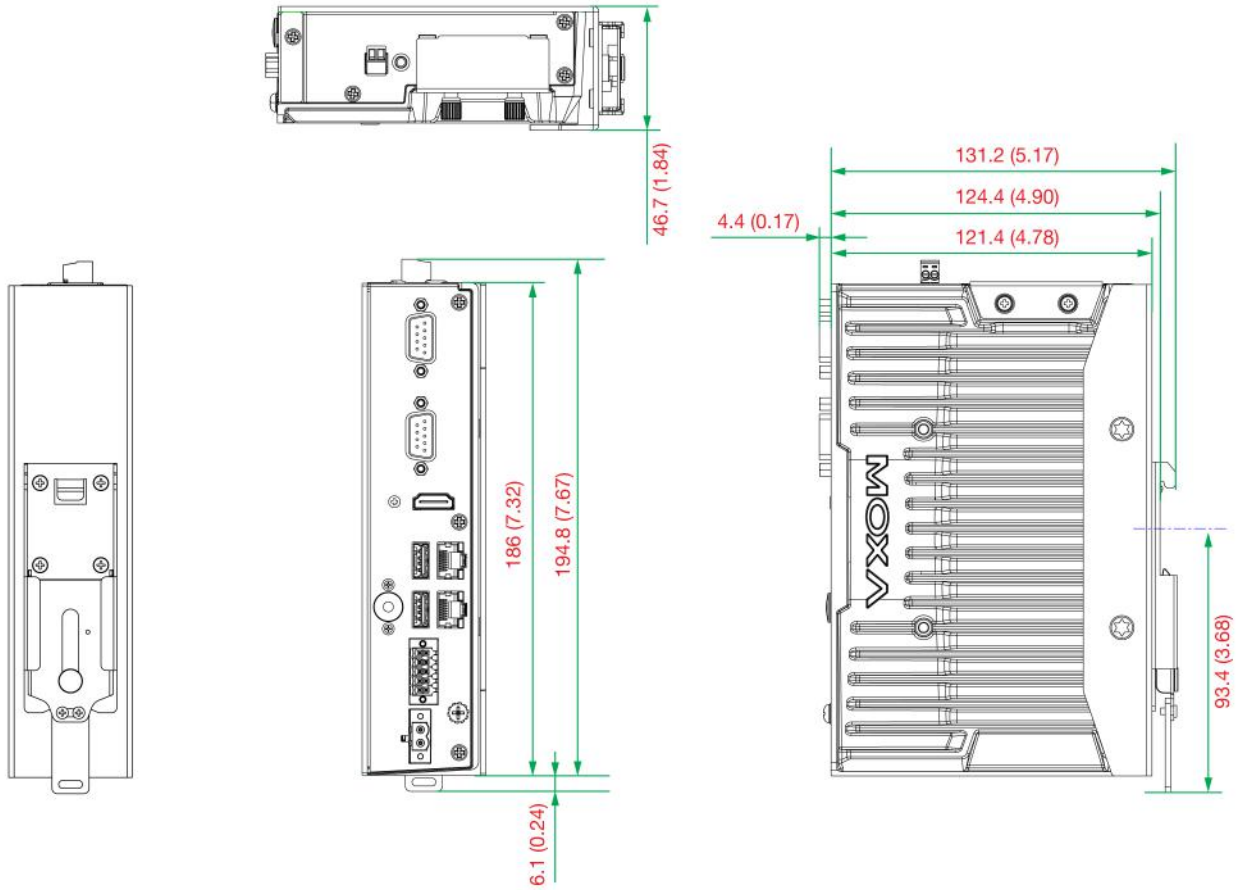
Package Contents

Device	1 x BXP-A101 Series computer
Installation Kit	1 x terminal block, 2-pin, for DC power input 1 x terminal block, 10-pin, for DIO 1 x terminal block, 2-pin, for connecting a power button extension 1 x M.2 screw (models with M.2 sockets)
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

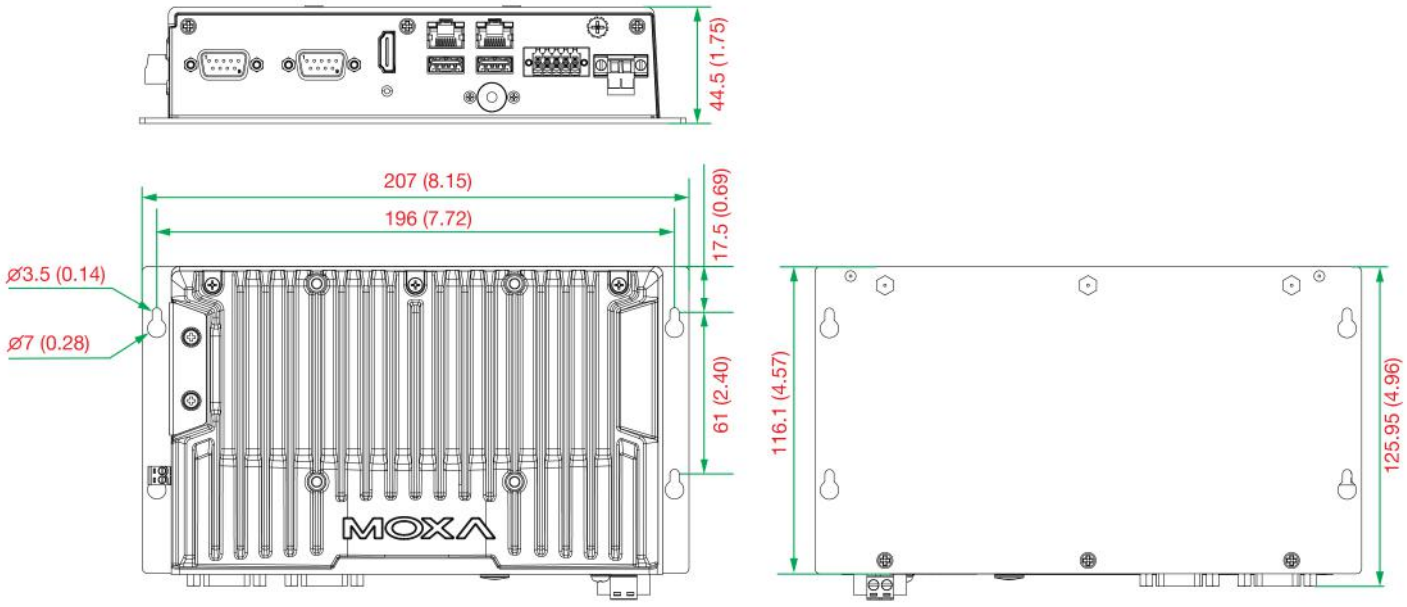
DIN-rail Models (BXP-A101-E2-DR-T/E4-DR-T/E2-M2-DR-T/E4-M2-DR-T)

Unit: mm (inch)



Wall-mount Models (BXP-A101-E2-T/E4-T/E2-M2-T/E4-M2-T)

Unit: mm (inch)



Ordering Information

Model Name	CPU	Memory	Storage Slots	OS Preinstalled	LAN/ Serial	USB 3.0	DIs/ DOs	Video Outputs	Default Mounting	Power Input
BXP-A101-E2-T	Intel Atom® x6211E	8 GB	1 x CFast 1 x SD	–	2/2	2	4 x DIs 4 x DOs	1 x HDMI	Wall Mounting	12/24 VDC
BXP-A101-E4-T	Intel Atom® x6425E	8 GB	1 x CFast 1 x SD	–	2/2	2	4 x DIs 4 x DOs	1 x HDMI	Wall Mounting	12/24 VDC
BXP-A101-E2-DR-T	Intel Atom® x6211E	8 GB	1 x CFast 1 x SD	–	2/2	2	4 x DIs 4 x DOs	1 x HDMI	DIN-rail Mounting	12/24 VDC
BXP-A101-E4-DR-T	Intel Atom® x6425E	8 GB	1 x CFast 1 x SD	–	2/2	2	4 x DIs 4 x DOs	1 x HDMI	DIN-rail Mounting	12/24 VDC
BXP-A101-E2-M2-T	Intel Atom® x6211E	8 GB	1 x M.2 1 x CFast 1 x SD	–	2/2	2	4 x DIs 4 x DOs	1 x HDMI	Wall Mounting	12/24 VDC
BXP-A101-E4-M2-T	Intel Atom® x6425E	8 GB	1 x M.2 1 x CFast 1 x SD	–	2/2	2	4 x DIs 4 x DOs	1 x HDMI	Wall-mount	12/24 VDC
BXP-A101-E2-M2-DR-T	Intel Atom® x6211E	8 GB	1 x M.2 1 x CFast 1 x SD	–	2/2	2	4 x DIs 4 x DOs	1 x HDMI	DIN-rail mount	12/24 VDC
BXP-A101-E4-M2-DR-T	Intel Atom® x6425E	8 GB	1 x M.2 1 x CFast 1 x SD	–	2/2	2	4 x DIs 4 x DOs	1 x HDMI	DIN-rail mount	12/24 VDC

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