BXP-C101 Series

Compact box computers with Intel Core™ Raptor Lake-U Refresh processor



Features and Benefits

- Box-type computer with fanless design
- Intel® Core™ Raptor Lake-U Refresh processor
- Compact size to fit most field applications
- Dual storage with a removable cover design for easy maintenance
- -30 to 70°C operating temperature range

Certifications

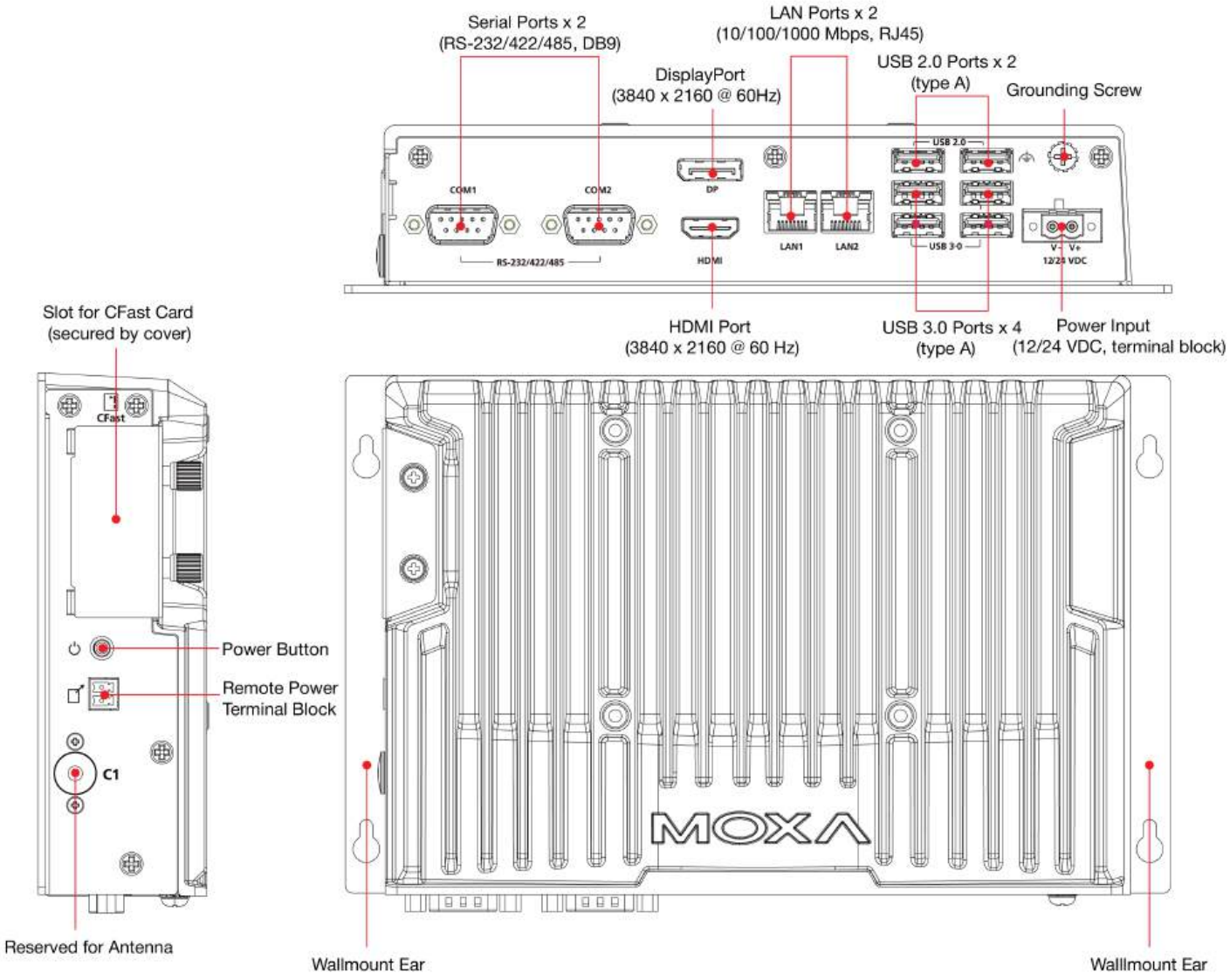
Introduction

The BXP-C101 Series computer models are built around an Intel® Core™ 3-100U, 5-120U, or 7-150U processor. The computers come with a rich set of interface options including either two serial ports (S1 models) or five digital inputs and six digital outputs (S2 models), two gigabit Ethernet ports, six USB ports, one HDMI port, and one DisplayPort. A dual-storage design that includes CFast and M.2 slots enables easy storage expansion.

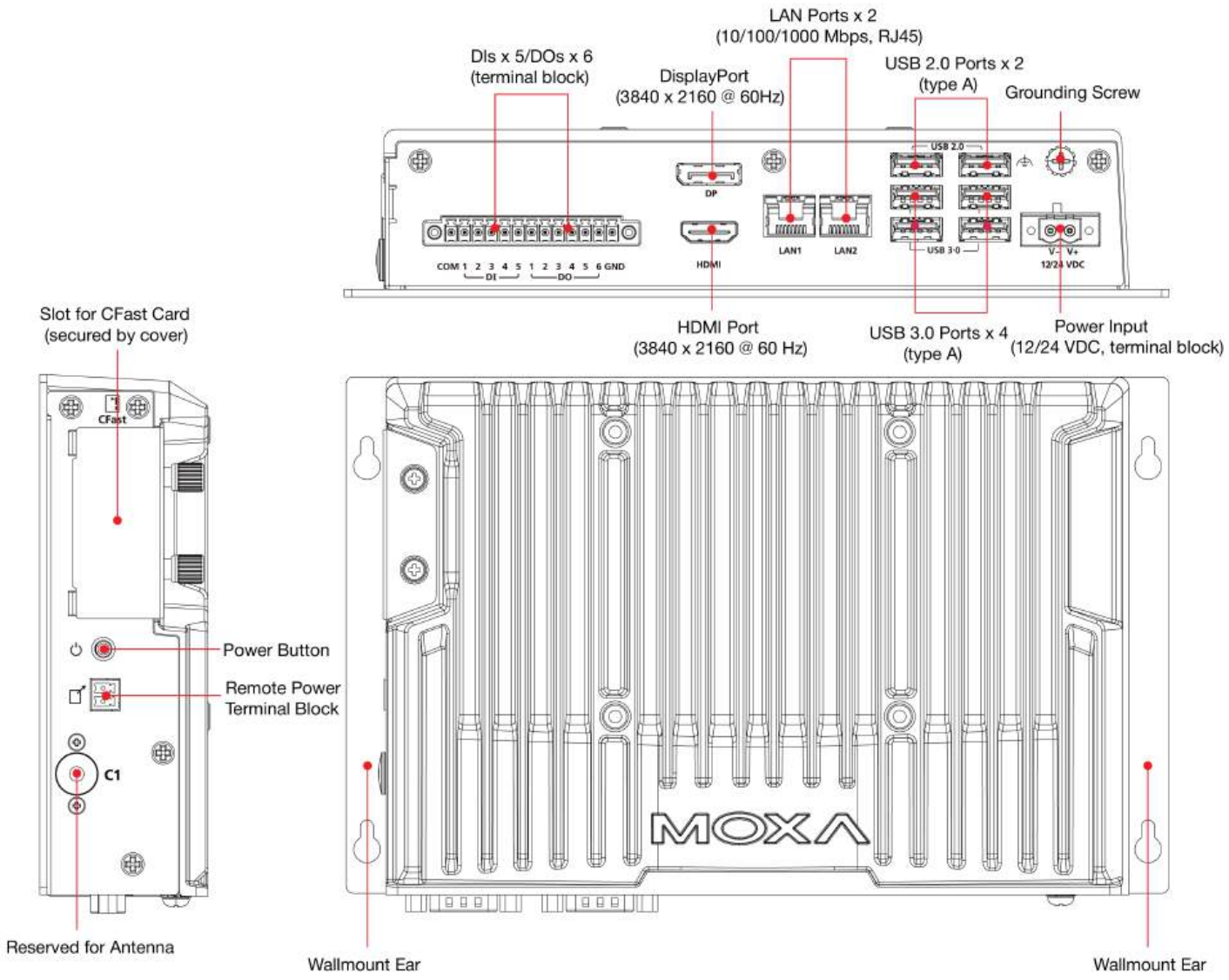
The BXP-C101 computers have a compact design and come with wall-mounting kit attached. The computers are fanless enabling them to withstand a temperature range of -30 to 70°C and making them a good fit for harsh operating environments. The built-in TPM 2.0 module secures the platform from unauthorized access. The BXP-C101 is an intelligent computing solution that perfectly fulfills both OT and IT requirements for various industrial environments.

Appearance

S1 Models (BXP-C101-C3-S1-T/C5-S1-T/C7-S1-T)



S2 Models (BXP-C101-C3-S2-T/C5-S2-T/C7-S2-T)



Specifications

Computer

CPU	BXP-C101-C3 models: Intel® Core™ 3-100U processor (6 cores, 10 MB Intel® smart cache, 1.2 GHz) BXP-C101-C5 models: Intel® Core™ 5-120U processor (10 cores, 12 MB Intel® smart cache, 1.4 GHz) BXP-C101-C7 models: Intel® Core™ 7-150U processor (10 cores, 12 MB Intel® smart cache, 1.8 GHz)
System Memory Slot	SODIMM DDR4 slots x 1, up to 32 GB max.
System Memory Pre-installed	8 GB DDR4
Storage Slot	CFast slot x 1 (SATAIII interface) M.2 M-key 2242 sockets x 1 (PCIe Gen 4 x4)
Expansion Slots	mPCIe slots x 1

Supported OS	Windows images and drivers supported: - Windows 11 Professional 64-bit - Windows 11 IoT Enterprise LTSC 2024 64-bit - Windows 10 IoT Enterprise LTSC 2021 64-bit Linux drivers supported: - Debian 13 - Ubuntu 24.04 LTS - RHEL 9
Graphics Controller	Intel® UHD Graphics

Computer Interface

Ethernet Ports	Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 2
Serial Ports	S1 models: RS-232/422/485 ports x 2 (software-selectable, DB9 male connector)
Digital Input	DIs x 5
Digital Output	DOs x 6
Video Output	HDMI 2.1 TMDS x 1, (type-A connector) DisplayPort 1.2 x 1
USB	USB 3.0 hosts x 4, type-A connectors USB 2.0 hosts x 2, type-A connectors
SIM Format	Nano
Number of SIMs	1
Buttons	Power button
TPM	TPM v2.0

Ethernet Interface

Magnetic Isolation Protection	1.5 kV (built-in)

Serial Interface

Bitrate	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

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: 0 to 3 VDC

Digital Outputs

Connector	Spring-type Euroblock terminal
I/O Type	Sink
Voltage	0 to 30 VDC
Current Rating	200 mA per channel

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	62.4 W

Physical Characteristics

Housing	Metal
IP Rating	IP20
Dimensions	217 x 136.5 x 44.5 mm (8.55 x 5.38 x 1.75 in)
Weight	1,600 g (3.52 lb)
Installation	Wall mounting (standard) DIN-rail mounting (with optional kit)

Environmental Limits

Operating Temperature	-30 to 70°C (-22 to 158°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
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, Spot Frequency: 10 V IEC 61000-4-8 PFMF: 1 A/m at 50 to 60 Hz
Safety	IEC 62368-1 UL 62368-1 EN 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	1,515,150 hrs
Standards	Telcordia (Bellcore), GB

Warranty

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

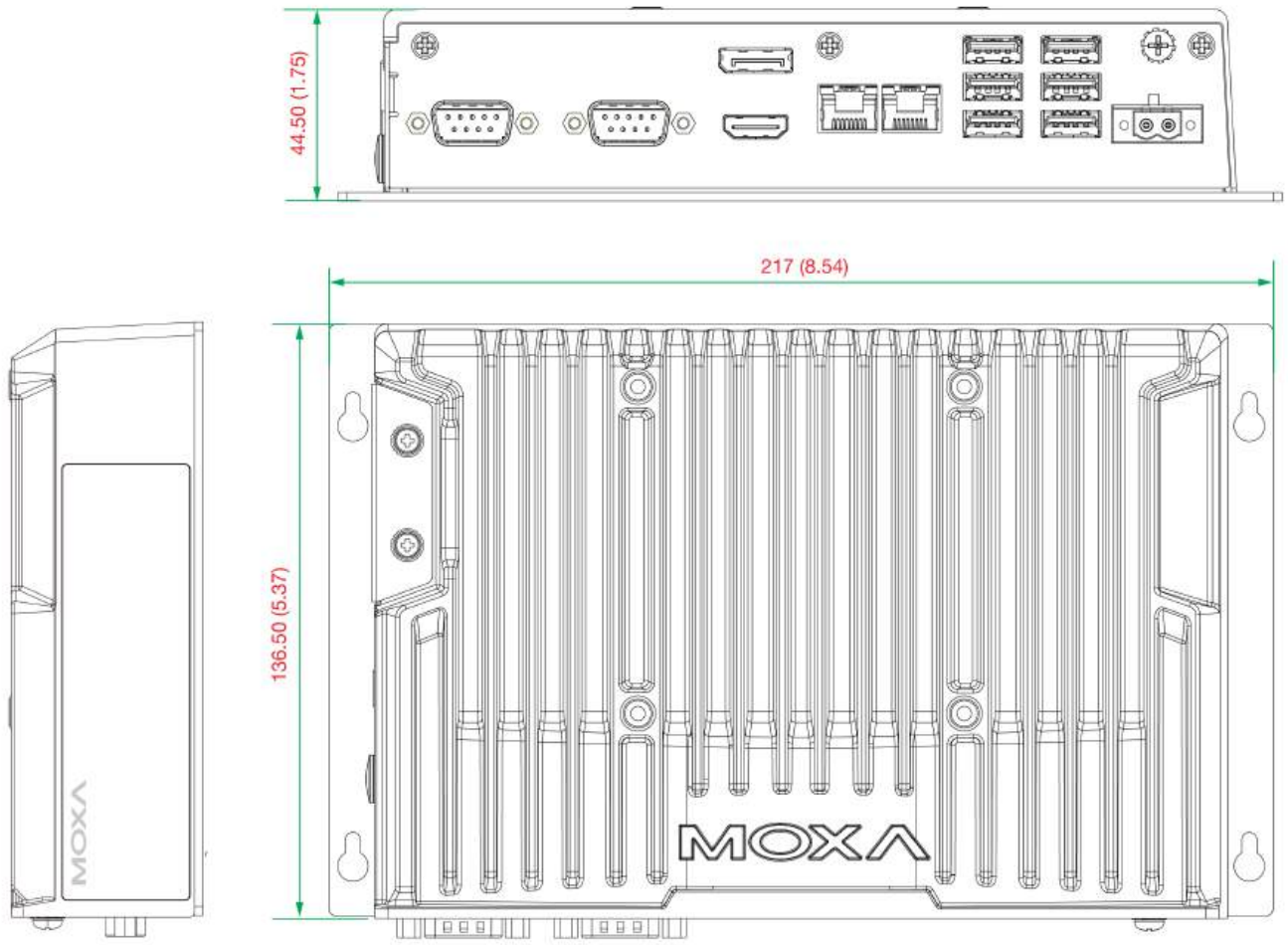
Package Contents

Device	1 x BXP-C101 Series computer
Installation Kit	1 x terminal block, 2-pin, for DC power input 1 x terminal block, 13-pin, for DIs/DOs (S2 models) 1 x terminal block, 2-pin, for connecting a power button extension 1 x screw for mounting mPCIe module 1 x screw for M.2 SSD 1 x thermal pad for M.2 SSD
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

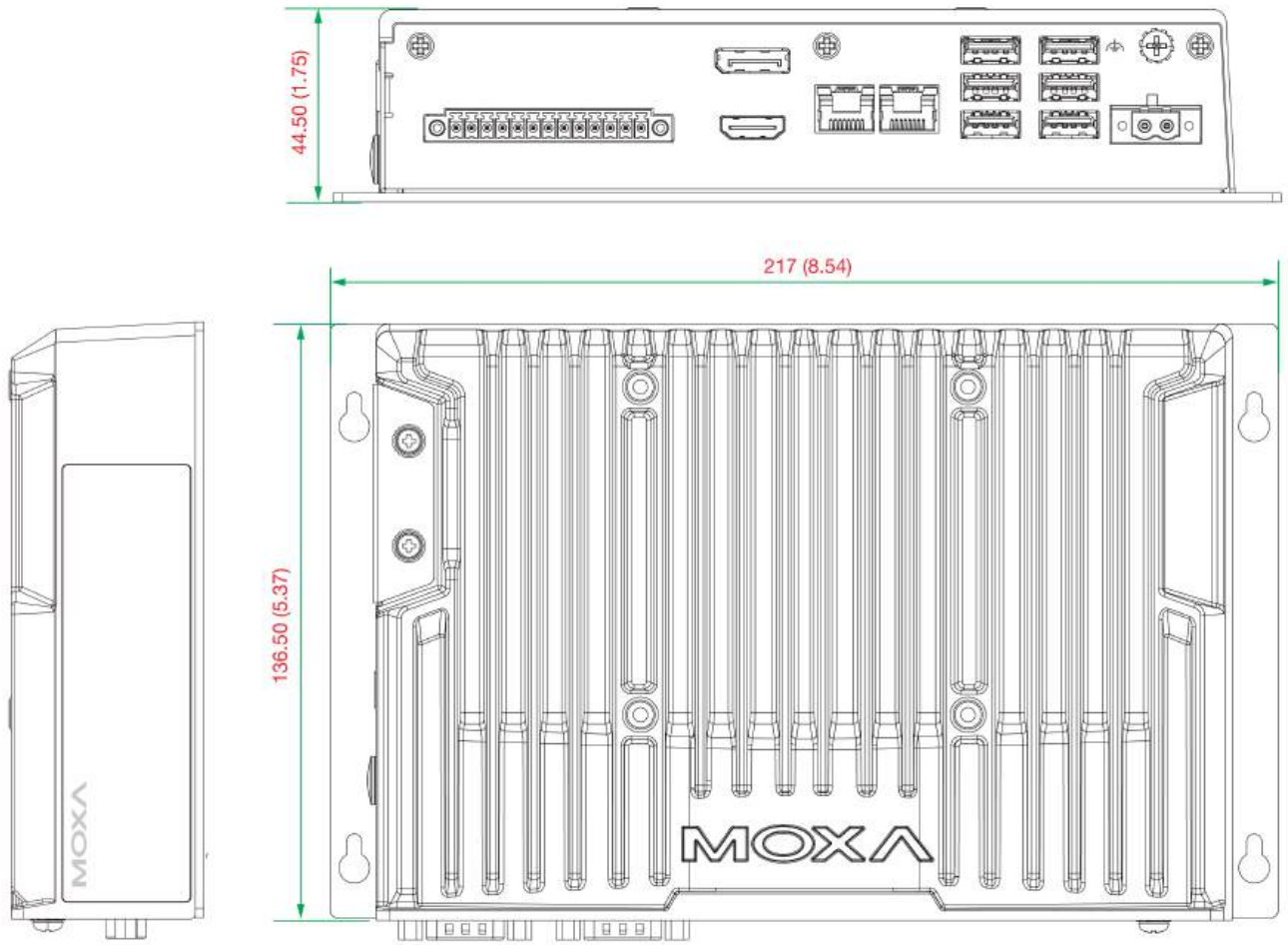
S1 Models (BXP-C101-C3-S1-T/-C5-S1-T/C7-S1-T)

Unit: mm (inch)



S2 Models (BXP-C101-C3-S2-T/C5-S2-T/C7-S2-T)

Unit: mm (inch)



Ordering Information

Model Name	CPU	Memory	Storage Slots	OS Preinstalled	LAN Ports	Serial Ports	USB Ports	DIs/ DOs	Video Outputs	Power Input
BXP-C101-C3-S1-T	Intel® Core™ 3-100U	8 GB	1 x Cfast, 1 x M.2 M-key	–	2	2	4 x USB 3.0 2 x USB 2.0	–	1 x HDMI 2.1 1 x DisplayPort	12/24 VDC
BXP-C101-C3-S2-T	Intel® Core™ 3-100U	8 GB	1 x Cfast, 1 x M.2 M-key	–	2	–	4 x USB 3.0 2 x USB 2.0	5 DIs 6 DOs	1 x HDMI 2.1 1 x DisplayPort	12/24 VDC
BXP-C101-C5-S1-T	Intel® Core™ 5-120U	8 GB	1 x Cfast, 1 x M.2 M-key	–	2	2	4 x USB 3.0 2 x USB 2.0	–	1 x HDMI 2.1 1 x DisplayPort	12/24 VDC
BXP-C101-C5-S2-T	Intel® Core™ 5-120U	8 GB	1 x Cfast, 1 x M.2 M-key	–	2	–	4 x USB 3.0 2 x USB 2.0	5 DIs 6 DOs	1 x HDMI 2.1 1 x DisplayPort	12/24 VDC
BXP-C101-C7-S1-T	Intel® Core™ 7-150U	8 GB	1 x Cfast, 1 x M.2 M-key	–	2	2	4 x USB 3.0 2 x USB 2.0	–	1 x HDMI 2.1 1 x DisplayPort	12/24 VDC
BXP-C101-C7-S2-T	Intel® Core™ 7-150U	8 GB	1 x Cfast, 1 x M.2 M-key	–	2	–	4 x USB 3.0 2 x USB 2.0	5 DIs 6 DOs	1 x HDMI 2.1 1 x DisplayPort	12/24 VDC

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