

BXP-C101 Series Quick Installation Guide

Embedded Computers

Version 1.1, June 2026

Technical Support Contact Information
www.moxa.com/support



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P/N: 1802001018021



Overview

The BXP-C101 Series computers are powered by three CPU options: Intel® Core™ 3-100U, 5-120U, and 7-150U processors. The computers come with a rich set of interface options including either two serial ports or five digital inputs and six digital outputs, two gigabit Ethernet ports, six USB ports, one HDMI, and one Display Port. A dual storage design that includes CFast and M.2 slots enable easy storage expansion. Both Wall-mount and DIN-rail mount models are available, making it easy to build data-communication systems at field sites.

Package Checklist

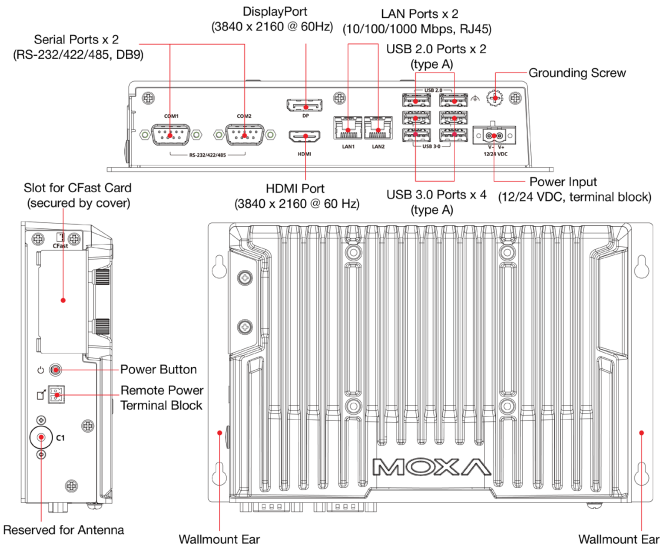
Each basic system model package is shipped with following items:

- BXP-C101 Series embedded computer
- 2-pin terminal block for DC power
- 2-pin terminal block for remote power
- 13-pin terminal block for DI/DOs (S2-DIO model only)
- M.2 SSD mounting screw and thermal pad
- mPCIe module mounting screw
- Quick installation guide (printed)
- Warranty card

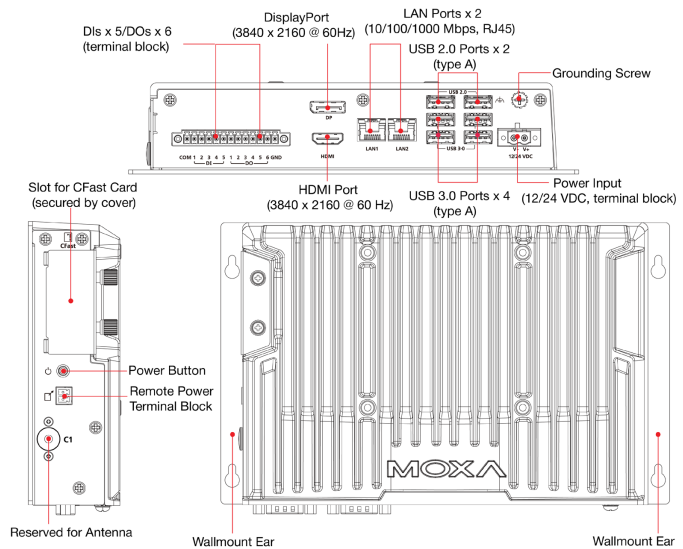
NOTE Notify your sales representative if any of the above items are missing or damaged.

Panel Views

Serial (S1) Models



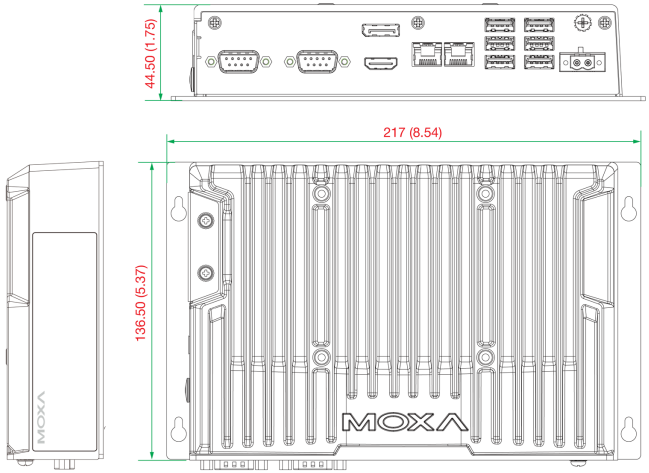
DIO (S2) Models



Dimensions

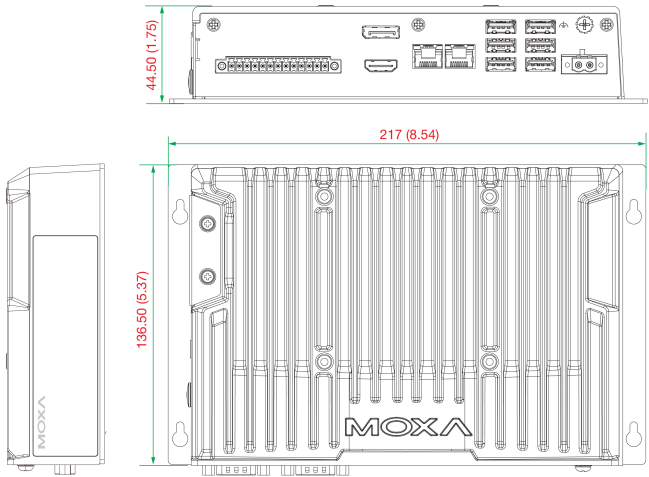
Serial (S1) Models

Unit: mm (inch)



DIO (S2) Models

Unit: mm (inch)



LED Indicators

The following table describes the LED indicators of BXP-C101 computers.

LED Name	Status	Function
Power (on power button)	Green	Power is on (S0 state)
	Off	Power is off (S5 state)
Ethernet (10/100/1000 Mbps) (on connectors)	Green	Steady on: 10/100 Mbps Ethernet link Blinking: Data is being transmitted or received
	Yellow	Steady on: 1000 Mbps Ethernet link Blinking: Data is being transmitted or received
	Off	No Ethernet connection

Installing the BXP-C101 Computer

Wall-mounting Models

The BXP-C101 computer comes with one wall-mounting plate pre-installed when shipped.

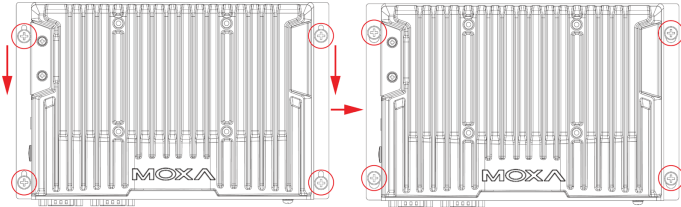


CAUTION

Peripheral devices should be kept at least 25 mm away from the computer.

To mount the computer on to a wall or a cabinet, do the following:

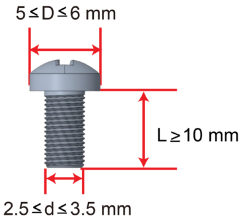
1. Place the computer on a wall or a cabinet, and then fasten the two screws on each side of the bracket.
2. Push the computer downwards to ensure the computer has been securely fixed to the mounting surface.



Fastening Torque: 10 Kgf-cm

NOTE The four screws for attaching the wall-mounting brackets to the wall or cabinet are NOT included in the product package; they need to be purchased separately.

The specification of the 4 screws to be purchased separately is indicated in the diagram on the right.

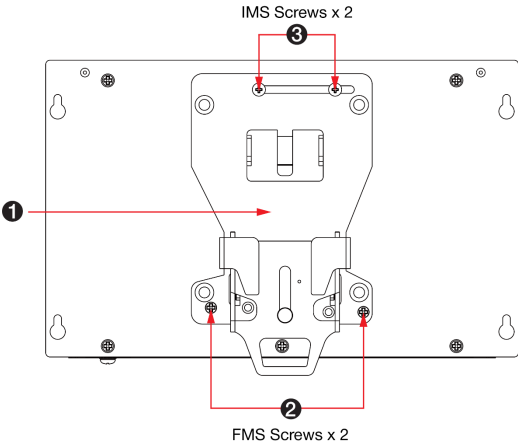


DIN-rail Mounting (optional)

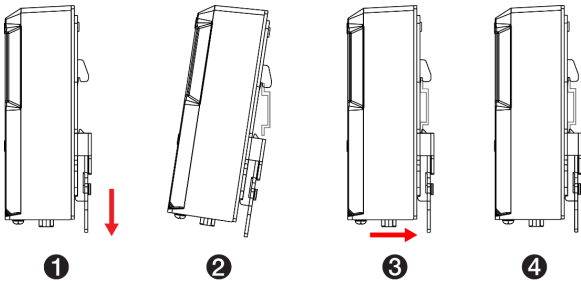
The BXP-C101 computer comes with one optional DIN-rail mounting kit, which needs to be purchased separately.

To mount the computer on to a DIN rail, do the following:

1. Attach the DIN-rail mounting bracket to the computer on the bottom side by placing it as indicated in the figure below and fastening four screws (two FMS and two IMS).



- 2. Pull down the slider of the DIN-rail mounting kit.
- 3. Insert the top of the DIN rail into the slot just below the upper hook of the DIN-rail mounting kit.
- 4. Push the unit on to the DIN rail to latch it firmly in place as shown in the following illustrations.



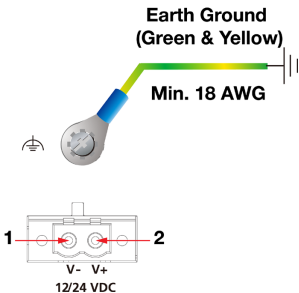
Once the computer is mounted properly, you will hear a click and the slider will rebound back into place automatically.

NOTE This computer is intended to be installed only in an area with restricted access. In addition, for safety reasons, the computer should be installed and handled only by qualified and experienced professionals.

Connecting the Power

The BXP-C101 computer is provided with 2-pin power input connectors in a terminal block on the front panel. Insert the power-cord wires into the connectors and tighten them to secure the wires in place. Push the power button. The power LED will light up to indicate that power is being supplied to the computer. It should take about 30 to 60 seconds for the operating system to complete the boot-up process.

Pin	Definition
1	V-
2	V+



The power input and wire rating specifications are as follows:

- DC power source rating is 12 VDC @ 5.2 A or 24 VDC @ 2.6 A
- A minimum wire gauge of 18 AWG is required
- Power input leads stripping Length of 7 to 8 mm is recommended
- Rated Cable Temp ≥ 97.2°C

For surge protection, connect the grounding connector located above the power connector with the earth (ground) or a metal surface.

NOTE This computer is intended to be supplied by a UL Listed Power Unit “LPS” (or “Limited Power Source”) rated 12 V @ 5.2 A min. or 24 V @ 2.6 A min., and minimum Tma = 70°C. If you need assistance with purchasing a power adapter, contact the Moxa technical support team.

NOTE If using Class I adapter, the power cord adapter should be connected to a socket outlet with an earthing connection or the power cord and adapter must comply with Class II construction.



ATTENTION

- Before connecting the BXP-C101 computer to the DC power inputs, make sure the DC power source voltage is stable.
- The wiring for the input terminal block shall be installed by a skilled person.
 - Wire type: Cu
 - Only use 18-12 AWG wire size and a torque value of 0.5 N-m.
 - Use only one conductor in a clamping point between the DC power source and the power input.



WARNING

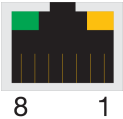
為避免電磁干擾，本產品不應安裝或使用於住宅環境。

Communications Connections

Ethernet Ports

The BXP-C101 computer has two 10/100/1000 Mbps Ethernet ports with RJ45 connectors on the front panel. Refer to the following table for pin assignments:

Pin	10/100 Mbps	1000 Mbps
1	ETx+	TRD(0)+
2	ETx-	TRD(0)-
3	ERx+	TRD(1)+
4	-	TRD(2)+
5	-	TRD(2)-
6	ERx-	TRD(1)-
7	-	TRD(3)+
8	-	TRD(3)-

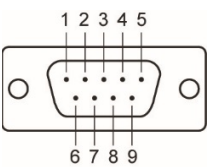


NOTE For reliable Ethernet connections, we recommend enabling the ports in standard temperatures and keeping them enabled in high/low temperature environment.

Serial Ports

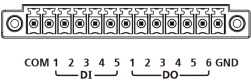
The BXP-C101 computer (S1) comes with 2 software-selectable RS-232/422/485 serial ports on the front panel. The ports use DB9 male connectors. Refer to the following table for pin assignments:

Pin	RS-232	RS-422	RS-485 (4-wire)	RS-485 (2-wire)
1	DCD	TxDA(-)	TxDA(-)	-
2	RxD	TxDB(+)	TxDB(+)	-
3	TxD	RxDB(+)	RxDB(+)	DataB(+)
4	DTR	RxDA(-)	RxDA(-)	DataA(-)
5	GND	GND	GND	GND
6	DSR	-	-	-
7	RTS	-	-	-
8	CTS	-	-	-



Digital Inputs/Digital Outputs

The BXP-C101 computer (S2) comes with five digital inputs and six digital outputs in a terminal block. Refer to the following figure for the pin definitions and current ratings.



Digital Inputs

Dry Contact:
Logic 0: Close to GND
Logic 1: Open

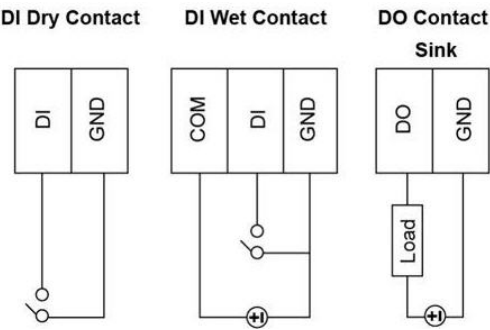
Wet Contact:
Logic 0: 10 to 30 VDC
(Source to DI)
Logic 1: 0 to 3 VDC
(Source to DI)

Digital Outputs

Current Rating:
200 mA per channel

Voltage:
0 to 30 VDC

For the wiring method, refer to the following diagram:



USB Ports

The BXP-C101 Series computer comes with 4 USB 3.0 ports and 2 USB 2.0 ports on the front panel. The USB ports can be used to connect to peripherals, such as keyboard, mouse, or flash drives for expanding the system's storage capacity.

CFast Card

The BXP-C101 computer comes with a slot for plugging in a CFast card.



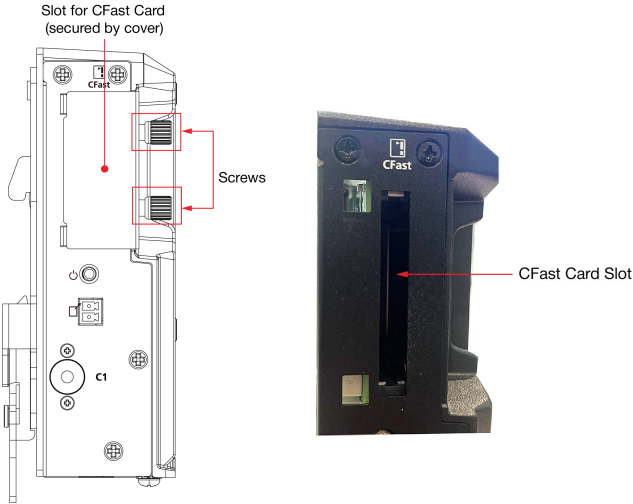
WARNING

EXPLOSION HAZARD

CFast card should only be replaced or installed in a non-hazardous location.

To plug in the card, do the following:

1. Remove the two screws that secure the slot cover.
2. Remove the cover and locate CFast card slot.



3. To remove the card, simply push them in to release them and take them out.

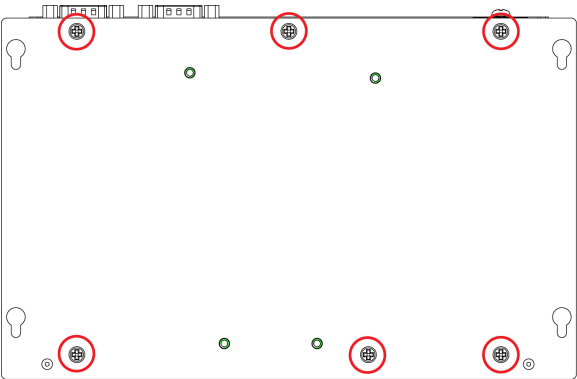
Connecting Displays

The BXP-C101 computer comes with an HDMI 2.1 and a DisplayPort for display output located on the front panel.

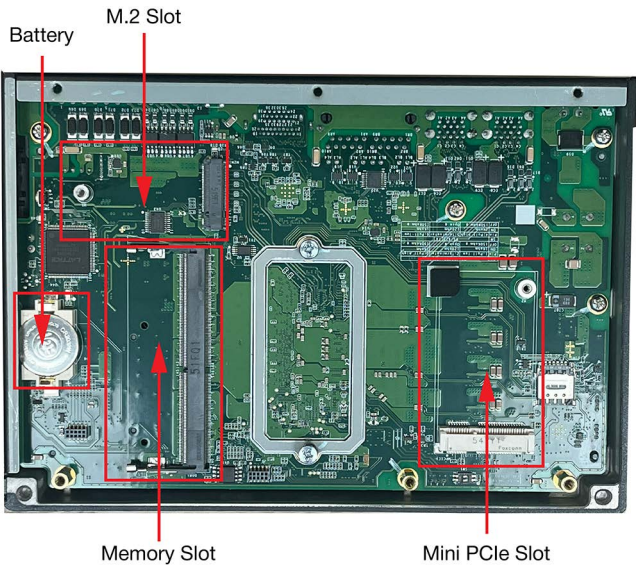
NOTE Use HDMI-certified cables for a reliable audio or video connection.

Installing/replacing the Internal Components

To access the computer’s internal components, you will first need to unfasten the six screws on the wall-mounting plate at the bottom of the computer and remove the plate.

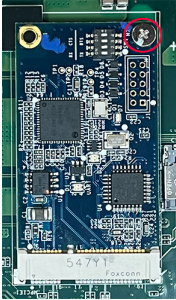


Location of the internal modules are shown in the following figure:



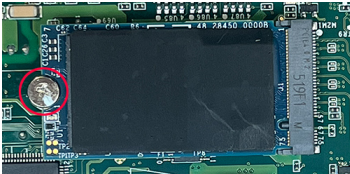
Installing the Mini PCIe module

1. Insert the Mini PCIe module in the slot.
2. Fasten the screw.

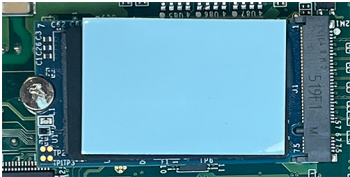


Installing the M.2 Module

1. Insert the M.2 module in the slot.
2. Fasten the screw.



3. Place the thermal pad.



Replacing the RTC Battery

The BXP-C101 computer comes with a lithium battery (3 V/200 mAh) preinstalled in the slot.



WARNING

EXPLOSION HAZARD

- Do not remove or replace batteries unless the power has been disconnected and the area is free of ignitable concentrations.
- To reduce the risk of fire or burns, do not disassemble, crush, or puncture the battery; do not dispose of it in fire or water and do not short external contacts.
- RTC batteries should only be replaced or installed in a non-hazardous location.
- Be sure to use the correct type of battery. Incorrect batteries may cause system damage. Contact Moxa's technical support staff for assistance, if necessary.
- The RTC must only be replaced with Panasonic battery type BR2032*, BR-2032*, BR2032, or BR-2032.

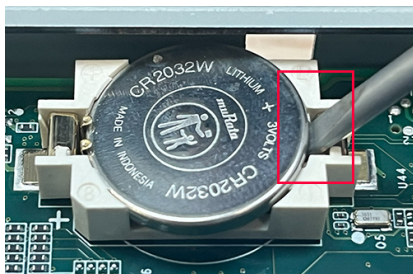


警告

不正確之電池形式會有爆炸的風險，請依製造商說明書處理用過之電池。

To replace the battery, do the following:

1. Use a screwdriver to remove the old battery by pushing the right latch of the slot outwards.



2. Remove the old battery and insert the new one.
3. Replace the wall-mounting plate.

For the Korean Region



WARNING

사용자 안내문 이 기기는 업무용 환경에서 사용할 목적으로 적합성 평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.