

V2200D Series Quick Installation Guide

Embedded Computers

Version 1.0, September 2026

Technical Support Contact Information
www.moxa.com/support



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P/N: 1802022020001



Overview

The V2200D Series embedded computers are built around an Intel Atom® Amston Lake x7433RE processor and come with up to 32 GB DDR4 memory, one internal M.2 2242 M-key storage slot, and two front-accessible easy-swappable M.2 2280 M-key storage slots for flexible and reliable data storage. The computers comply with railway requirements for operating temperature, power input, and EMC, making them suitable for onboard and wayside applications in harsh railway environments.

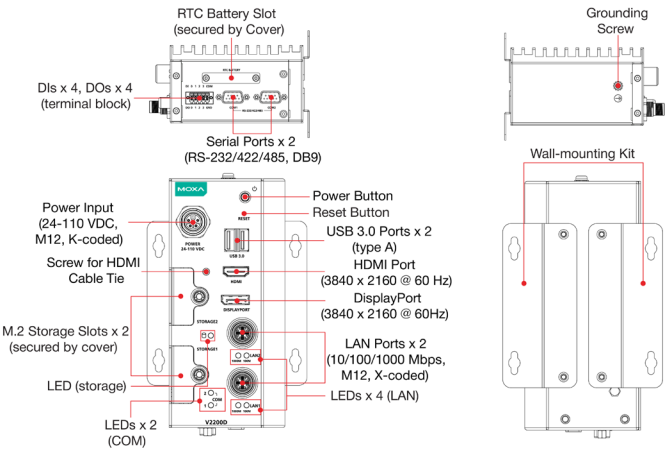
For enhanced data protection, the front-accessible storage slots are equipped with a lock, allowing only authorized personnel to access the storage devices. The V2200D computers provide essential industrial interfaces, including 2 Gigabit Ethernet ports, 2 RS-232/422/485 serial ports, 4 digital inputs, 4 digital outputs, 2 USB 3.0 ports, 1 HDMI, and 1 DisplayPort, enabling seamless integration with onboard systems and field devices. A built-in TPM 2.0 module further strengthens platform integrity and provides hardware-based protection against unauthorized access and tampering.

Package Checklist

Each basic system model package is shipped with following items:

- V2200D Series embedded computer
- Wall-mounting kit (with five M3 x 5 mm screws)
- 2 keys (to lock the external M.2 M-key slot trays)
- HDMI cable clamp (with a M3 x 5 mm screw)
- Quick installation guide (printed)
- Warranty card

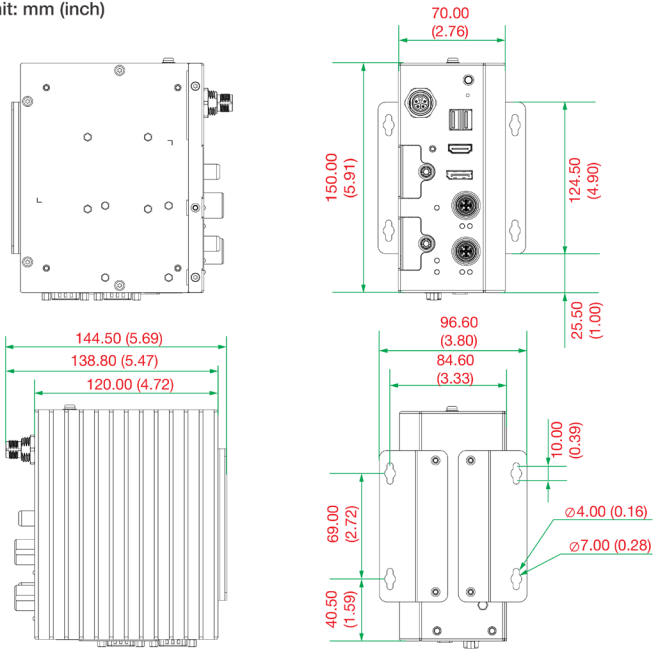
Panel Layouts



Dimensions

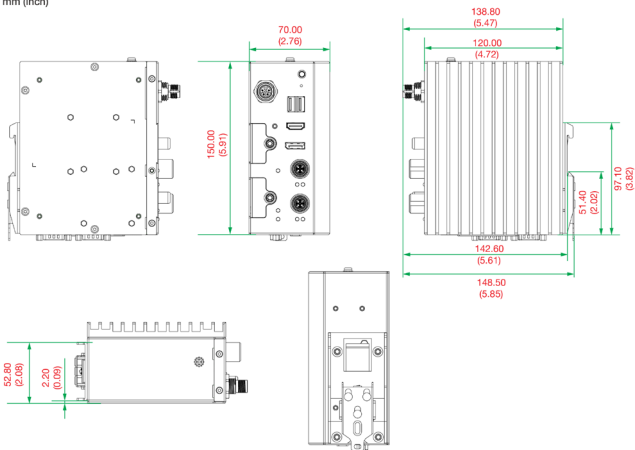
Wall-mounting Models

Unit: mm (inch)



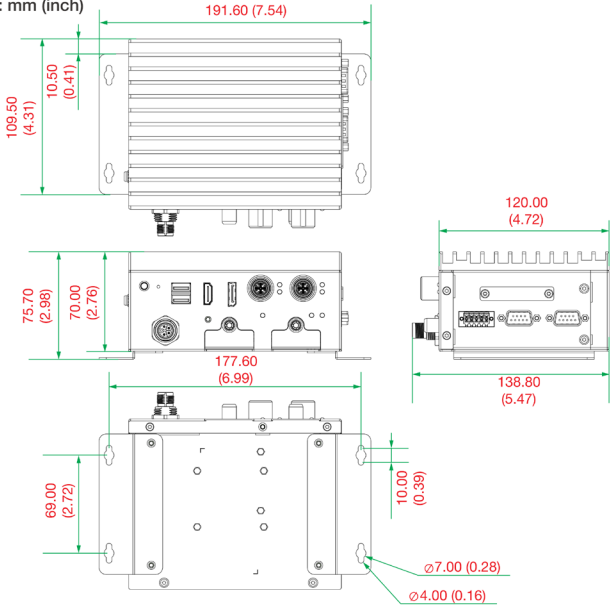
DIN-rail Mounting Models

Unit: mm (inch)



Desk-mounting Models

Unit: mm (inch)



LED Indicators

LED	Color	Status	Description
Power	Green	On	Power supplied to power input
		Off	Power off or other power error
Ethernet (100/1000 Mbps)	Green	Solid	Port active and linking at 100 Mbps
		Blinking	Port transmitting data at 100 Mbps
		Off	Port transmitting data at 10 Mbps or cable not connected
	Yellow	Solid	Port active and linking at 1000 Mbps
		Blinking	Port transmitting data at 1000 Mbps
		Off	Port transmitting data at 10 Mbps or cable not connected
Serial (TX/RX)	Green	Solid	Port transmitting data (Tx)
		Off	Port inactive or link down
	Yellow	Solid	Port receiving data (Rx)
		Off	Port inactive or link down
Storage (M.2 M-key)	Yellow	Solid	Data accessed from one of the M.2 M-key storage drives
		Off	No activity on the storage drives

Installing the V2200D

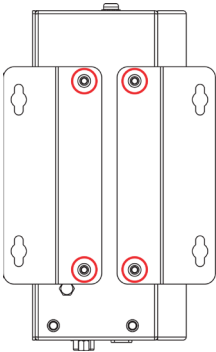
Wall-mounting

The V2200D comes with a wall-mounting kit in the product package.

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

Step 1

Use two screws (M3 x 5 mm with a torque value of 4.5kgf-cm; see *Screws for Wall and Desk Mounting*) to attach the brackets to the rear panel of the computer as indicated in the figure.



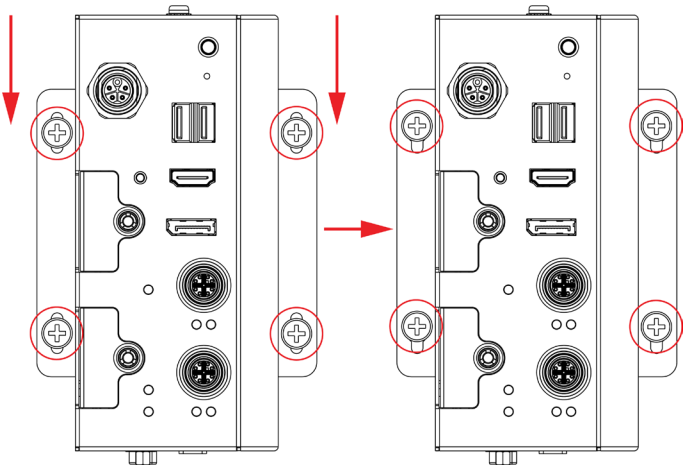
Step 2

Use two screws (M3 x 5 mm standard is recommended; see *Screws for Wall and Desk Mounting*) on each side to attach the V2200D to a wall or cabinet.

NOTE The product package does not include the four screws required for attaching the wall-mounting kit to the wall. You must purchase them separately.

Step 3

Pull the mounted computer downwards against the mounting surface to ensure the computer is secured as shown in the following figures:

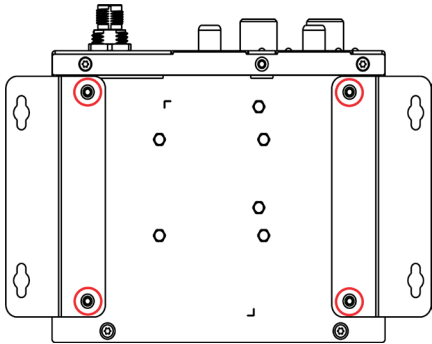


Desktop Mounting

The V2200D computers can also be mounted on to a desk or a flat surface as follows:

Step 1

Attach the brackets to the side panel of the computer using two screws (M3 x 5L with torque value of 4.5 kgf-cm; refer to **Screws for Wall and Desk Mounting** section) on each side as indicated in the following figure.



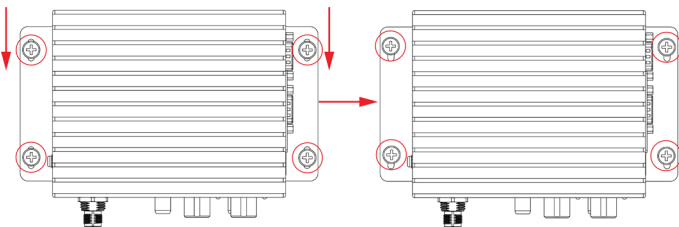
Step 2

Use two screws (M3 x 5L standard is recommended, refer to **Screws for Wall and Desk Mounting**) on each side to attach the V2200D to a wall or cabinet.

NOTE The product package does not include the four screws required for attaching the mounting kit to the desk. You must purchase them separately.

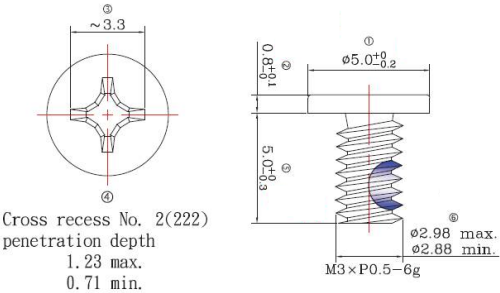
Step 3

Pull the mounted computer downwards against the mounting surface to ensure the computer is secured as shown in the following figures:



Screws for Wall and Desk Mounting

The specifications of the screws for wall and desk mounting are shown in the following figures:



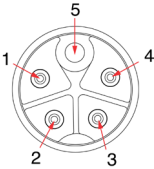
Connecting the Power

The V2200D computers are provided with M12 power input connectors on the front panel. Connect the power cord wires to the connectors and then tighten the connectors.

NOTE Connect the computer to a listed 24 to 110 VDC power adapter or DC power source rated for at least 1.68 A @ 24 VDC or 0.38 A @ 110 VDC and with a minimum ambient temperature rating of 70°C. Use a 18 AWG (min.) wire for the power connection.

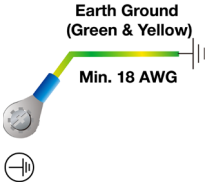
To supply power, push the power button. The **Power** LED will light up to indicate that power is being supplied to the computer. After this, it will take about 30 to 60 seconds for the operating system to complete the boot-up process.

Pin	Definition
1	V1+
2	V1-
3	N/A
4	N/A
5	GND



If a power adapter is used, connect it to a properly grounded power outlet.

For surge protection, connect the grounding connector on the top panel to earth (ground) or a well-grounded metal mounting surface using a green-and-yellow grounding cable with a minimum conductor size of 18 AWG.



Connecting Displays

The V2200D comes with an HDIM and a DisplayPort on the front panel, allowing you to connect to a display. There is an HDIM cable clamp in the package. Connect the cable clamp to the HDMI cable tie screw to ensure that the HDMI cable has been securely connected.



NOTE For highly reliable video streaming, use premium HDMI-certified cables.

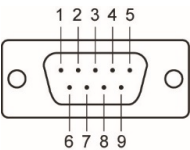
USB Ports

The V2200D comes with 2 USB 3.0 ports on the front panel. The USB ports can be used to connect to peripherals, such as keyboard, mouse, and flash drives for expanding the system’s storage capacity.

Serial Ports

The V2200D comes with 2 software-selectable RS-232/422/485 serial ports on the bottom panel. The pin assignments are as follows:

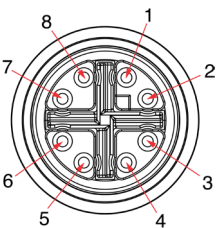
Pin	RS-232	RS-422	RS-485 (4-wire)	RS-485 (2-wire)
1	DCD	TxDA(-)	TxDA(-)	-
2	RxD	TxDB(+)	TxDB(+)	-
3	TxD	RxDB(+)	RxDB(+)	DataB(+)
4	DTR	RxDA(-)	RxDA(-)	DataA(-)
5	GND	GND	GND	GND
6	DSR	-	-	-
7	RTS	-	-	-
8	CTS	-	-	-



Ethernet Ports

The V2200D has 2 10/100/1000 Mbps Ethernet ports with M12 connectors on the front panel. The pin assignments are as follows:

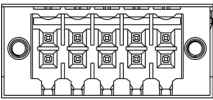
Pin	Definition
1	DA+
2	DA-
3	DB+
4	DB-
5	DD+
6	DD-
7	DC-
8	DC+



Digital Inputs/Outputs

The V2200D comes with 4 digital inputs and 4 digital outputs in a terminal block on the bottom panel. The pin assignments and the current ratings are as follows:

DI 0 1 2 3 COM



DO 0 1 2 3 GND

Digital Inputs

Dry Contact

Logic 0: Short to Ground

Logic 1: Open

Wet Contact

(COM to DI)

Logic 0: 10 to 30 VDC

Logic 1: 0 to 3 VDC

Digital Outputs

Current Rating:

200 mA per channel

Voltage:

0 to 30 VDC

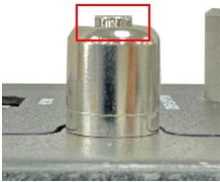
For detailed wiring methods, refer to the *V2200D Hardware User Manual*.

Installing the Storage Devices

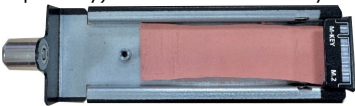
The V2200D comes with 2 M.2 storage slots on the front panel.

To install M.2 storage devices, do the following:

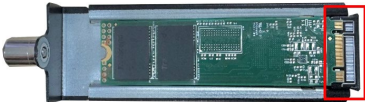
1. Use the corresponding key to the M.2 slot tray (included in the product package) to rotate the lock on the tray and unlock it.



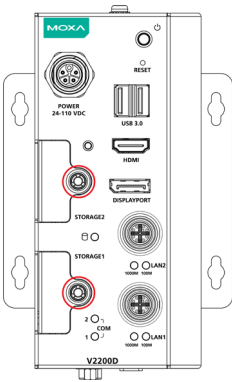
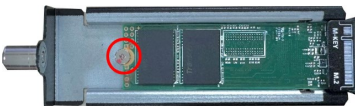
2. Pull out the M.2 slot tray.
3. Attach a thermal pad (purchase separately) on to the M.2 slot tray.



4. Align the pins on the M.2 SSD storage device with the M-key connector, insert the SSD into the slot, and push gently until it fits in the slot.



5. Secure the M.2 SSD storage to the tray using the screw provide in the package.



- Put back the M.2 storage slot tray and use the key to lock it in place.



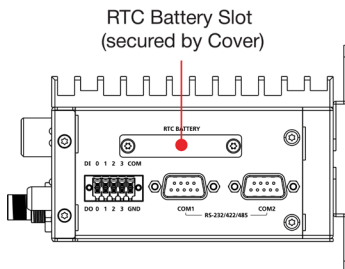
NOTE This computer is intended to be installed in a restricted access area only. In addition, for safety reasons, the computer should be installed and handled only by qualified and experienced professionals.

Replacing the Battery

The V2200D comes with one battery slot, which comes installed with a 3 V/195 mAh lithium battery.

To replace the battery, do the following:

- Unfasten the two screws on the battery cover located on the bottom panel and take off the cover.



- The battery holder is attached to the slot cover as indicated in the image. Remove the screw on the cover and take out the battery holder.



3. Pull the two latches on the battery holder outwards to open the battery holder and take out the battery using a screwdriver.



4. Replace the battery with a new one and close the holder latches.
5. Close the battery holder (black cover and metal plates) and secure them with a screw.
6. Reattach the battery holder to the slot cover and place it back in the slot
7. Replace the slot cover and secure it with two screws.

NOTE If you have unplugged the battery connector, do remember to plug it back in before placing the battery holder back in the slot.



CAUTION

Replace batteries with correct types. Contact Moxa's technical support staff for assistance, if needed.



WARNING

Risk of Explosion - Battery

Dispose of used batteries appropriately.

To avoid risk of fire and burns, do not short the external contacts, disassemble, crush, or puncture the batteries or dispose of them in fire or water.

限用物質含有情況標示聲明書

Declaration of the Presence Condition of the Restricted Substances Marking

設備名稱：嵌入式電腦 型號（型式）：V2200D Series						
(產品型號：V2200D-AL2-CT-T, V2200D-AL4-CT-T)						
Equipment name		Type designation (Type)				
單元 Unit	限用物質及其化學符號					
	Restricted substances and its chemical symbols					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr ⁺⁶)	多溴聯苯 Polybrominat ed biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
外殼	○	○	○	○	○	○
印刷電路板 及其電子組 件	—	○	○	○	○	○
電纜/電線/ 連接器	—	○	○	○	○	○
機械部件- 金屬	—	○	○	○	○	○
機械部件- 非金屬	○	○	○	○	○	○
備考 1. “超出 0.1 wt %”及 “超出 0.01 wt %”係指限用物質之百分比含量超出百分比含量基準值。 Note 1: “Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.						
備考 2. “○”係指該項限用物質之百分比含量未超出百分比含量基準值。 Note 2: “○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.						
備考 3. “-”係指該項限用物質為排除項目。						

Note 3: The “-” indicates that the restricted substance corresponds to the exemption.



WARNING

警告：為避免電磁干擾，本產品不應安裝或使用於住宅環境。

警告：更換不正確的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。

製造商：四零四科技股份有限公司

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