DA-920E Series
Quick Installation Guide

Version 1.1, June 2026

Technical Support Contact Information
www.moxa.com/support

P/N: 1802009200011

Overview

DA-920E is a 2U rack mountable, fanless industrial server built for harsh environments, virtualized protection, automation, and control (vPAC), and substation automation. The computer is compliant with IEC 61850-3, IEEE 1613, and IEC 60255 requirements. Powered by Intel® Xeon® D processor with up to 256 GB ECC memory, the DA-920E delivers high-performance, deterministic reliability, and is optimized for virtualization applications. With single or dual wide-range PSUs and RAID storage, the DA-920E ensures reliable computing in modern substations.

Package Checklist

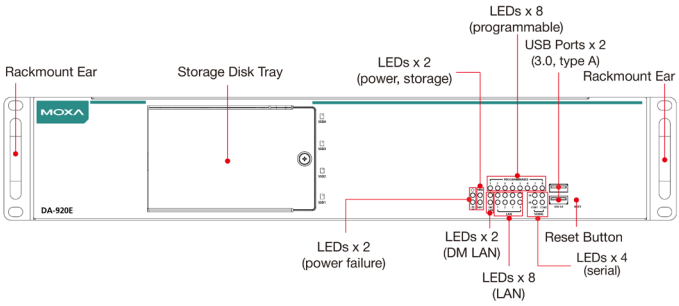
Each basic system model is shipped with the following standard items:

- DA-920E rackmount computer
- Rack-mounting kit
- USB dongle kit
- 1 or 2 terminal blocks for the power supply
- 1 terminal block for the COM port
- 1 terminal block for the relay output
- A pack of thermal pads for the M.2 storage and memory modules
- A pack of 4 backup screws for memory modules
- A pack of 16 screws for mounting the SSD
- Quick Installation Guide
- Warranty card

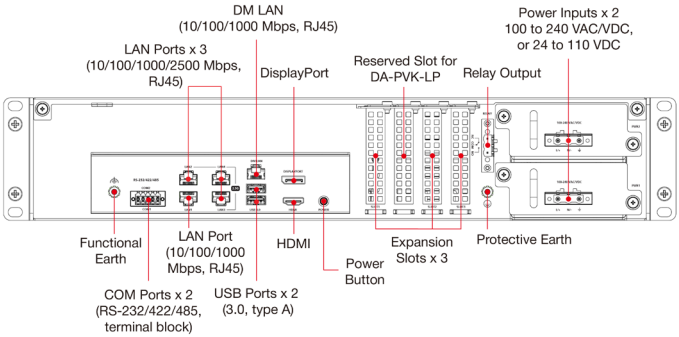
NOTE Notify your sales representative if any of the above items are missing or damaged.

Panel Layouts

Front View

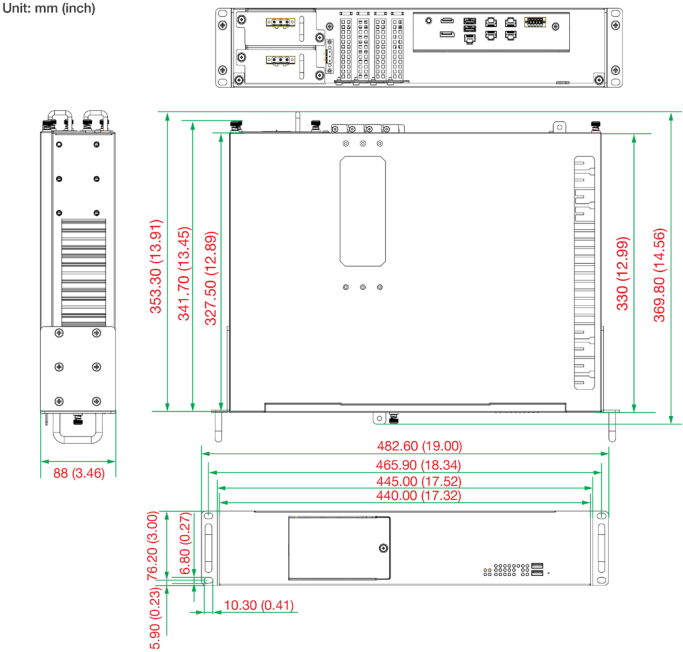


Rear View



Dimensions

Unit: mm (inch)



LED Indicators

The front panel is equipped with 40 LED indicators. Detailed descriptions of the LEDs are provided in the following table:

LED	Status	Function	
Power	Green	Power is on	
	Off	No power	
Storage	Yellow	Blinking	Data is being written to or read from the storage
	Off	No activity	
PWR1	Off	The first power supply is operational	
	Red	Error in the first power supply	
PWR2	Off	The second power supply is operational	
	Red	Error in the 2nd power supply (only applicable to models with dual power supplies)	
LAN 1 (shared LAN)	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	
LAN 2 to 4	Green	Steady on	10/100/1000 Mbps Ethernet link
		Blinking	Data is being transmitted or received
	Yellow	Steady on	2500 Mbps Ethernet link
		Blinking	Data is being transmitted or received
	Off	No Ethernet connection	
LAN DM (dedicated management LAN)	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	
Serial Port P1/P2	Green	Tx: Serial data is being transmitted	
	Yellow	Rx: Serial data is being received	
Programmable LEDs 1 to 8	Green	Steady on	Can be used to indicate statuses or for debugging, as defined by users.
		Blinking	

Mounting the DA-920E on to a Rack

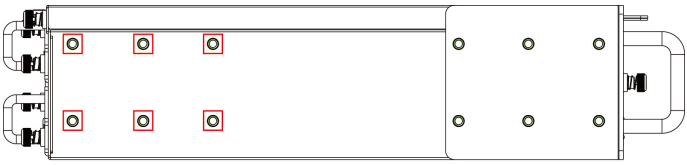
The DA-920E comes with a rack-mounting kit that includes two rackmount ears and twelve screws.

To attach the rackmount ears to the DA-920E, place a rackmount ear on one side of the front-panel and secure it using 6 screws (included in the package) as shown in the following image. Attach the other mounting ear on the other side of the front panel in a similar manner.

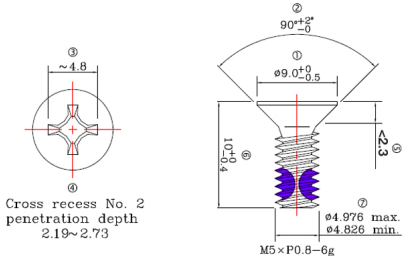
You can choose either the front-mounting or rear-mounting method to mount the computer.

Front Mounting

Rear Mounting



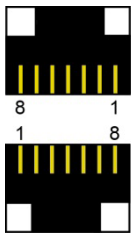
The twelve screws included in the package are of the following specifications:



Ethernet Ports

The DA-920E is equipped with one 10/100/1000 Mbps RJ45 Ethernet port (LAN1) and three 10/100/1000/2500 Mbps RJ45 Ethernet ports (LAN2 to LAN 4), and one 10/100/1000 Mbps dedicated management LAN (DM LAN) port for out-of-band-management. The pin assignments are listed in the following table:

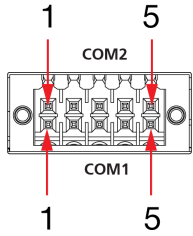
Pin	10/100 Mbps	1000/2500 Mbps
1	Tx+	TRD(0)+
2	Tx-	TRD(0)-
3	Rx+	TRD(1)+
4	–	TRD(2)+
5	–	TRD(2)-
6	Rx-	TRD(1)-
7	–	TRD(3)+
8	–	TRD(3)-



Serial Ports

The DA-920E comes with two software-selectable RS-232/422/485 serial ports on the rear panel. The ports use terminal-block connectors. Refer to the following table for the pin assignments:

Pin	RS-232	RS-422	RS-485 (2-wire)	RS-485 (4-wire)
1	TxD	Tx+	–	Tx+
2	RxD	Tx-	–	Tx-
3	RTS	Rx+	Data+	Rx+
4	CTS	Rx-	Data-	Rx-
5	GND	GND	GND	GND



Connecting the Power

The DA-920E features dual power inputs via a terminal block located on the rear panel. To establish a power connection, attach the power cord wires to the corresponding screws and secure them. Upon successful power connection, the Power LED will illuminate indicating that power is being supplied to the DA-920E. Subsequently, the PLED 1 (Programmable LED 1) will turn green for 20 seconds and then turn off. The BIOS will initialize the flash disk module, resulting in the storage LED blinking. The operating system boot-up process typically takes between 3 to 4 minutes to complete. The rear panel is equipped with a power button for powering the computer on from sleep or hibernate mode.

Model/ Power Modules	DA-PWR-200-HV	DA-PWR-200-WV
DA-920E-X08-H	1	–
DA-920E-X08-HH	2	–
DA-920E-X08-HW	1	1
DA-920E-X08-W	–	1
DA-920E-X08-WW	–	2

ATTENTION

Before connecting the DA-920E computer to an AC/DC power source, ensure that the AC/DC power source voltage is stable.

The wiring for the input terminal block shall be installed by qualified and experienced professionals and use the following:

- Wire type: Cu, FW2
- Wire gauge: 16 to 12 AWG (1.5 to 4 mm^2
- Recommended torque: 5.0 kg-cm (4.34 lb-in)

Use only one conductor per clamping point between the AC power source and the power input.

Wiring the Power Inputs and Powering the Computer

To establish a power connection, insert the power cord wires in the correct terminals and tighten the screws to secure the wires. Refer to the following diagrams and table for a detailed description of the power input wiring terminals.

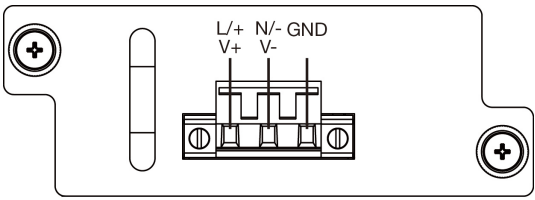
NOTE The PWR1 and PWR2 LEDs for power failure detection on the front panel will turn on if the computer loses power. For details on power LED behavior, refer to the *LED Indicators* section.

Installing/removing the Hot-swappable Power Supplies

To install the hot-swappable power supply, insert it into either the PWR1 or PWR2 slot. Ensure that it is inserted all the way to the end of the slot. Secure the power supply by fastening screws on both sides.

To remove the power supply, first unfasten the two screws. Then, grasp the handle of the power supply and gently pull it out of the slot.

Power Supply: DA-PWR-200-HV, DA-PWR-200-WV

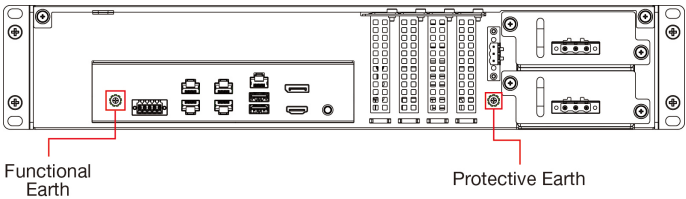


Terminal Number	Description
L/+	PWR line
N/-	PWR neutral
GND	Ground

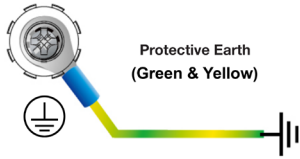
For details on power connection and surge protection, refer to the *DA-920E Hardware User Manual*.

Grounding the Chassis

A protective earth (PE) grounding connector is located on the rear panel of the DA-920E computer.



Connect the chassis grounding connector to the PE connector, which in turn must be connected to the earth ground using the green and yellow grounding wire as shown in the following figure:



ATTENTION

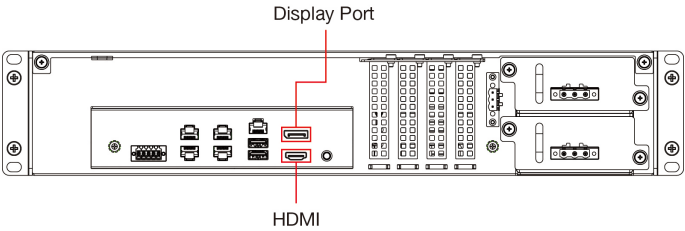
If protective earthing is used as a safeguard, the instructions shall require the connection of the equipment protective earthing conductor to the installation protective earthing conductor (for example, using a power cord connected to a socket-outlet with an earthing connection).
The grounding cable should be of the following specifications:

- Wire gauge: 16 to 12 AWG (1.5 to 4 mm^2
- Recommended torque: 5.0 kg-cm (4.34 lb-in)

Connecting the Display

The DA-920E comes with one DisplayPort with 1920 x 1200 full HD resolution at 60 Hz and one HDMI port with 1920 x 1080 full HD resolution at 60 Hz. Both display ports are located on the rear panel.

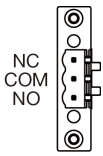
DisplayPort is the default display interface.



NOTE For optimal video streaming reliability, we recommend using premium certified HDMI cables. If you want to use a DisplayPort-to-HDMI converter, an active DisplayPort-to-HDMI adapter, such as Aten VC986, is recommended.

Relay Output

The DA-920E includes a relay output located on the rear panel. The pin definitions of the relay output connectors are shown in the figure.

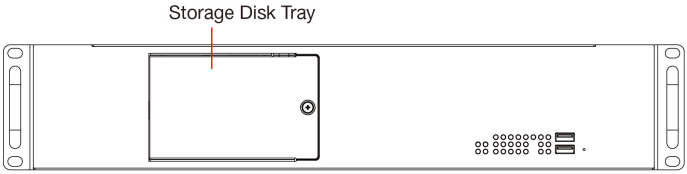


USB Ports

The DA-920E comes with 2 USB 3.0 ports on the front panel and 2 USB 3.0 ports on the rear panel. The USB ports can be used to connect peripherals, such as flash drives, for expanding the system's storage capacity.

Installing Storage Disks

The DA-920E is provided with four sockets for storage disks, enabling installation of up to four 2.5" SSDs. To access the sockets, remove the storage cover on the front panel by unfastening the screw. Pull out the SSD tray and install the SSD disk on the tray. The screws for the SSD tray are included in the product box a separate small package. For detailed instructions, refer to the *DA-920E Hardware User Manual*.



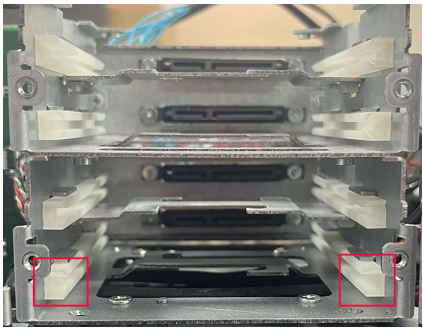
The SSD storage sequence starts from the bottom slot 1 and continues to the top slot 4.

To install the SSD storage, do the following:

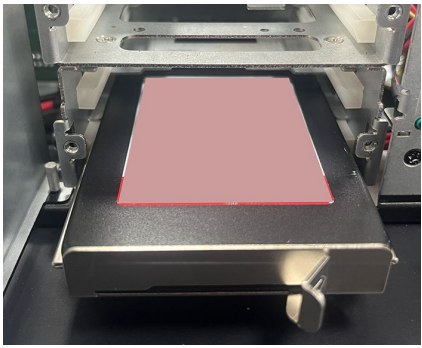
1. Place the SSD storage on the installation tray and secure it with four screws on the back.

2. Open the storage disk tray door and locate the slot of the tray.

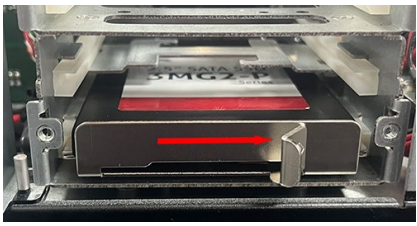
Each slot has plastic rails on either sides to enable the storage tray to slide in.



3. Insert the storage tray onto to the rail of slot 1.



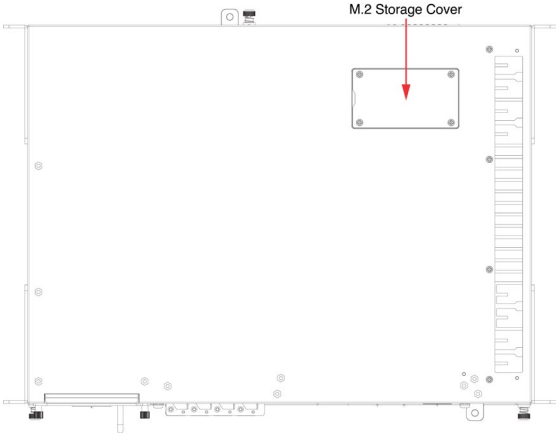
4. Push the handler to the right to secure the tray in place.



To remove the storage tray, push the handler to the left and pull out the tray.

Installing the M.2 Storage Module

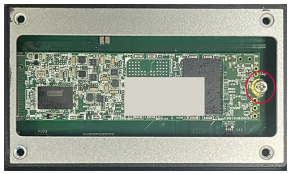
The DA-920E comes with 1 M.2 M-key 2280 slot on the bottom side. To access the slot, remove the storage cover by unfastening the four screws as indicated in the following figure:



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

1. Insert the M.2 module into the slot.

2. Fasten the screw on the module to secure it to the slot.

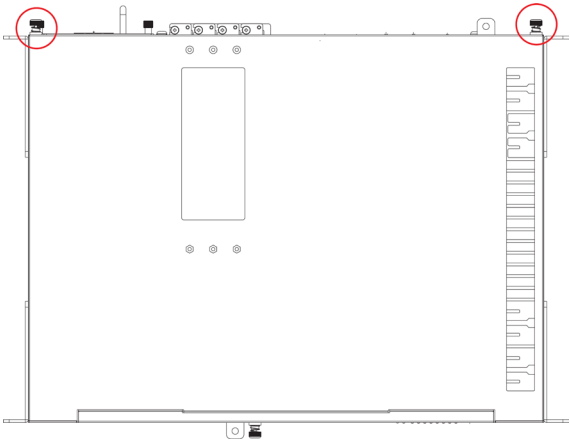


3. Paste the thermal pad on the module.

4. Reattach the cover and fasten the four screws.

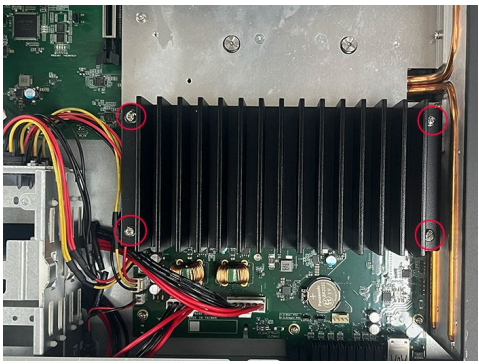
Installing the Memory Module

To access the memory slots, unfasten the two hand-rotated screws and remove the cover of the computer.

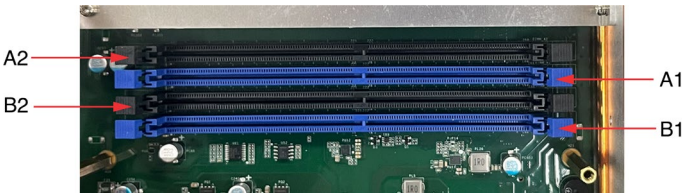


To install the memory module, do the following:

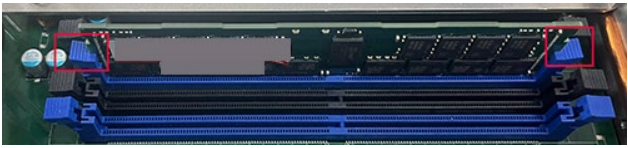
1. Remove the computer cover and locate the black heat sink. The memory slots are located under the black heat sink.
2. Unfasten the four screws on the heat sink and remove it.



There are four memory slots—A1, B1, A2, and B2. Install your first memory module in the A1 slot and the second one in the B1 slot. For the second set, install the first module in the A2 slot and the last one in the B2 slot.



3. Insert the module in the slot and push downwards until the latches on two sides are secured.



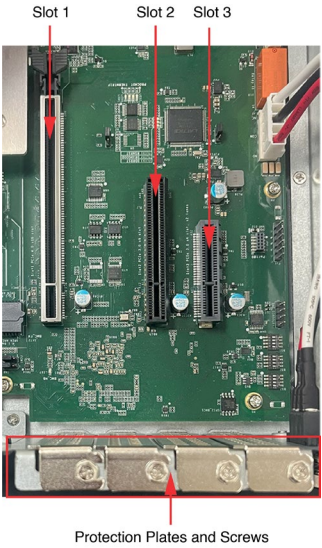
4. Replace the heat sink and fasten the four screws.
5. Attach the outer cover of the computer and secure it.

NOTE The heat sink is designed to fit in a certain direction for an error-proof installation. If you has an issue installing the heat sink, adjust the direction and try again. Do not force the heat sink into the installation space.

Installing Expansion Modules

The DA-920E is equipped with three standard PCIe slots located on the rear of the computer for installing expansion modules. The slots also support installation of low-profile standard PCIe cards, providing flexibility for extending customized interfaces. The following table lists the interfaces supported on the three slots:

Slot 1	Slot 2	Slot 3
PCIe x16	PCIe x8	PCIe x4 (2-lane)



WARNING

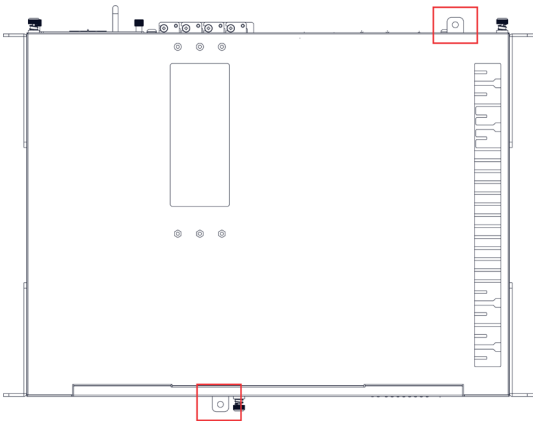
Power off the computer before installing the expansion modules to avoid damage to the computer.

To install a PCIe card into a slot, do the following:

1. Unfasten the screw and remove the protection plate.
2. Insert the PCIe card into the slot and fasten the screw to secure it.

Hardware Security and Installing Locks

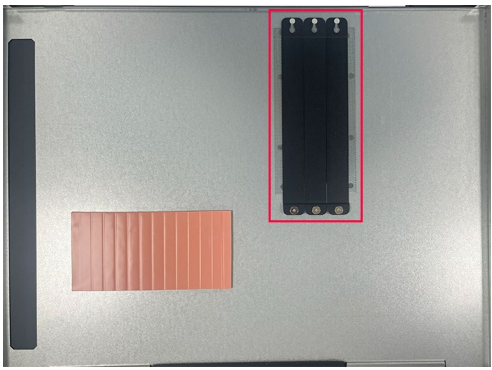
The DA-920E comes with two hardware security mechanisms located on the front panel and the rear panel as indicated in the following figure:



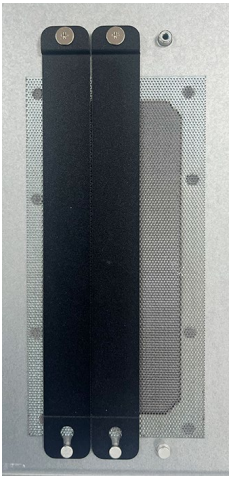
The one in the front is designed to protect the storage tray from being replaced or stolen, while the rear one is to protect the cover from being opened. Install locks on the apertures of protect the computer from being tampered.

Ventilation

The DA-920E comes with three vents located on the top as shown in the following figure. By default, each vent is covered up with a plate secured by two screws, installed against the inner side of the computer cover.



To clear a vent, remove the plate covering it by unfastening the two screws.



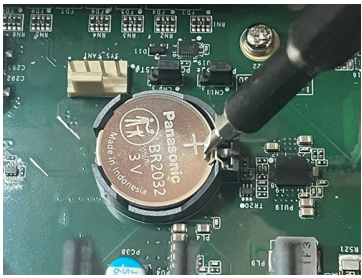
RTC Battery

WARNING

There is a risk of explosion if the wrong type of battery is used. To avoid this potential danger, always be sure to use the correct type of battery. Contact the Moxa RMA service team if you need to replace your battery. Dispose of used batteries according to the instructions on the batteries.

To replace the RTC battery, do the following:

1. Use a screwdriver to push the right latch of the battery slot outwards.



2. Remove the old battery and insert the new one.

警告

更換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。

警告

為避免電磁干擾，本產品不應安裝或使用於住宅環境。

Specifications

Input Rating	**DA-920E-X08-H(H):** 100 to 240 VAC, 50/60 Hz, 2.22 to 0.92 A or 100 to 240 VDC, 2.20 to 0.92 A (for each power supply) **DA-920E-X08-W(W):** 24 to 110 VDC, 9.02 to 1.97 A (for each power supply) **DA-920E-X08-HW:** 100 to 240 VAC, 50/60 Hz, 2.22 to 0.92 A or 100 to 240 VDC, 2.20 to 0.92 A & 24 to 110 VDC, 9.02 to 1.97 A
Input Voltage	100 to 240 VAC 100 to 240 VDC 24 to 110 VDC
Operating Temperature	-25 to 55°C (-13 to 131°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)

For a full set of specifications, refer to the Moxa website.

BSMI—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：機架式電腦 Equipment name	型號（型式）：DA-920E-X08-H, DA-920E-X08-HH, DA-920E-X08-HW, DA-920E-X08-W, DA-920E-X08-WW 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 Polybrominated 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.

製造商資訊：

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