

UC-8600A Series Quick Installation Guide

Version 1.0, February 2026

Technical Support Contact Information
www.moxa.com/support

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P/N: 180208600001



Overview

The UC-8600A Series Arm-based box-type computing platform is designed for embedded data-acquisition and edge-computing applications. The computers come with four 10/100/1000 Ethernet ports, eight RS-232/422/485 serial ports, four DI/DO channels, and two CAN ports. The UC-8600A provides robust connectivity for a wide variety of field devices. A wireless expansion slot supporting Wi-Fi 6 and cellular enables reliable wireless communication for remote applications. The system also supports storage expansion via an M.2 M-key socket for SSD and a MicroSD card slot. These versatile communication and expansion capabilities allow users to efficiently deploy the UC-8600A Series in diverse industrial environments.

Package Checklist

Before installing the UC-8600A Series, verify that the package contains the following items:

- 1 x UC-8600A Series embedded computer
- 1 x Quick installation guide (printed)
- 1 x Warranty card (printed)



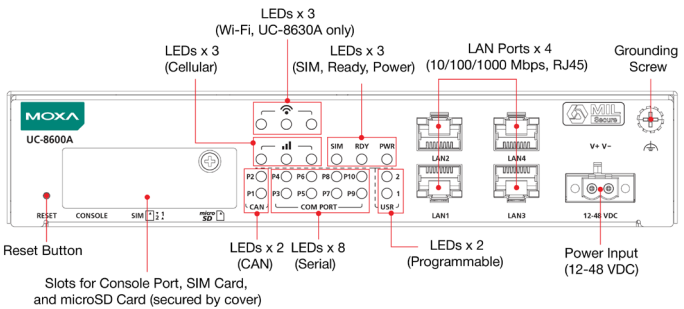
IMPORTANT!

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

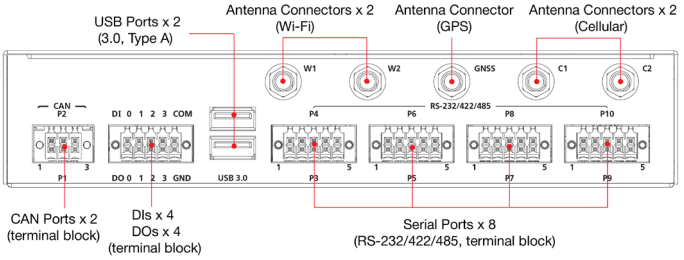
Panel Layouts

The panel layouts for the UC-8600A are shown in the following sections:

Front View

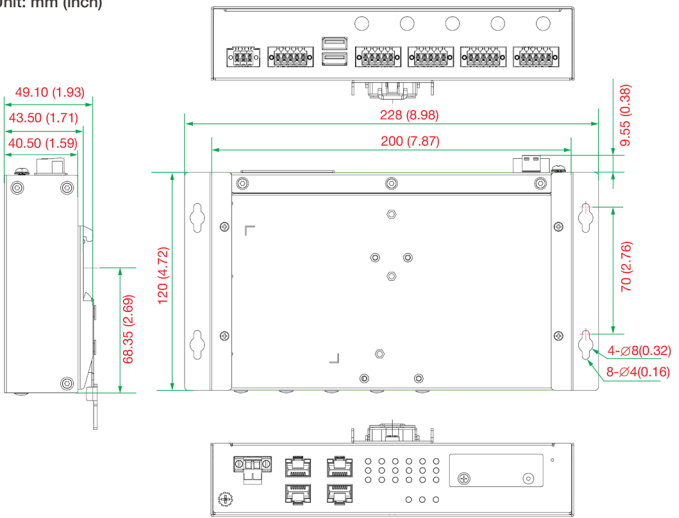


Rear View





Dimensions

Unit: mm (inch)



LED Indicators

LED Name	Status	Function
PWR	Green	Power is on
	Off	No power
READY	Green	Steady on: The device has successfully booted and all services are initialized
		Blinking: Device is in the process of booting up
	Red	Device boot failure, which occurs if any service fails to initialize
SIM	Green	Steady on: SIM2 is the active slot, with a functional SIM card inserted
	Yellow	Steady on: SIM1 is the active slot, with a functional SIM card inserted
	Off	The device remains in the bootloader stage and has not yet booted into the kernel

LED Name	Status	Function
USR1/USR2	Green/ Yellow	Steady on/blinking off: User programmable
 (Cellular Signal Strength)	Green	Three LEDs steady on: Good or excellent Two LEDs steady on: Fair One LED steady on: Poor One LED blinking: Very poor
	Off	Disconnected
 (Wi-Fi Signal Strength, UC-8630A only)	Green	Three LEDs steady on: Good, RSSI \geq -70 dBm Two LEDs steady on: Fair, $-70 \text{ dBm} > \text{RSSI} \geq -90 \text{ dBm}$ One LED steady on: Poor, RSSI $<$ -90 dBm One LED blinking: Signal is very poor
	Off	Disconnected
LAN1 to LAN4 (RJ45 connector)	Green	Steady on: 10M/100M link established Blinking: Receiving or transmitting data
	Yellow	Steady on: 1000M link established Blinking: Receiving or transmitting data
	Off	No Ethernet connection
P1/P2 CAN Ports	Light Yellow	Blinking: CAN port is transmitting data
	Yellow	Blinking: CAN port is receiving data
	Off	CAN port is not transmitting or receiving data
P3/P10 Serial Ports	Green	Blinking: Serial port is transmitting data
	Yellow	Blinking: Serial port is receiving data
	Off	Serial port is not transmitting or receiving data

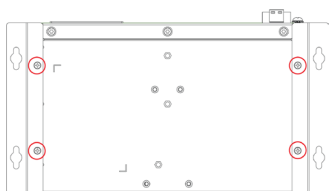
Mounting the UC-8600A Series

Wall Mounting

The UC-8600A Series comes with a wall-mounting kit in the product package. To install the computer on to a wall or a cabinet, do the following:

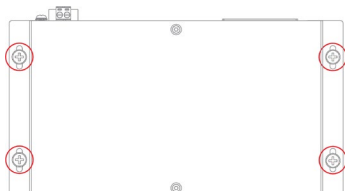
Step 1

Use the four screws (M3 x 5 mm) in the package to attach the wall-mounting brackets to the bottom of the computer.



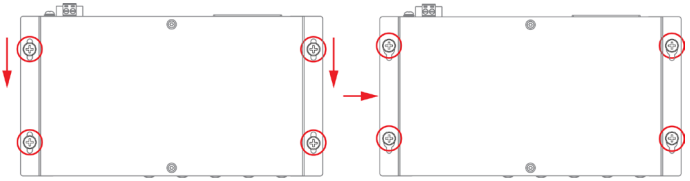
Step 2

Use another four screws (M3 x 6 mm, not included in the package) to mount the computer on to a wall or in a cabinet.



Step 3

Pull the mounted computer downwards to ensure the computer has been securely mounted.



Recommended Fastening Torque: 4.5 ± 0.5 kgf-cm.

- NOTE**
- Test the screw head and shank size by inserting the screws into one of the keyhole shaped apertures of the wall-mounting plates before attaching the plate to the wall.
 - Do not drive the screws in all the way—leave a space of about 2 mm to allow room for sliding the wall mount panel between the wall and the screws.

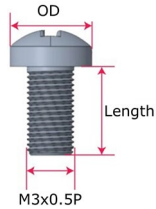
The additional four screws (M3 x 6 mm) are not included in the wall-mounting kit package and must be purchased separately. The specifications of the screws are as follows:

Head Type: Pan/Doom

Head Diameter $5.2 \text{ mm} < \text{OD} < 7.0 \text{ mm}$

Length $> 6 \text{ mm}$

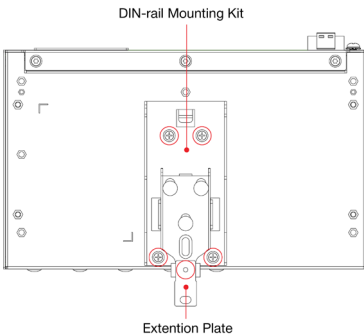
Thread Size: M3 x 0.5P



DIN-rail Mounting (optional)

The UC-8600A also provides an optional DIN-rail mounting kit that needs to be purchased separately. Contact Moxa's sales representative for details.

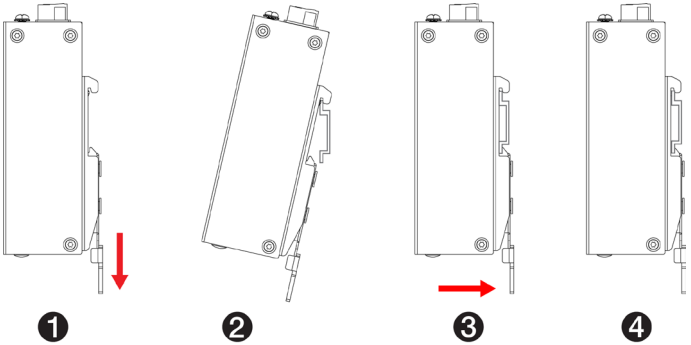
To install the DIN-rail mounting kit, place the DIN-rail mounting kit at the center of the bottom part of the computer and secure it with the four screws included in the package. Additionally, fasten the screw on the extension plate.



To mount the UC-8600A Series on to a DIN rail, ensure that the stiff metal spring of the mounting kit is facing upwards and follow these steps.

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

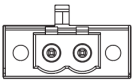
Once the computer is mounted properly, you will hear a click and the slider will rebound back into place automatically.



Connector Descriptions

Power Connector

v+ v-



12-48 VDC

Connect the power jack to the UC-8600A Series' DC terminal block (located on the front panel), and then connect the power adapter. It takes about 10 to 30 seconds for the system to boot up. Once the system is ready, the Power LED will light up.



ATTENTION

The wiring for the input terminal block should be installed by a skilled person. The wire type should be copper (Cu), wire size should be 12 AWG to 28 AWG, and a torque of 0.5 n-m should be used for V+, V-, and GND connections. The wire size of the power input and earthing conductor should be the same.



ATTENTION

This product is intended to be supplied by a UL Listed Power Unit marked **LPS** (Limited Power Source). The ratings for the different models in the series are as follows:

- UC-8630A-T: 1.58 A @ 12 VDC = 16 W, 0.43 A @ 48 VDC = 17 W
- UC-8620A-T: 1.34 A @ 12 VDC = 13 W, 0.38 A @ 48 VDC = 15 W

Minimum Tma = 75°C

If you need further assistance with purchasing the power source, please contact a Moxa representative.



ATTENTION

Altitude Requirement

This product and the listed power supply (LPS) adapter(s) used with it are UL-certified for operation at 2,000 meters. Although the product is tested at 5,000 meters, it is not UL-certified for this altitude. For reliable performance of the product in high-altitude installations of over 2,000 meters (e.g., 5,000 meters), use a suitable adapter that is tested and certified at the altitude (i.e., 5,000 meters).

Grounding the Computer

There is a grounding connector located on the upper right corner of the front panel of the computer. Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI).



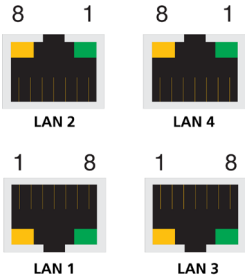
ATTENTION

This product is intended to be mounted to a well-grounded mounting surface such as a metal panel and the power cord adapter should be connected to a socket outlet with an earthing connection. Use the green-and-yellow cable type with a minimum American Wire Gauge (AWG) 14 (2.5 mm²) for grounding.



Ethernet Ports

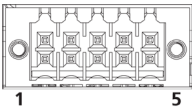
The four 10/100/1000 Mbps Ethernet ports (LAN1 to LAN4) come with RJ45 connectors. The pin assignment is listed in the following table:



Pin	10/100 Mbps	1000 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

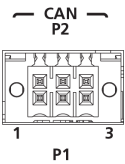
The eight serial ports (P3 to P10) use terminal-block interfaces. Each port can be configured by software for RS-232, RS-422, or RS-485. The pin assignment is listed in the following table:



Pin	RS-232	RS-422/ RS-485 4w	RS-485 2w
1	TXD	TDP	-
2	RXD	TDN	-
3	RTS	RDP	DP
4	CTS	RDN	DN
5	GND	GND	GND

CAN Ports

Two (P1, P2) CAN ports with DB9 interfaces are located on the bottom panel. The pin assignment is shown in the following table:

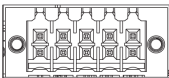


Pin	Definition
1	CAN_H
2	CAN_L
3	GND

Digital Inputs/Outputs

The four DI/DO channels are located on the bottom panel of the computer and use terminal-block interfaces. The pin diagram and details are listed in the following table:

DI 0 1 2 3 COM



DO 0 1 2 3 GND

Digital Inputs

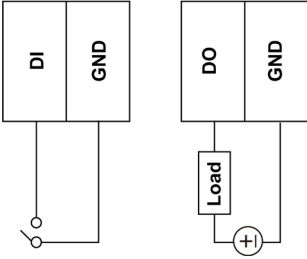
Dry Contact:
Logic 0: Close to GND
Logic 1: Open

Digital Outputs

Current Rating:
200 mA per channel
Voltage:
0 to 30 VDC

Refer to the following diagram for the wiring method:

DI Dry Contact DO Contact Sink



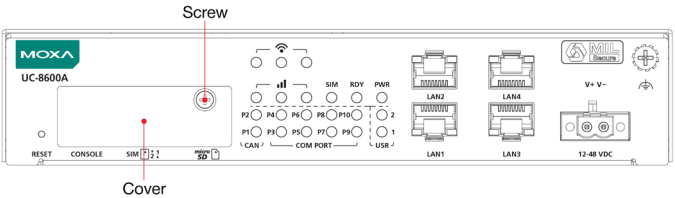
USB Port

The two USB ports are type-A USB 3.0 and can be used to connect USB storage devices or type-A USB compatible devices. Both ports are located on the rear panel of the computer.

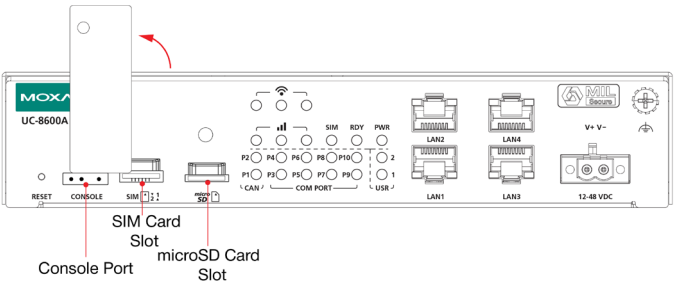
NOTE The peripheral devices installed are recommended to be placed at least 25 mm from the UC-8600A computer.

Console Port, SIM Cards, and microSD Card

The UC-8600A comes with a console port, a SIM card tray that can install two SIM cards, and a microSD socket all located on the front panel and secured by a cover.



Access to these interfaces is through a slot cover. First unfasten the screw securing the cover and pull up the cover to the upright position.



MicroSD Card Socket

The UC-8600A comes with a microSD socket for storage expansion. Insert a microSD card into the socket to get started. You will hear a click when the card is in place. To remove the card, push the card in before releasing it.

SIM Card Socket

The UC-8600 computers come with a nano-SIM card tray that can install two SIM cards for cellular communication.

To install the SIM cards, do the following:

Step 1

Push in the SIM card tray inwards and then release it to eject the tray. Pull out the tray.



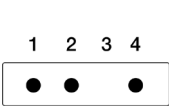
Step 2

Install the SIM cards and insert the tray back into the socket. The SIM card tray can hold two SIM cards, one on each side. Install the first SIM card on the front side, and the second SIM card on the rear side.



Console Port

The console port is an RS-232 port. You can connect a 4-pin pin header cable and use the port for debugging issues or system image upgrades.



Pin	Signal
1	TxD
2	RxD
3	NC
4	GND

Real-time Clock

The real-time clock in the UC-8600A Series is powered by a lithium battery. We strongly recommend that you do not replace the lithium battery without the help of a Moxa support engineer. If you need to change the battery, contact the Moxa RMA service team.



ATTENTION

There is a risk of explosion if the battery is replaced with an incorrect type of battery. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Installing the Wi-Fi and LTE Modules

The UC-8600A offers Wi-Fi (UC-8630A only) and LTE modules for reliable wireless communications. For details on how to install the modules, refer to the instructions in the *UC-8600A Series Hardware User Manual*.

Accessing the UC-8600A Series Using a PC

You can use a PC to access the UC-8600A Series by one of the following methods:

- A. Through the serial console port with the following settings:
Baudrate=115200 bps, **Parity**=None, **Data bits**=8, **Stop bits**=1, **Flow Control**=None



ATTENTION

Remember to choose the **VT100** terminal type. Use the console cable to connect a PC to the UC-8600A Series's serial console port.

- B. Using SSH over the network.

Refer to the following IP addresses and login information:

	Default IP Address	Netmask
LAN 1	Assigned by DHCP server. Link-local IP addresses will be assigned when DHCP server is not available	255.255.255.0
LAN 2	192.168.4.127	255.255.255.0
LAN 3	192.168.5.127	255.255.255.0
LAN 4	192.168.6.127	255.255.255.0

Login: moxa

Default Password: moxa

Specifications

Input Current	UC-8620A-T: 1.34 A @ 12 V UC-8630A-T: 1.58 A @ 12 V
Input Voltage	12 to 48 VDC
Power Consumption	UC-8620A-T: 15 W UC-8630A-T: 17 W
Operating Temperature	Without Wireless and M.2 M-key SSD UC-8620A-T: -40 to 75°C UC-8630A-T: -40 to 70°C With LTE and Wi-Fi -30 to 65°C With Wi-Fi (no LTE): -30 to 70°C With LTE only (no Wi-Fi): -40 to 70°C
Storage Temperature	-40 to 85°C (-40 to 185°F)

For detailed specifications, refer to the datasheet or product page.

Certification Information

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：嵌入式平台 型號(型式)：UC-8620A-T, UC-8630A-T, UC-8632-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。

製造商：四零四科技股份有限公司

地址：桃園市八德區和平路 1111 號

服務電話：+886-3-273-7575

KC Statement

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상호: Moxa Inc.

기자재 명칭: Arm-based Platform

모델명: UC-8620A-T, UC-8630A-T, UC-8632A-T

제조사 및 제조국가: Moxa Inc. / 대만