UC-3400A Series
Quick Installation Guide

Version 1.2, May 2025

Technical Support Contact Information
www.moxa.com/support

P/N: 1802034000003

Overview

Moxa's UC-3400A Series computers can be used as edge gateways in the field for data pre-processing and transmission, as well as for other embedded data-acquisition applications. The series includes a diverse set of models, each supporting different wireless options and protocols.

The UC-3400A's advanced heat-dissipation design makes it suitable for use in temperatures ranging from -40 to 70°C. In fact, the Wi-Fi and LTE connections can be used simultaneously in both cold and hot environments, allowing you to maximize data pre-processing and transmission capabilities of your applications in harsh operating environments. The UC-3400A comes equipped with Moxa Industrial Linux, a high-performance industrial-grade Linux distribution with long-term support that is developed by Moxa.

Package Checklist

Before installing the UC-3400A, verify that the package contains the following items:

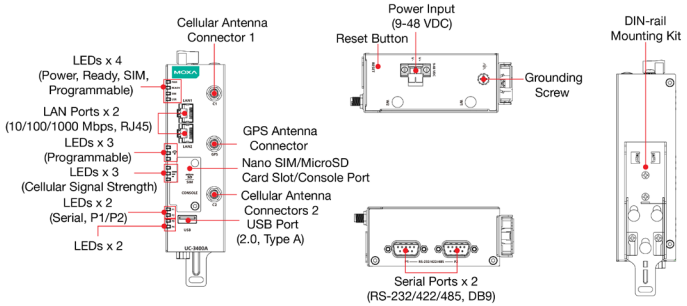
- 1 x UC-3400A Arm-based computer
- 1 x Quick installation guide (printed)
- 1 x Warranty card

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

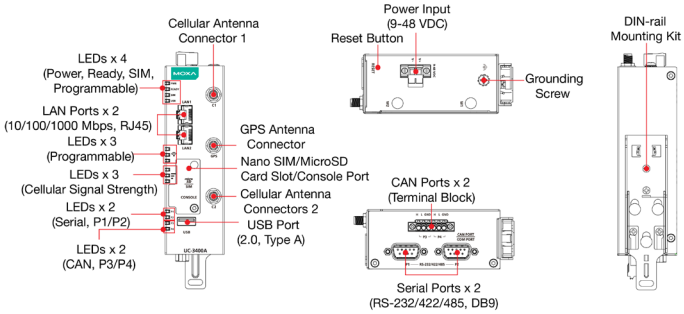
Panel Layouts

The following figures show the panel layouts of the UC-3400A models:

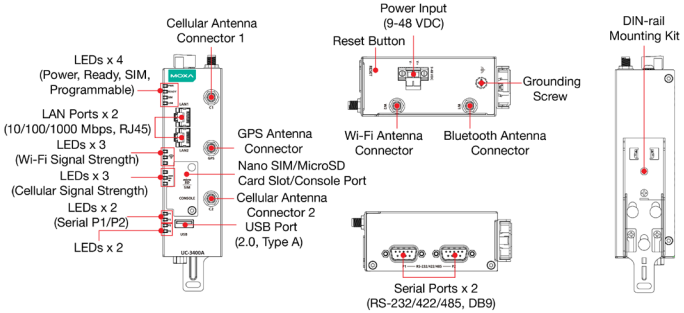
UC-3420A-T-LTE



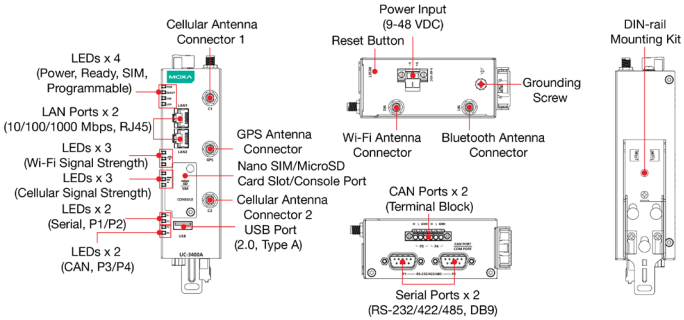
UC-3424A-T-LTE



UC-3430A-T-LTE-WiFi

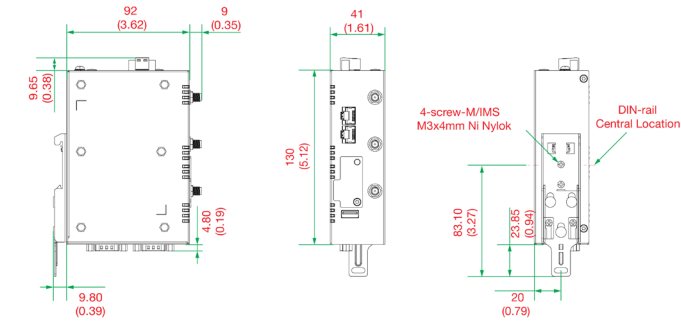


UC-3434A-T-LTE-WiFi



Dimensions

Unit: mm (inch)



LED Indicators

LED Name	Color	Status	Function
PWR	Green	Steady on	Power is on
	Off		Power is off
READY	Green	Steady on	System is ready for use
		Blinking	System is booting up
	Red	Steady on	System initialization failed
	Off		System is still in the bootloader stage, kernel not up yet
SIM	Green	Steady on	SIM card inserted AND SIM2 is the active slot
	Yellow	Steady on	SIM card inserted AND SIM1 is the active slot
	Off		SIM card not detected
USR	Green/ Yellow	Steady on/blinking /off	User programmable
LAN1/ LAN2	Green	Steady	10/100 Mbps link established
		Blinking	Receiving or transmitting data
	Yellow	Steady	1000 Mbps link established
		Blinking	Receiving or transmitting data
	Off		Ethernet port is not active
(Wi-Fi Signal Strength)	Green	3 LEDs Steady on	Signal strength at 61% to 100%
		2 LEDs Steady on	Signal strength at 41% to 60%
		1 LED Steady on	Signal strength at 21% to 40%
		1 LED Blinking	Signal strength at 0% to 20%
	Off		No signal
	*For UC-3420 and UC-3424 models, the WI-FI signal strength LEDs are user programmable.		

LED Name	Color	Status	Function
(Cellular Signal Strength)	Green	3 LEDs Steady on	Signal is good
		2 LEDs Steady on	Signal is moderate/ok
		1 LED Steady on	Signal is poor
		Off	No signal
P1/P2 (Serial Port)	Green	Blinking	Serial port is transmitting data
	Yellow	Blinking	Serial port is receiving data
	Off		Serial port is not active
P3/P4 (CAN Port)	Light Yellow	Blinking	CAN port is transmitting data
	Yellow	Blinking	CAN port is receiving data
	Off		CAN port is not active

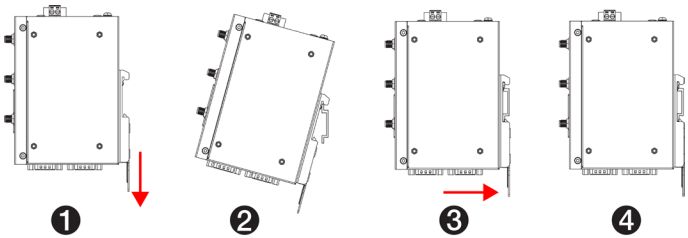
Installing the UC-3400A

The UC-3400A can be mounted on to a DIN rail or on to a wall. The DIN-rail mounting kit is attached by default. To order a wall-mounting kit, contact a Moxa sales representative.

DIN-rail Mounting

To mount the UC-3400A on to a DIN rail, do the following:

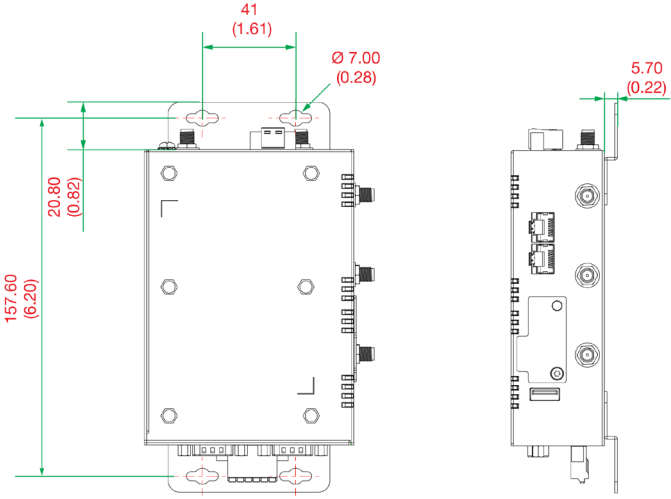
1. Pull down the slider of the DIN-rail bracket located at the back of the unit.
2. Insert the top of the DIN rail into the slot just below the upper hook of the DIN-rail bracket.
3. Latch the unit firmly on to the DIN rail as shown in the illustrations below.
4. Once the computer is mounted properly, you will hear a click and the slider will rebound back into place automatically.



Wall Mounting (optional)

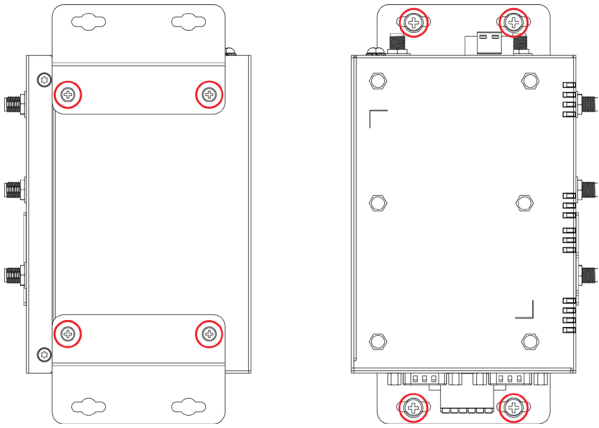
The UC-3400A can also be wall mounted. The wall-mounting kit needs to be purchased separately. Refer to the product datasheet for information on the wall-mounting kit to be purchased. For the mounting dimensions, refer to the figure below:

Unit: mm (inch)



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

1. Attach two wall-mounting brackets with four **M3 x 5 mm** screws on the right side panel of the computer as indicated in the figure.
2. Use another four screws to fasten the computer on to a wall or a cabinet.

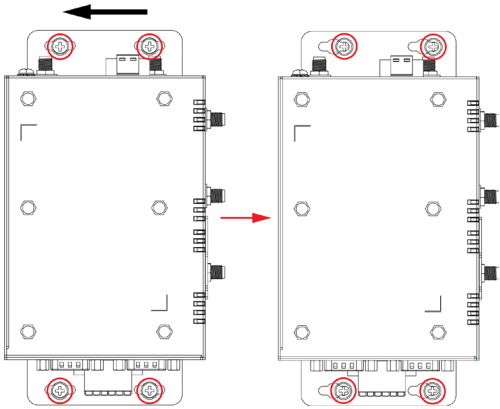


Recommended Torque: 4.5±0.5kgf-cm

The additional four screws are not included in the wall-mounting kit and must be purchased separately. Refer to the following specifications for the additional screws to be purchased.

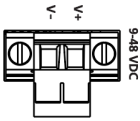
Head Type: Pan/Doom
Head Diameter:
5.2 mm < Outer Diameter (OD) < 7.0 mm
Length: > 6 mm
Thread Size: M3 x 0.5P

3. Push the computer to the left to ensure the computer is securely fixed to the mounting surface.



Connector Descriptions

Power Connector



Connect the power jack to the terminal block located on the top panel, and then connect the power adapter to the power jack. Use a 12 to 24 AWG wire and secure the plug by screws with a minimum torque value of 0.5 N-m (4.4253 lb-in). Stripping length is recommended to be 7 to 8 mm.

After the power is connected, it takes about 10 to 30 seconds for the system to boot up. Once the system is ready, the READY LED will light up.

ATTENTION

The wiring for the input terminal block must be done by a skilled person. The wire type should be copper (Cu).

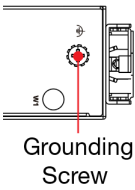
ATTENTION

The product is intended to be supplied by a UL Listed Power Unit marked "L.P.S." (or "Limited Power Source") and rated 9 to 48 VDC, 1.2 A (min.), Tma = 70°C. If you need further assistance with purchasing the power source, contact Moxa for further information.

If you are using a Class I adapter, the power cord must be connected to a socket-outlet with an earthing connection.

Grounding the Computer

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI).

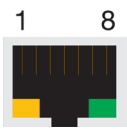


The grounding screw or GS (M4-type screw) is located on the top panel. When you connect to the GS wire, the noise is routed directly from the metal chassis to the ground point.

NOTE The grounding wire must have a minimum diameter of 3.31 mm^2.

Ethernet Port

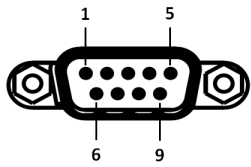
The 10/100/1000 Mbps Ethernet port uses the RJ45 connector. The pin assignment of the port is shown below:



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)-

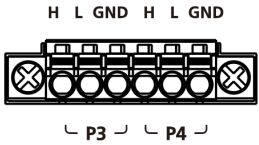
Serial Port

The serial port uses the DB9 male connector. It can be configured by software for the RS-232, RS-422, or RS-485 mode. The pin assignment of the port is shown below:



Pin	RS-232	RS-422	RS-485
1	DCD	TxD-(A)	–
2	RxD	TxD+(A)	–
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	–	–
7	TRS	–	–
8	CTS	–	–
9	–	–	–

CAN Port



The UC-3424A and UC-3434A models come with two CAN ports which use the terminal block connector and are compatible with the CAN 2.0A/B standard.

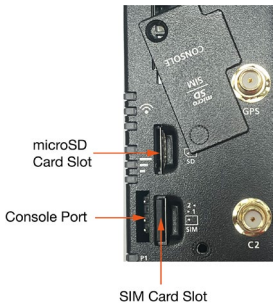
SIM Card Slot

The UC-3400A comes with a Nano-SIM card slot, a console port, and a microSD slot on the front panel.

To install SIM cards, do the following:

1. Remove the screw on the slot cover.
   The UC-3400A comes with a Nano SIM card slot.

2. Push the SIM card tray in and then pull it out to remove it.



ATTENTION

When the tray slot is open, ensure that LAN2 is not connected to the network.

3. The SIM card tray can install two SIM cards one on each side of the tray.

4. Install the SIM card in SIM1 slot. Install the other SIM card in SIM2 on the other side of the tray.

5. Insert the tray into the SIM card slot and secure the cover to the slots.
   To remove the SIM cards, push the tray in before releasing it.

Console Port

The console port located on the left side of the SIM card slot is a RS-232 port that can connect to a 4-pin pin header cable. You can use this port for debugging or firmware upgrade.

Pin	Signal
1	TXD
2	RXD
3	–
4	GND

microSD Slot

There is a microSD slot located above the SIM card slot. Insert the microSD card into the slot. To remove the card, push it in first and release it.

USB Port

The USB port is a type-A USB 2.0 port, which can be used to connect to a type-A USB storage device.

Connecting Antennas

The UC-3400A comes with various antenna connectors to the following interfaces.

Cellular

The UC-3400A models come with a built-in cellular module. Connect the antenna to the SMA connector with the cellular mark to enable the use of the cellular function.

GPS

The UC-3400A models come with a built-in GPS module. Connect the antenna to the SMA connector with the GPS mark to enable the use of the GPS function.

Wi-Fi

The UC-3430A-T-LTE-WiFi and UC-3434A-T-LTE-WiFi models come with a built-in Wi-Fi module. Connect the antenna to the RP-SMA connector marked **W2** to enable the use of the Wi-Fi function.

Bluetooth

The UC-3430A-T-LTE-WiFi and UC-3434A-T-LTE-WiFi models come with a built-in Bluetooth module. Connect the antenna to the RP-SMA **W1** connector to enable the use of the Bluetooth function.

Real-time Clock

The real-time clock is powered by a lithium battery. We strongly recommend that you do not replace the lithium battery on your own. If you need to replace 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.
- Dispose of used batteries according to the manufacturer's instructions.

Accessing the UC-3400A Using a PC

You can use a PC to access the UC-3400A 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-3400A'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	192.168.3.127	255.255.255.0
LAN 2	192.168.4.127	255.255.255.0

Login: moxa
Password: moxa

UL Certification Information

Model Type and Model Name on the Product Labels

The UC-3400A Series models and models of other Moxa products have been organized into different model types for UL certification purposes. The following table maps the commercial names of the UC-3400A Series models to the Model Type that you will see on the product labels:

Model Type		Commercial Series	Commercial Model
Virtual Series	**Virtual Model**		
MXEG3400	MXEG3400-2S4G	UC-3400A Series	UC-3420A-T-LTE
	MXEG3400-2S2C4G		UC-3424A-T-LTE
	MXEG3400-2S4GW		UC-3430A-T-LTE-WiFi
	MXEG3400-2S2C4GW		UC-3434A-T-LTE-WiFi

NCC

警語

減少電磁波影響，請妥善使用。

警語

電波功率密度 MPE 標準值為：1.0 mW/cm^2, 送測產品實測值為：0.109 mW/cm^2，建議使用時設備天線至少距離人體 20 公分。

警語

應避免影響附近雷達系統之操作。

高增益指向性天線只得應用於固定式點對點系統。

警語

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前述合法通信，指依電信管理法規定作業之無線電通信。

低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

警語

為避免電磁干擾，本產品不應安裝或使用於住宅環境。

Hazardous Locations Specifications

Model/Rating	• Model Names: MXEG3400-2S4G, UC-3420A-T-LTE MXEG3400-2S4GW, UC-3430A-T-LTE-WiFi MXEG3400-2S2C4G, UC-3424A-T-LTE MXEG3400-2S2C4GW, UC-3434A-T-LTE-WiFi • Rating: 9 to 48 VDC, 1.2 A (max.)
ATEX Information	CE Ex II 3G Ex ec IIC T4 Gc UL 25 ATEX 3364X Ambient Range: -40°C ≤ Tamb ≤ +70°C Rated Cable Temp ≥ 80°C
Address of Manufacturer	No. 1111, Heping Rd., Bade Dist., Taoyuan City 334004, Taiwan

Specific Conditions of Use

ATTENTION

- Peripheral devices should be kept at least 25 mm away from the main device.
- These devices are open-type devices and are required to be installed in a suitable enclosure for the environment such that the devices can only be accessed with use of a tool.
- The devices are suitable for use in Class I, Division 2, Groups A, B, C and D or non-hazardous location only.
- The equipment shall be installed in an enclosure that provides a minimum ingress protection of IP 54 in accordance with EN IEC 60079-0 and accessible only by use a tool.
- The equipment is intended for use in pollution degree 2 industrial environment, as defined in EN 60664-1.