UC-3100
Quick Installation Guide

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Overview

Moxa's UC-3100 Series computers can be used as smart edge gateways for data pre-processing and transmission, as well as for other embedded data-acquisition applications. The UC-3100 Series includes three models, UC-3101, UC-3111 and UC-3121, each supporting different wireless options and protocols. Please refer to the datasheet for more information.

Package Checklist

Before installing the UC-3100, verify that the package contains the following items:

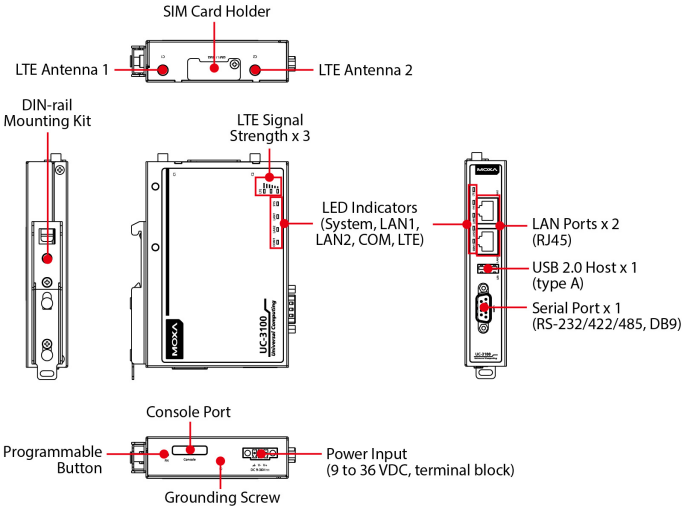
- 1 x UC-3100 RISC computer
- 1 x DIN-rail mounting kit (pre-installed)
- 1 x Power jack
- 1 x 3-pin terminal block for power
- 1 x CBL-4PINDB9F-100: 4-pin pin header to DB9 female console port cable, 100 cm
- 1 x Quick installation guide (printed)
- 1 x Warranty card

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

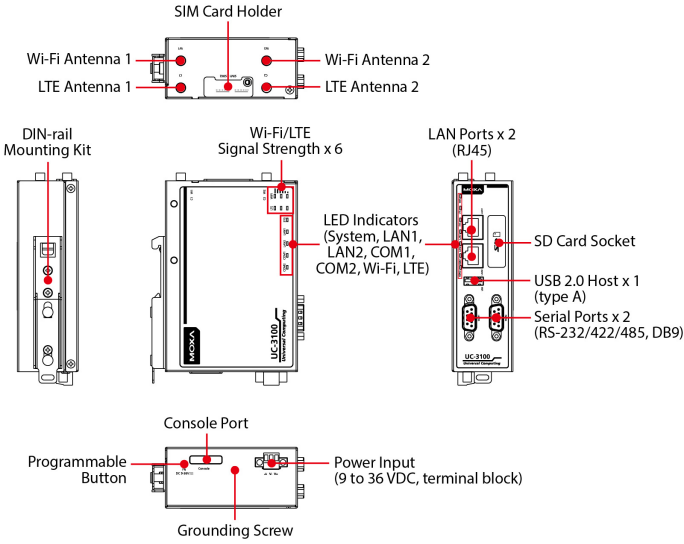
UC-3100 Panel Layout

The following figures show the panel layouts of the UC-3100 models:

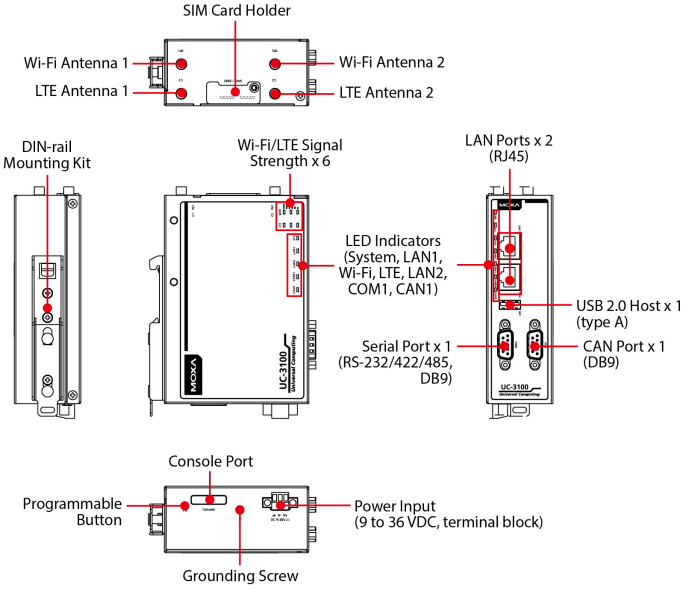
UC-3101



UC-3111



UC-3121



LED Indicators

LED Name	Status	Function	Notes
SYS	Green	Power is on	Refer to the *Function Button (FN Button) and LED Indicators* section in the hardware/software user manual for more details.
	Red	FN button is pressed	
	Off	Power is off	
LAN1/ LAN2	Green	10/100 Mbps Ethernet mode	
	Off	Ethernet port is not active	
COM1/ COM2/ CAN1	Orange	Serial/CAN port is transmitting or receiving data	
	Off	Serial/CAN port is not active	
Wi-Fi	Green	Wi-Fi connection has been established	**Client mode**: 3 levels with signal strength 1 LED is on: Poor signal quality 2 LEDs are on: Good signal quality All 3 LEDs are on: Excellent signal quality
			AP mode: All 3 LEDs blinking at the same time
	Off	Wi-Fi interface is not active	
LTE	Green	Cellular connection has been established	3 levels with signal strength 1 LED is on: Poor signal quality 2 LEDs are on: Good signal quality All 3 LEDs are on: Excellent signal quality
	Off	Cellular interface is not active	

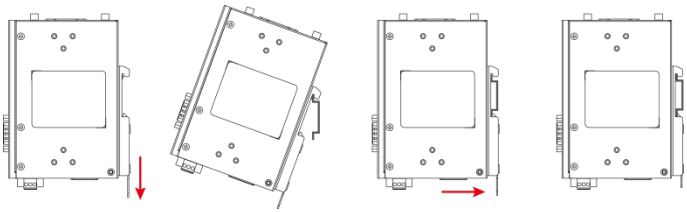
Installing the UC-3100

UC-3100 computer 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-3100 on to a DIN rail, do the following:

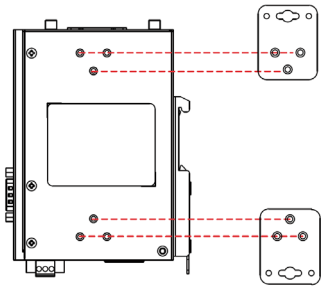
1. Pull down the slider of the DIN-rail bracket located at the back of the unit
2. Insert the top of the DIN rail into the slot just below the upper hook of the DIN-rail bracket.
3. Latch the unit firmly on to the DIN rail as shown in the illustrations below.
4. Once the computer is mounted properly,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



Wall Mounting (Optional)

The UC-3100 can also be wall mounted. The wall-mounting kit needs to be purchased separately. Refer to datasheet for more information.

1. Fasten the wall-mounting kit to the UC-3100 as shown below:



2. Use two screws to mount the UC-3100 on to a wall.

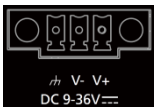
Connector Description

Power Connector

Connect the power jack (in the package) to the UC-3100's DC terminal block (located on the bottom panel), and then connect the power adapter. It takes several seconds for the system to boot up. Once the system is ready, the SYS LED will light up.

Grounding the UC-3100

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). There are two ways to connect the UC-3100 grounding wire to the ground.

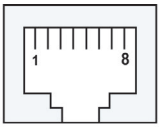


1.Through the SG (Shielded Ground, sometimes called Protected Ground):
The SG contact is the left-most contact in the 3-pin power terminal block connector when viewed from the angle shown here. When you connect to the SG contact, the noise will be routed through the PCB and the PCB copper pillar to the metal chassis.

2. Through the GS (Grounding Screw):
The GS is located between the console port and the power connector. When you connect to the GS wire, the noise is routed directly from the metal chassis.

Ethernet Port

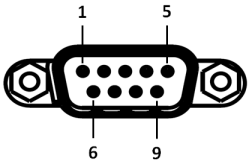
The 10/100 Mbps Ethernet port uses the RJ45 connector. The pin assignment of the port is shown below:



Pin	Signal
1	Tx+
2	Tx-
3	Rx+
4	–
5	–
6	Rx-
7	–
8	–

Serial Port

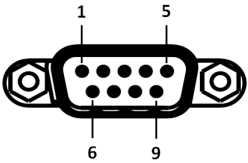
The serial port uses the DB9 male connector. It can be configured by software for the RS-232, RS-422, or RS-485 mode. The pin assignment of the port is shown below:



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 (UC-3121 Only)

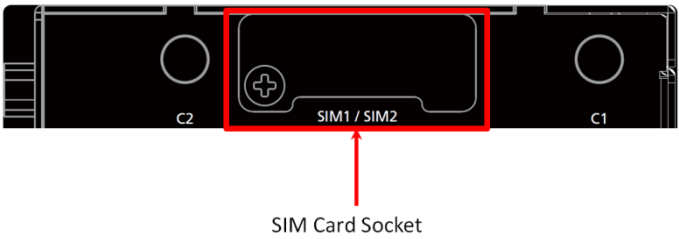
The UC-3121 comes with a CAN port which uses the DB9 male connector and is compatible with the CAN 2.0A/B standard. The pin assignment of the port is shown below:



Pin	Signal Name
1	–
2	CAN_L
3	CAN_GND
4	–
5	CAN_SHLD
6	GND
7	CAN_H
8	–
9	CAN_V+

SIM Card Socket

The UC-3100 comes with two nano-SIM card sockets for cellular communication. The nano-SIM card sockets are located on the same side as the antenna panel. To install the cards, remove the screw and the protection cover to access the sockets, and then insert the nano-SIM cards into the sockets directly. You will hear a click when the cards are in place. The left socket is for SIM 1 and the right socket is for SIM 2. To remove the cards, push the cards in before releasing them.



SMA Connector

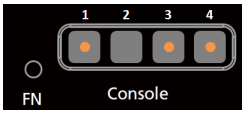
The UC-3100 comes with a built-in wireless module. You must connect the antenna to the SMA connector before you can use the wireless function (refer to datasheet for more information). The C1 & C2 connectors are interfaces to the cellular module, W1 & W2 (UC-3111 & UC-3121 only) are interfaces to the Wi-Fi module.

SD Card Socket (UC-3111 Only)

The UC-3111 comes with a SD-card socket for storage expansion. The SD card socket is located next to the Ethernet port. To install the SD card, remove the screw and the protection cover to access the socket, and then insert the SD card into the socket. You will hear a click when the card is in place. To remove the card, push the card in before releasing it.

Console Port

The console port is an RS-232 port that you can connect to with a 4-pin pin header cable (in the package). You can use this port for debugging or firmware upgrade.



Pin	Signal
1	GND
2	NC
3	RxD
4	TxD

USB

The USB port is a type-A USB 2.0 version port, which can be connected with a USB storage device or other type-A USB compatible devices.

Real-Time Clock

The real-time clock in the UC-3100 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.

Accessing the UC-3100 Using a PC

You can use a PC to access the UC-3100 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-3100'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