

# UC-8100A-ME-T

## Quick Installation Guide

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### **Technical Support Contact Information** **[www.moxa.com/support](http://www.moxa.com/support)**

Moxa Americas:

Toll-free: 1-888-669-2872

Tel: 1-714-528-6777

Fax: 1-714-528-6778

Moxa China (Shanghai office):

Toll-free: 800-820-5036

Tel: +86-21-5258-9955

Fax: +86-21-5258-5505

Moxa Europe:

Tel: +49-89-3 70 03 99-0

Fax: +49-89-3 70 03 99-99

Moxa Asia-Pacific:

Tel: +886-2-8919-1230

Fax: +886-2-8919-1231

Moxa India:

Tel: +91-80-4172-9088

Fax: +91-80-4132-1045



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**P/N: 1802081121010**



## Overview

The UC-8100A-ME-T computing platform is designed for embedded data acquisition applications. The UC-8100A-ME-T computer comes with two RS-232/422/485 serial ports and dual 10/100 Mbps Ethernet LAN ports, as well as a Mini PCIe socket to support cellular modules. These versatile communication capabilities let users efficiently adapt the UC-8100A-ME-T to a variety of complex communications solutions.

## Package Checklist

Before installing the UC-8100A-ME-T, verify that the package contains the following items:

- UC-8100A-ME-T embedded computer
- Power jack
- Console cable
- Quick installation guide (printed)
- Warranty card



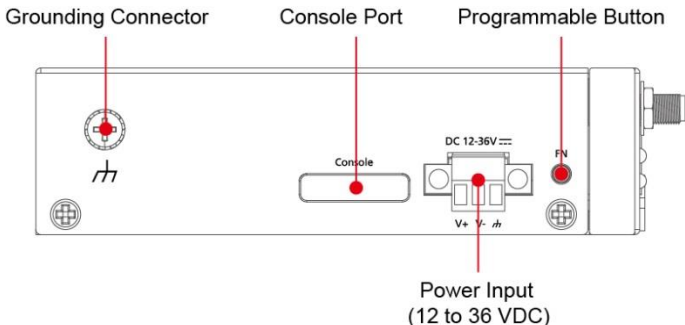
### IMPORTANT!

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

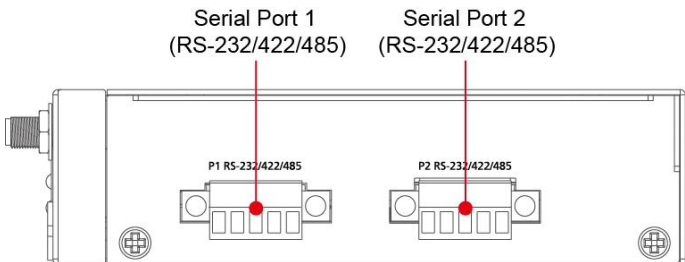
## UC-8100A-ME-T Panel Layout

The following figures show the panel layouts of the UC-8100A-ME-T:

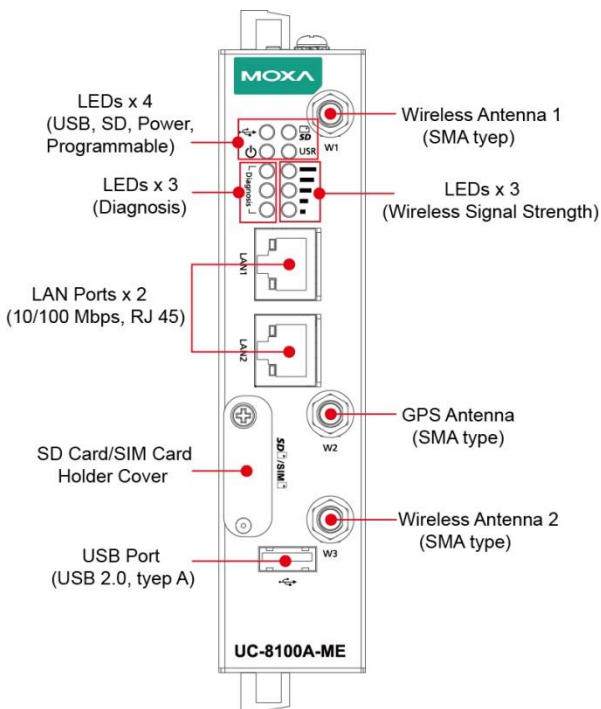
### Top Panel View








### Bottom Panel View



## Front Panel View



## LED Indicators

LED Name	Color	Function	
	USB	Green	Steady On   USB device is connected and working normally.
		Off	Off   USB device is not connected.
	SD	Green	Steady On   SD Card inserted and working normally.
		Off	Off   SD card is not detected.
	Power	Green	Green   Power is on and the computer is working normally.
		Off	Off   Power is off.
	LAN1/ LAN 2 (RJ45 connector)	Green	Steady On   100 Mbps Ethernet link
			Blinking   Data transmission in progress
		Yellow	Steady On   10 Mbps Ethernet link
			Blinking   Data transmission in progress
		Off	Off   Ethernet is not connected.
	Wireless Signal Strength	Green Yellow Red	The number of glowing LEDs indicates the signal strength. 3 (Green + Yellow + Red): Excellent 2 (Yellow + Red): Good 1 (Red): Poor
		Off	Off   Wireless module is not detected.
<b>USR</b>	User-defined	Green	This LED can be defined by users. For details, refer to <i>Hardware User's Manual</i> .

LED Name	Color	Function
<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); border: 1px solid black; padding: 2px;">Diagnosis</div> <div style="margin-left: 10px;">           Programmable diagnostic LEDs         </div> </div>	Green Yellow Red	These three LEDs are programmable. For details, refer to the "Default Programmable Button Operation" section in the <i>Hardware User's Manual</i> .

## Specifications

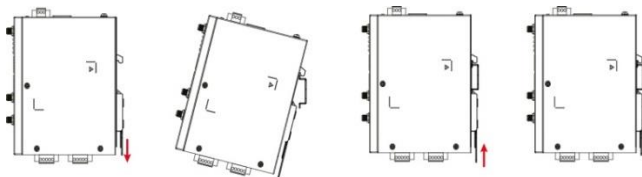
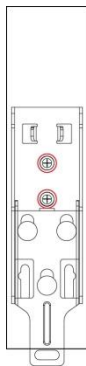
<b>Input Current</b>	500 mA @ 12 VDC
<b>Input Voltage</b>	12 to 36 VDC (3-pin terminal block, V+, V-, SG)
<b>Power Consumption</b>	6 W (without cellular module and external USB device attached)
<b>Operating Temperature</b>	Without LTE Module preinstalled: -40 to 85°C (-40 to 185°F)  With LTE Module preinstalled: -40 to 70°C (-40 to 158°F)
<b>Storage Temperature</b>	-40 to 85°C (-40 to 185°F)

## Installing the UC-8100A-ME-T

### DIN-rail Mounting

The aluminum DIN-rail attachment plate is already attached to the product's casing. To mount the UC-8100A-ME-T on to a DIN rail, make sure that the stiff metal spring is facing upwards and follow these steps.

1. Pull down the bottom 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. Push the slider back into place.

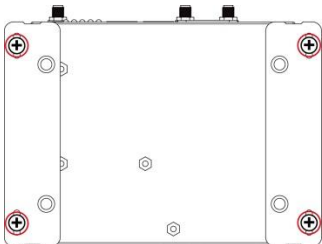


## Wall Mounting (Optional)

The UC-8100A-ME-T can be mounted with a wall-mounting kit that needs to be purchased separately. Follow these steps to mount the computer on to a wall:

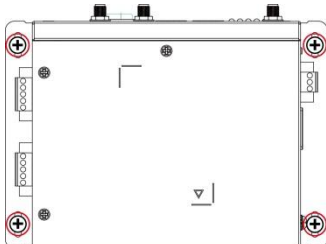
### Step 1

Use four screws to fasten the wall-mounting brackets on the left panel of the computer.



### Step 2

Use another four screws to mount the computer on a wall or a cabinet.



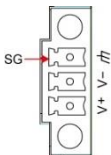
## Connector Description

### Power Connector

Connect the power jack (in the package) to the UC-8100A-ME-T's DC terminal block (located on the top panel), and then connect the power adapter. It takes about 30 seconds for the system to boot up. Once the system is ready, the Power LED will light up.

### Grounding the UC-8100A-ME-T

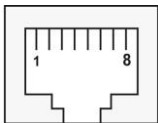
Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI).



**SG:** The Shielded Ground (sometimes called Protected Ground) contact is the top contact of the 3-pin power terminal block connector when viewed from the angle shown here. Connect the SG wire to an appropriate grounded metal surface.

### Ethernet Ports

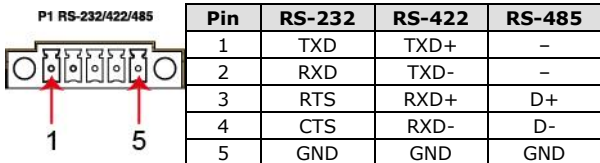
The two 10/100 Mbps Ethernet ports (LAN 1 and LAN 2) use RJ45 connectors.



Pin	Signal
1	Tx+
2	Tx-
3	Rx+
6	Rx-

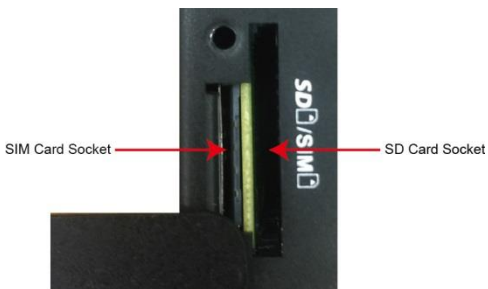
### Serial Ports

The two serial ports (P1 and P2) use terminal connectors. Each port can be configured by software for RS-232, RS-422, or RS-485. The pin assignments for the ports are shown in the following table:



### **SD/SIM Card Sockets**

The UC-8100A-ME-T comes with an SD socket for storage expansion, and a SIM card socket for cellular communication. The SD card/SIM card sockets are located at the lower part on the front panel. To install the cards, remove the screw and the protection cover to access the sockets, and then insert the SD card or the SIM card into the sockets directly. You will hear a click when the cards are in place. To remove the cards, push the cards in before releasing them.



### **Console Port**

The console port is an RS-232 port that can be connected to with a 4-pin pin header cable. You can use this port for debugging or firmware upgrade.



Pin	Signal
1	TxD
2	RxD
3	NC
4	GND

### **USB Port**

The USB 2.0 port is located at the lower part of the front panel and supports a USB storage device driver. By default, the USB storage is mounted at `/mnt/usbstorage`.

### **Antenna Connectors**



There are three antenna connectors on the front panel of the UC-8100A-ME-T. W1 and W3 are for cellular modules, and W2 is for the GPS module. All three connectors are of SMA type.

## **Real-time Clock**

The real-time clock in the UC-8100A-ME-T 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-8100A-ME-T Using a PC**

You can use a PC to access the UC-8100A-ME-T 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-8100A-ME-T's serial console port

- B. Using SSH over the network. Refer to the following IP addresses and login information:

	<b>Default IP Address</b>	<b>Netmask</b>
<b>LAN 1</b>	192.168.3.127	255.255.255.0
<b>LAN 2</b>	192.168.4.127	255.255.255.0

**Login:** moxa

**Password:** moxa