

UC-2100-W Series

Arm-based wireless-enabled palm-sized industrial computer



Features and Benefits

- Armv7 Cortex-A8 1000 MHz processor
- Integrated LTE Cat. M1/NB1 module with global band support
- Dual-SIM slots
- Moxa Industrial Linux with 10-year long-term support
- Dual auto-sensing Ethernet ports (10/100 Mbps and 10/100/1000 Mbps)
- Dual CAN ports with industrial CAN 2.0 A/B protocol supported
- microSD socket for storage expansion
- Programmable LEDs and a programmable button for easy installation and maintenance
- -40 to 75°C operating temperature range

Certifications



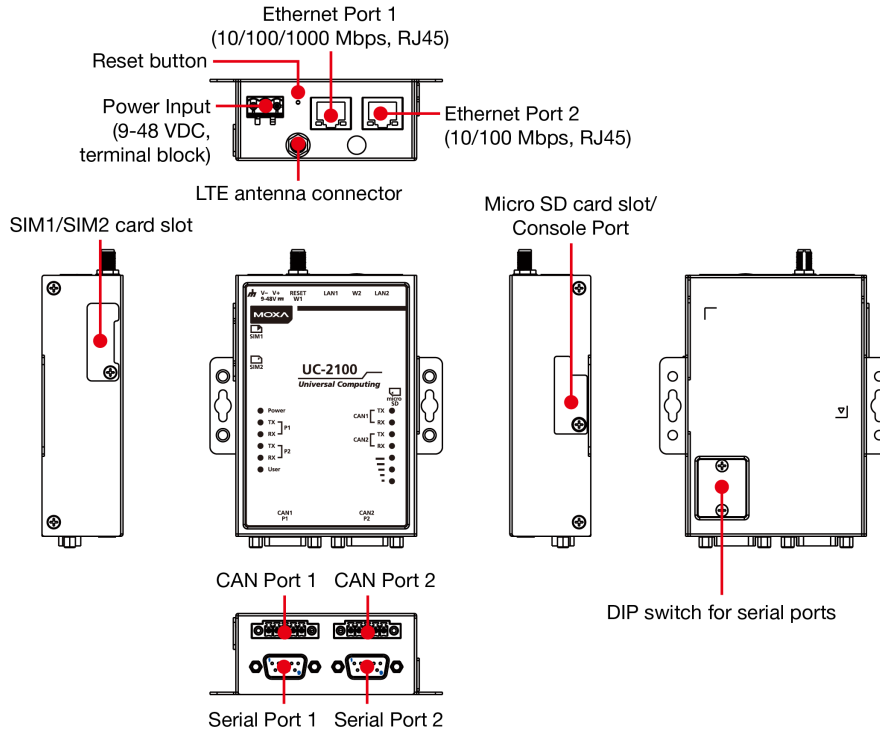
Introduction

The UC-2100-W Series computing platform is designed for embedded data acquisition and processing applications. The computer comes with up to two software selectable RS-232/422/485 full-signal serial ports and single or dual LAN ports. This palm-sized series of Arm-based computing platforms includes a variety of models for a wide range of interface requirements, such as serial and LAN ports, and wireless connections. The versatile communication capabilities allow users to efficiently adapt the UC-2100-W Series for a variety of complex communications solutions running on a compact palm-sized computer.

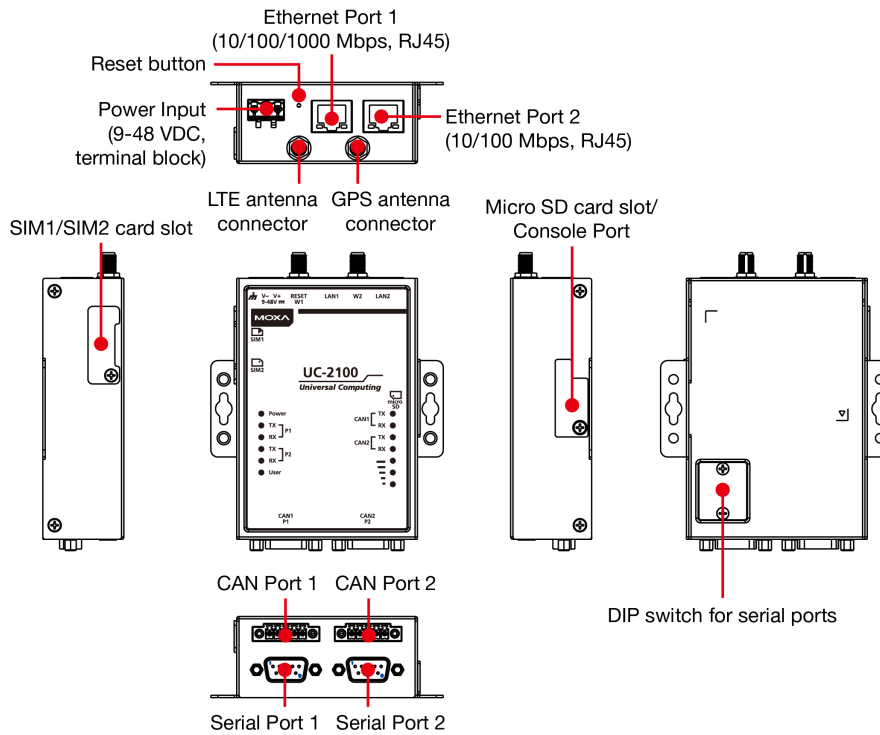
The UC-2100-W Series has a built-in Cortex-A8 Arm-based processor that has been optimized for a variety of industrial solutions. With flexible interface options, this tiny embedded computer is a reliable and secure gateway for data acquisition and processing at field sites and is a useful communication platform for many other large-scale deployments. Models designed for wide-temperature applications are available for extreme environments such as those found in the Oil and Gas industry. Furthermore, all models use Moxa's industrial-grade Linux platform, which provides optimized software features and superior long-term support.

Appearance

UC-2114



UC-2116



Specifications

Computer

CPU	Armv7 Cortex-A8 1 GHz
DRAM	512 GB DDR3

Storage Pre-installed	8 GB eMMC
Pre-installed OS	Moxa Industrial Linux (Debian 9, Kernel 4.4)
Computer Interface	
Storage Slot	Micro SD Slot x 1
Ethernet Ports	Auto-sensing 10/100 Mbps ports (RJ45 connector) x 1 Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 1
Serial Ports	RS-232/422/485 ports x 2, software-selectable (terminal block)
CAN Ports	CAN 2.0 A/B x 2 (5-pin terminal block)
Cellular Antenna Connector	SMA x 1
GPS Antenna Connector	SMA x 1
Number of SIMs	2
SIM Format	Nano
Console Port	RS-232 (TxD, RxD, GND), 4-pin header output (115200, n, 8, 1)
Buttons	Reset button
Ethernet Interface	
Magnetic Isolation Protection	1.5 kV (built-in)
Serial Interface	
Baudrate	50 bps to 921.6 kbps
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark
Pull High/Low Resistor for RS-485	1 kilo-ohm, 150 kilo-ohms
ESD Protection	4 kV, for all signals
Flow Control	RTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485, RTS Toggle (RS-232 only)
Serial Signals	
RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND
CAN Interface	
Industrial Protocols	CAN 2.0A, CAN 2.0B
Baudrate	10 to 1000 kbps
Signals	GND, CAN_L, CAN_SHLD, CAN_H, CAN_V+
Isolation	2 kV (built-in)

Cellular Interface

Band Options	LTE Bands: Band 1 (2100 MHz) / Band 2 (1900 MHz) / Band 3 (1800 MHz) / Band 4 (1700 MHz) / Band 5 (850 MHz) / Band 8 (900 MHz) / Band 12 (700 MHz) / Band 13 (700 MHz) / Band 18 (850 MHz) / Band 19 (850 MHz) / Band 20 (800 MHz) / Band 25 (1900 MHz) / Band 26 (850 MHz) / Band 28 (700 MHz) Carrier Approval: Verizon, AT&T, TELUS
--------------	---

LED Indicators

System	Power x 1 Programmable x 1
LAN	2 per port (10/100 Mbps)
Serial	2 per port (Tx, Rx)
Wireless Signal Strength	3
CAN	2 per port (Tx, Rx)

Power Parameters

Input Voltage	9 to 48 VDC
Power Consumption	5.8 W
Input Current	0.6 A @ 9 VDC, 0.12 A @ 48 VDC

Reliability

Alert Tools	External RTC (real-time clock)
Automatic Reboot Trigger	External WDT (watchdog timer)

Physical Characteristics

Housing	Metal
Dimensions (with ears)	111 x 99 x 34.5 mm (4.37 x 3.90 x 1.36 in)
Weight	396 g (0.87 lb)
Installation	Wall-mounting, DIN-rail mounting (with optional kit)

Environmental Limits

Operating Temperature	-40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Safety	EN 62368-1, UL 62368-1
EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV IEC 61000-4-6 CS: 3 V IEC 61000-4-8 PFMF
Shock	IEC 60068-2-27

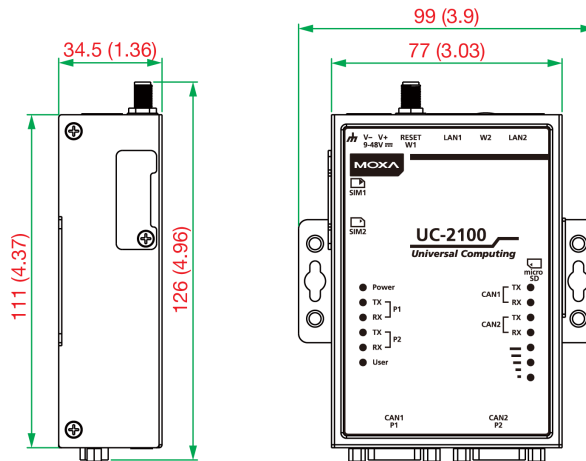
Vibration	2 Grms @ IEC 60068-2-64, random wave, 5-500 Hz, 1 hr per axis (without any USB devices attached)
Hazardous Locations	Class I Division 2, ATEX, IECEx ¹
Green Product	RoHS, CRoHS, WEEE
MTBF	
Time	UC-2114-T-LX : 533,149 hrs UC-2116-T-LX : 496,650 hrs
Standards	Telcordia (Bellcore) Standard
Warranty	
Warranty Period	5 years
Details	See www.moxa.com/warranty
Package Contents	
Device	1 x UC-2100-W Series computer
Installation Kit	1 x power jack
Cable	1 x console cable
Documentation	1 x quick installation guide 1 x warranty card

1. Class 1 Division 2, ATEX, and IECEx certifications are underway. Please contact a Moxa sales representative for details.

Dimensions

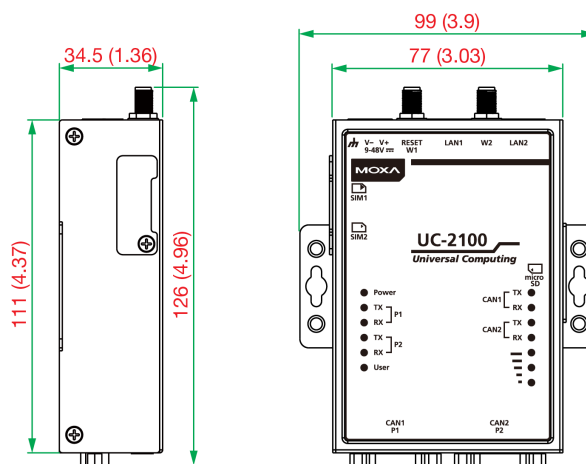
UC-2114

Unit: mm (inch)



UC-2116

Unit: mm (inch)



Ordering Information

Model Name	CPU	RAM	Storage	Serial	Ethernet	CAN	Cellular	GPS	Operating Temp.
UC-2114-T-LX	1000 MHz	512 MB	8 GB	2	2 (1 Giga LAN)	2	BN-IoT/ Cat. M1	-	-40 to 75°C
UC-2116-T-LX	1000 MHz	512 MB	8 GB	2	2 (1 Giga LAN)	2	BN-IoT/ Cat. M1	Yes	-40 to 75°C

Accessories (sold separately)

Power Adapters

PWR-24270-DT-S1	Power adapter, input voltage 90 to 264 VAC, output voltage 24 V with 2.5 A DC load
-----------------	--

Power Cords

PWC-C7US-2B-183	Power cord with United States (US) plug, 10A/125V, 1.83 m
PWC-C7EU-2B-183	Power cord with Continental Europe (EU) plug, 2.5A/250V, 1.83 m
PWC-C7UK-2B-183	Power cord with United Kingdom (UK) plug, 2.5A/250V, 1.83 m
PWC-C7AU-2B-183	Power cord with Australian (AU) plug, 2.5A/250V, 1.83 m
PWC-C7CN-2B-183	Power cord with two-prong China (CN) plug, 1.83 m

Cables

CBL-F9DPF1x4-BK-100	Console cable with 4-pin connector, 1 m
---------------------	---

Antennas

ANT-LTEUS-ASM-01	GSM/GPRS/EDGE/UMTS/HSPA/LTE, omni-directional rubber duck antenna, 1 dBi
ANT-GPS-OSM-05-3M BK	Active GPS antenna, 26 dBi, 1572 MHz, L1 band antenna for GPS
ANT-LTE-ASM-04 BK	LTE Stick antenna that covers 704-960/1710-2620 MHz providing omnidirectional radiation with a gain of 4.5 dBi.
ANT-LTE-OSM-06-3m BK MIMO	Multi-band antenna that covers 700-2700/2400-2500/5150-5850 MHz frequencies. Screw-fastened mounting and full IP67 waterproofing are available.
ANT-LTE-OSM-03-3m BK	Multi-band antenna that covers 700-2700 MHz. Specially designed for 2G, 3G, and 4G applications. Magnetic mounting is available
ANT-LTE-ASM-05 BK	LTE stick antenna that covers 704-960/1710-2620 MHz with a gain of 5 dBi.

DIN-Rail Mounting Kits

DK35A	DIN-rail mounting brackets x 2, screws x 4
-------	--

© Moxa Inc. All rights reserved. Updated Oct 23, 2019.

This document and any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of Moxa Inc. Product specifications subject to change without notice. Visit our website for the most up-to-date product information.