

# UC-7100 Series

*Arm-based palm-sized industrial computers with 2 serial ports and 2 LAN ports*



## Features and Benefits

- MOXA ART Arm9 32-bit 192 MHz processor
- 16 or 32 MB RAM
- 8 or 16 MB Flash ROM
- Dual or single 10/100 Mbps Ethernet ports
- 1 or 2 software-selectable RS-232/422/485 ports
- 50 bps to 921.6 kbps baudrate (nonstandard baudrates supported)
- SD slot for storage expansion
- Built-in real-time clock (RTC) and buzzer
- Preinstalled Linux kernel 2.6 platform
- -40 to 75°C wide-temperature models available

## Certifications



## Introduction

The UC-7101/UC-7110/UC-7112 mini Arm-based communication platforms are ideal for embedded applications. The computers come with 1 or 2 RS-232/422/485 serial ports and single or dual 10/100 Mbps Ethernet LAN ports to provide users with a versatile communication platform.

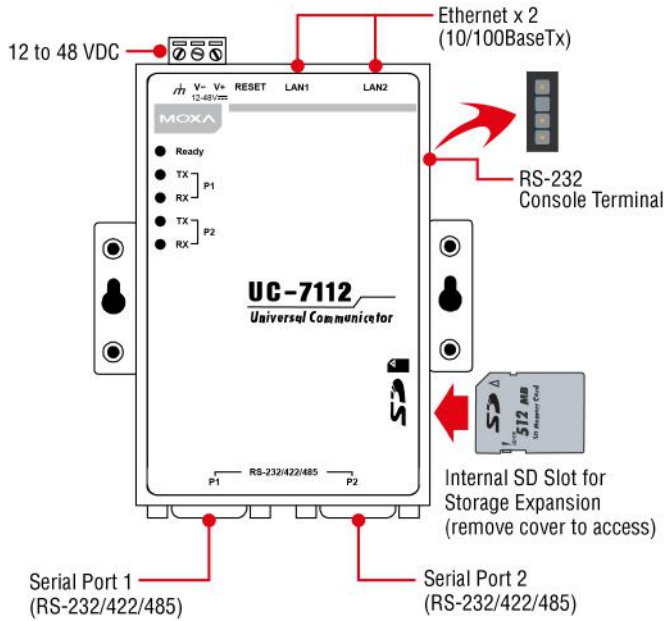
The UC-7101/UC-7110/UC-7112 platforms use the Arm9 CPU. The architecture and modern semiconductor technology used in the Arm9 CPU are designed to provide the CPU with a powerful computing engine and many useful communication functions, but without generating too much heat. The built-in 8 or 16 MB NOR Flash ROM and 16 or 32 MB SDRAM provide plenty of storage, and the SD slot (UC-7101 and UC-7112 only) provides users with flexible storage expansion to run applications that generate a lot of data.

The dual or single LAN ports built into the Arm9 make the UC-7101/7110/UC-7112 computers ideal communication platforms for data acquisition and protocol conversion applications, and the 1 or 2 RS-232/422/485 serial ports allow you to connect a variety of serial devices.

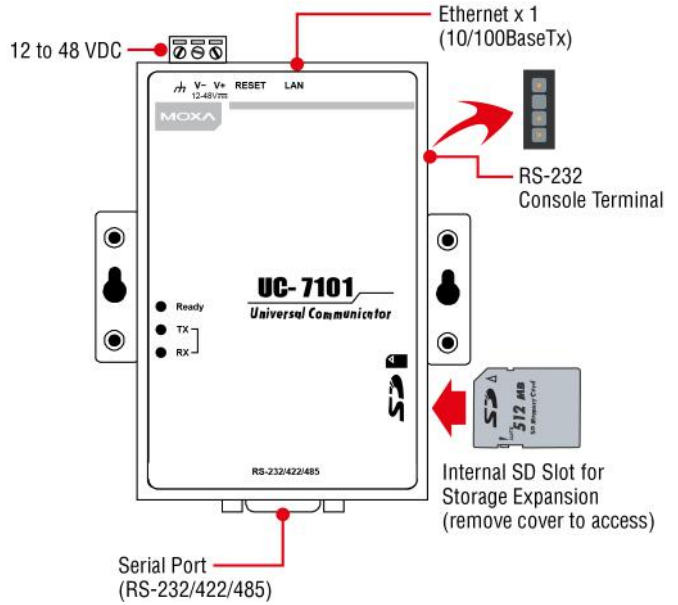
The preinstalled  $\mu$ clinux or Linux operating system provides an open platform for software development. This means that software written for desktop PCs can be easily ported to a UC-7101, UC-7110, or UC-7112 embedded computer with a GNU cross compiler, eliminating the need to spend time modifying existing code. The operating system, device drivers, and your own software can all be stored in the UC-7101/UC-7110/UC-7112's flash memory.

## Appearance

### UC-7110/UC-7112



### UC-7101



## Specifications

### Computer

CPU	MOXA ART Arm9, 192 MHz
Supported OS	UC-7101-LX: $\mu$ CLinux UC-7101-T-LX: $\mu$ CLinux UC-7110-LX: $\mu$ CLinux UC-7110-T-LX: $\mu$ CLinux UC-7112-LX: $\mu$ CLinux UC-7112-LX Plus: Linux kernel version 2.6
Storage Slot	UC-7101-LX/7112-LX Series: SD slots x 1

### Computer Interface

Ethernet Ports	UC-7101: Auto-sensing 10/100 Mbps ports (RJ45 connector) x 1 UC-7110/7112/7112 Plus: Auto-sensing 10/100 Mbps ports (RJ45 connector) x 2
Serial Ports	UC-7101: RS-232/422/485 ports x 1, software-selectable (DB9 male) UC-7110/7112/7112 Plus: RS-232/422/485 ports x 2, software-selectable (DB9 male)
Console Port	UC-7101-LX/7110-LX/UC-7112-LX: RS-232 (TxD, RxD, GND), 3-pin (19200, n, 8, 1) UC-7112-LX Plus: RS-232 (TxD, RxD, GND), 3-pin (115200, n, 8, 1)

### Memory

Flash	UC-7101-LX/7110-LX/7112-LX Series: 8 MB UC-7112-LX Plus: 16 MB
SDRAM	UC-7101-LX/7110-LX/7112-LX Series: 16 MB UC-7112-LX Plus: 32 MB

### Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	1 or 2
Magnetic Isolation Protection	1.5 kV (built-in)

## LED Indicators

System	All models: System Ready x 1 UC-7101-LX/7112-LX Series: SD x 1
LAN	2 per port (10/100/1000 Mbps)
Serial	2 per port (Tx, Rx)

## Serial Interface

Baudrate	50 bps to 921.6 kbps (supports non-standard baudrates)
Connector	DB9 male
Data Bits	5, 6, 7, 8
Flow Control	RTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485, RTS Toggle (RS-232 only)
ESD Protection	4 kV, for all signals
No. of Ports	UC-7101-LX Series: 1 UC-7110-LX/7112-LX Series: 2
Parity	None, Even, Odd, Space, Mark
RS-485 Data Direction Control	ADDC® (automatic data direction control)
Serial Standards	RS-232/422/485
Stop Bits	1, 1.5, 2

## 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

## Power Parameters

Connection	Removable terminal block
Input Current	170 mA @ 24 VDC 340 mA @ 12 VDC
Input Voltage	12 to 48 VDC
No. of Power Inputs	1
Power Connector	3-pin terminal block
Power Consumption	4.5 W (max.)

## Physical Characteristics

Housing	Metal
Dimensions (with ears)	UC-7101: 90 x 111 x 26 mm (3.54 x 4.31 x 1.02 in) UC-7110/7112: 100 x 111 x 26 mm (4.18 x 4.31 x 1.02 in)
Dimensions (without ears)	UC-7101: 67 x 111 x 26 mm (2.64 x 4.31 x 1.02 in) UC-7110/7112: 77 x 111 x 26 mm (3.03 x 4.37 x 1.02 in)

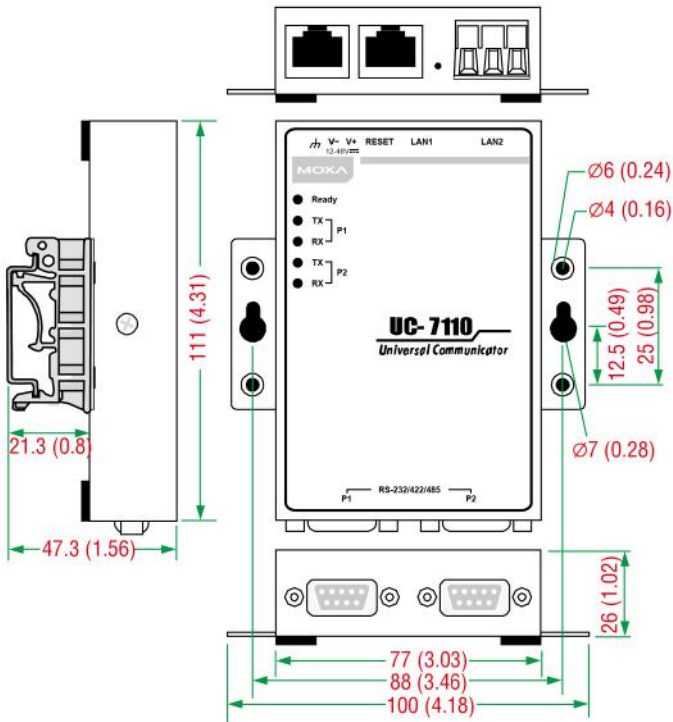
Weight	UC-7101-LX Series: 130 g (0.29 lb) UC-7110-LX/7112-LX Series: 190 g (0.42 lb)
Installation	DIN-rail mounting (with optional kit), Wall mounting, Wall mounting (standard)
<b>Environmental Limits</b>	
Operating Temperature	Standard Models: -10 to 60°C (14 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	Standard Models: -20 to 80°C (-4 to 176°F) Wide Temp. Models: -40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
<b>Standards and Certifications</b>	
EMC	EN 55032/24, EN 61000-6-2/-6-4, EN 61000-3-2 Class A, EN 61000-3-3
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-11 DIPs 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: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-8 PFMF
Environmental Testing	IEC 60068-2-1, DNV 2.0 IEC 60068-2-2, DNV 2.0 IEC 60068-2-30, DNV 2.0
Safety	EN 60950-1, IEC 60950-1, UL 60950-1
Vibration	IEC 60068-2-6
<b>Declaration</b>	
Green Product	RoHS, CRoHS, WEEE
<b>MTBF</b>	
Time	UC-7101-LX Series: 514,973 hrs UC-7110-LX Series: 149,414 hrs UC-7112-LX Series: 148,980 hrs
Standards	UC-7110-LX Series, UC-7112-LX: MIL-HDBK-217F UC-7101-LX Series: Telcordia (Bellcore), GB UC-7112-LX Plus: Telcordia SR332
<b>Warranty</b>	
Warranty Period	5 years
Details	See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>
<b>Package Contents</b>	
Device	1 x UC-7100 Series computer
Cable	1 x 4-pin header to DB9 console port 1 x Ethernet, crossover 1 x terminal block to power jack converter

Power Supply	1 x power adapter, universal
Documentation	1 x document and software CD 1 x product certificates of quality inspection, Simplified Chinese 1 x product notice, Simplified Chinese 1 x quick installation guide 1 x warranty card

## Dimensions

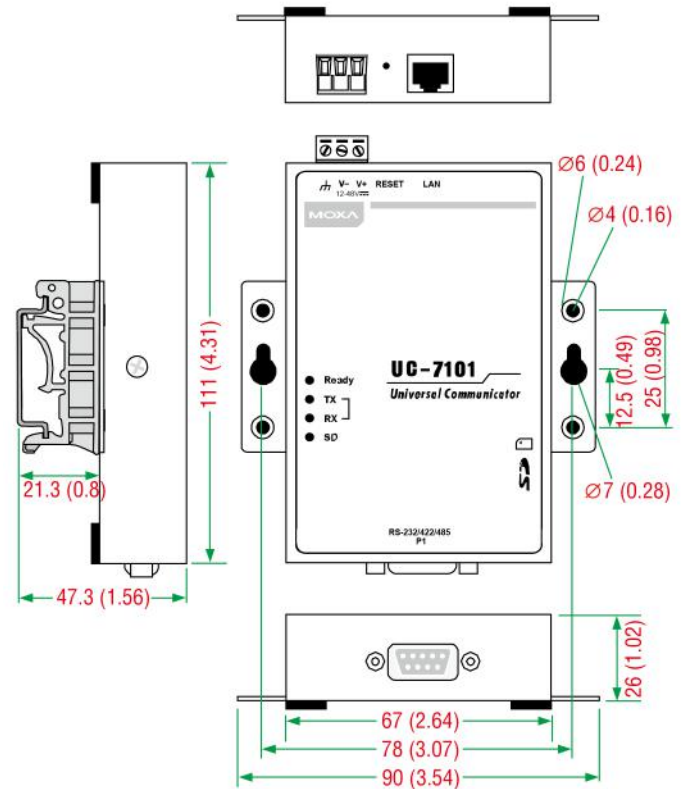
### UC-7110/UC-7112

Unit: mm (inch)



### UC-7101

Unit: mm (inch)



## Ordering Information

Model Name	RAM	Storage	Serial Ports	LAN Ports	Storage Slots	OS	Operating Temp.
UC-7101-LX	16	8	1	1	SD Card	µCLinux	-10 to 60°C
UC-7101-T-LX	16	8	1	1	SD Card	µCLinux	-40 to 75°C
UC-7110-LX	16	8	2	2	-	µCLinux	-10 to 60°C
UC-7110-T-LX	16	8	2	2	-	µCLinux	-40 to 75°C
UC-7112-LX	16	8	2	2	SD Card	µCLinux	-10 to 60°C
UC-7112-LX Plus	32	16	2	2	SD Card	Linux kernel 2.6	-10 to 60°C

## Accessories (sold separately)

### DIN-Rail Mounting Kits

DK35A	DIN-rail mounting kit, 35 mm
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