

UC-7112/UC-7110

Mini RISC-based Ready-to-Run Embedded Computer with 2 Serial Ports, Dual Ethernet, SD



Features

- Mini controller with ready-to-run platform for customized applications
- 32-bit ARM9 RISC microcontroller
- 16 MB RAM (about 12 MB of user programmable space)
- 8 MB Flash ROM (about 4 MB of user programmable space)
- Auto-sensing 10/100 Mbps Ethernet ports x 2
- Software-selectable RS-232/422/485 ports x 2
- Supports SD socket for storage expansion
- Built-in RTC, Buzzer
- Built-in μ Clinux Communication Platform
- GNU GCC cross-compiler
- -40 to 75°C wide temperature models available



Overview

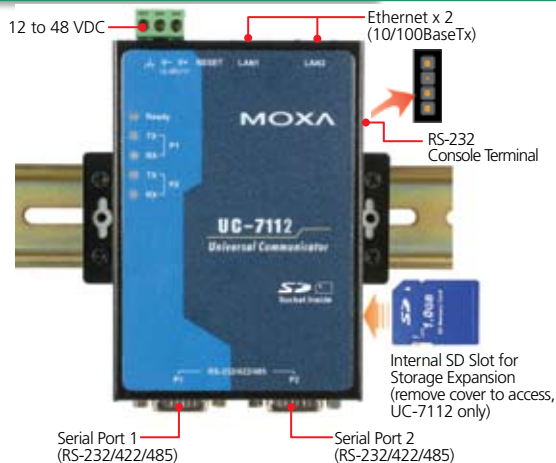
UC-7112/UC-7110 Mini RISC-based Communication Platforms are ideal for your embedded applications. UC-7112/UC-7110 comes with two RS-232/422/485 serial ports and dual 10/100 Mbps Ethernet LAN ports to provide users with a versatile communication platform.

UC-7112/UC-7110 uses the ARM9 RISC CPU. Unlike the X86 CPU, which uses a CISC design, the ARM9's RISC design architecture and modern semiconductor technology provide UC-7112/UC-7110 with a powerful computing engine and communication functions, but without generating too much heat. The built-in 8 MB NOR Flash ROM and 16 MB SDRAM give you enough storage capacity, and an additional SD socket provides the user with flexible storage expansion to run

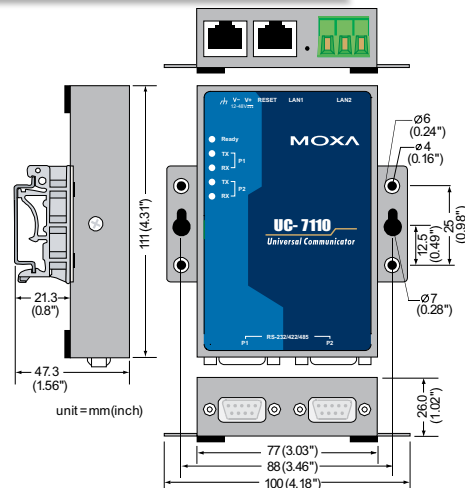
applications. The dual LAN ports built into the ARM9 make UC-7112/UC-7110 an ideal communication platform for some of the more simple data acquisition and protocol conversion applications, and the two RS-232/422/485 serial ports allow you to connect a variety of serial devices.

The pre-installed μ Clinux operating system provides an open software operating system for software program development. This means that software written for desktop PCs is easily ported to UC-7112/UC-7110 by using a GNU cross compiler, so that you will not need to spend time modifying existing software code. The operating system, device drivers, and your own software can all be stored in the UC-7112/UC-7110's Flash memory.

Appearance

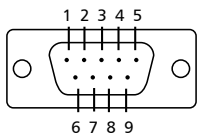


Dimensions



Pin Assignment

Male DB9



PIN	RS-232	RS-422	RS-485 (4-wire)	RS-485 (2-wire)
1	DCD	TxDA(-)	TxDA(-)	---
2	RxD	TxDB(+)	TxDB(+)	---
3	TxD	RxDB(+)	RxDB(+)	DataB(+)
4	DTR	RxDA(-)	RxDA(-)	DataA(-)
5	GND	GND	GND	GND
6	DSR	---	---	---
7	RTS	---	---	---
8	CTS	---	---	---

Serial Console port



PIN	
1	TxD
2	RxD
3	NC
4	GND



Hardware Specifications

System

CPU: Moxa ART ARM9 32-bit RISC CPU, 192 MHz
DRAM: 16 MB onboard (12 MB for user programmable space)
Flash: 8 MB onboard (4 MB for user programmable space)
Storage Expansion: SD socket x 1 (UC-7112 only)
Console Port: RS-232, 3-wire (TxD, RxD, GND), pin-header
Other: RTC, buzzer, Watchdog Timer
OS: Built-in µClinux

Network Communication

LAN: 10/100 Mbps x 2, RJ45
Protection: Built-in 1.5 KV magnetic isolation protection

Serial Communication

Serial Port: RS-232/422/485 x 2, software-selectable, DB9
Protection: Built-in 15 KV ESD protection for all signals
Data bits: 5, 6, 7, 8
Stop bits: 1, 1.5, 2
Parity: None, Even, Odd, Space, Mark
Flow Control: RTS/CTS, XON/XOFF, RS-485 ADDC™
Speed: 50 bps to 921.6 Kbps, supports Any Baudrate

LEDs

System: Ready x 1
LAN: 10M/Link x 2, 100M/Link x 2 (on connector)
Serial: TxD x 2, RxD x 2

Power Requirements

Power Input: 12 to 48 VDC
Power Consumption: 340 mA @ 12 VDC, 4.5W

Mechanical

Dimensions (WxDxH): 77 x 111 x 26 mm (3.03 x 4.37 x 1.02 in)
Weight: 190 g
Construction Material: Aluminum, 1 mm
Mounting: Wall-mounting, DIN-Rail

Environmental

Operating Temperature:
 -10 to 60°C (14 to 140°F), 5 to 95% RH
 -40 to 75°C (-40 to 167°F) for -T models

Storage Temperature:
 -20 to 80°C (-4 to 176°F), 5 to 95% RH
 -40 to 85°C (-40 to 185°F) for -T models

Regulatory Approvals

EMC: FCC Part 15, CISPR 22 Class A
 CE Class A: EN55022 Class A, EN61000-3-2 Class A,
 EN61000-3-3, EN55024

Safety: TÜV: IEC/EN60950
 UL/cUL: UL60950, CAN/CSA-C22.2 No. 60950-00

Warranty: 5 years

Software Specifications

µClinux

Kernel Version: 2.6.9
Protocol Stacks: TCP, UDP, IPv4, SNMP V1/V2c, ICMP, ARP, HTTP, CHAP, PAP, DHCP, NTP, NFS, SMTP, Telnet, FTP, PPP, PPPoE

File System: JFFS2 (on-board flash)

System Utilities: msh, busybox, tinylogin, telnet, ftp

Supporting Services and Daemons:

telnetd: Telnet Server daemon
 ftpd: FTP server daemon
 Boa: Web server daemon

pppd: dial in/out over serial port daemon & PPPoE
 snmpd: snmpd agent daemon
 inetd: TCP server manager program

Application Development Environment:

MOXA Linux API Library
 Linux Tool Chain:
 Arm-elf-gcc: C/C++ PC Cross Compiler
 µClibc: POSIX Standard Library
 UC Finder: UC's LAN IP broadcast search utility for Windows and Linux

Device Drivers:

UART, RTC, Buzzer, SD Card

Ordering Information

Standard Operating Temperature Models (-10 to 60°C)

UC-7110-LX

Mini RISC-based Ready-to-Run Embedded Computer with 2 Serial Ports, Dual Ethernet, µClinux OS

UC-7112-LX **New!**

Mini RISC-based Ready-to-Run Embedded Computer with 2 Serial Ports, Dual Ethernet, SD, µClinux OS

Wide Operating Temperature Models (-40 to 75°C)

UC-7110-T-LX **New!**

Mini RISC-based Ready-to-Run Embedded Computer with 2 Serial Ports, Dual Ethernet, µClinux OS, Wide Temperature

UC-7112-T-LX **New!**

Mini RISC-based Ready-to-Run Embedded Computer with 2 Serial Ports, Dual Ethernet, SD, µClinux OS, Wide Temperature

All items include

- 1 UC-7112 or UC-7110
- Quick Installation Guide
- Document & Software CD
- Ethernet Cable: RJ45 to RJ45 cross-over cable, 100 cm
- Console Port Cable: CBL-4PINDB9F-150 4-pin pin-header to female DB9 cable, 150 cm
- Universal Power Adaptor (includes terminal block to power jack converter)
- Product Warranty Booklet

Optional Accessories

DK35A: DIN-Rail Mounting kit (35 mm)