

UC-7124/7122

New

Mini RISC-based Ready-to-Run Embedded Computer with Dual LANs, 4/2 Serial Ports, SD, USB

Features

- > Cirrus Logic EP9302 ARM9 32-bit 200 MHz processor
- > On-board 32 MB RAM, 16 MB flash disk
- > 4/2 software-selectable RS-232/422/485 serial ports
- > Serial port speed from 50 bps to 921.6 Kbps supporting ANY BAUDRATE
- > Dual 10/100 Mbps Ethernet for network redundancy
- > SD socket for storage expansion supported
- > Built-in RTC, buzzer, Watchdog Timer
- > Ready-to-run WinCE 5.0 platform



Overview

The UC-7124/7122 embedded computers come with 2 or 4 RS-232/422/485 serial ports and dual 10/100 Mbps Ethernet LAN ports to provide users with a versatile communication platform, making these RISC-based embedded computers ideal for your embedded applications.

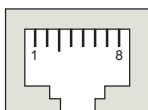
The UC-7124/7122 embedded computers use the Cirrus Logic EP9302 ARM9 200 MHz RISC CPU. Unlike the X86 CPU, which uses a CISC design, the ARM9's RISC design architecture and modern semiconductor technology provide the UC-7124/7122 with a powerful computing engine and communication functions, but without generating too much heat. Moreover, the built-in 16 MB NOR Flash ROM and 16 MB SDRAM give you enough storage capacity to run applications on the UC-7124/7122. The additional SD socket provides the flexibility for storage expansion, and the dual LAN ports built into the ARM9 make the UC-7124/7122 ideal communication platforms for simple data acquisition

and protocol conversion applications. In addition, the RS-232/422/485 serial ports allow you to connect a variety of serial devices. Taken together, these features ensure that the UC-7124/7122 embedded computers are convenient and powerful central control units for industrial applications, such as data acquisition, remote device control and monitoring, and protocol conversion.

The pre-installed WinCE 5.0 operating system provides a common Windows-based software operating system for software program development. This means that software written in Visual C/C++, VB and .NET for desktop PCs is easily ported to the UC-7124/7122 by using a general programming tool such as Microsoft Embedded Visual C++ or Microsoft Visual Studio 2005. You will not need to spend time modifying existing software code, and the operating system, device drivers, and your own software can all be stored in the UC-7124/7122's Flash memory.

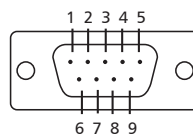
Pin Assignment

Serial Port, RJ45 Connector for UC-7124



PIN	RS-232	RS-422	RS-485
1	DSR	---	---
2	RTS	TxD+	---
3	GND	GND	GND
4	TxD	TxD-	---
5	RxD	RxD+	Data+
6	DCD	RxD-	Data-
7	CTS	---	---
8	DTR	---	---

Serial Port, DB9 Connector for UC-7122



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	---	---	---

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UC-7124/7122

Hardware Specifications

System

CPU: Cirrus EP9302 ARM9 CPU, 200 MHz

DRAM: 32 MB onboard (64 MB for ODM)

Flash: 16 MB onboard (32 MB for ODM)

Storage Expansion: SD socket x 1 for storage expansion,

USB: USB 2.0 full speed Host (OHCI) x 1

Console/Debugging Port: RS-232 x 1 (TxD, RxD, GND),
4-pin header output

OS: Built-in Windows CE 5.0

Other: RTC, buzzer, Watchdog Timer

Network Communication

LAN: Auto-sensing 10/100Mbps x 2, RJ45

Protection: Built-in 1.5 KV magnetic isolation protection

Serial Communication

Serial Ports: Software-selectable RS-232/422/485 x 2 for UC-7122, male DB9 connector

RS-232/422/485 x 4 for UC-7124, software-selectable, RJ45

RS-232 signals: TxD, RxD, DTR, DSR, RTS, CTS, DCD, GND

RS-422 signals: TxD+, TxD-, RxD+, RxD-, GND

4-wire RS-485 signals: TxD+, TxD-, RxD+, RxD-, GND

2-wire RS-485 signals: Data+, Data-, GND

Protection: Built-in 15 KV ESD protection for all signals

Data bits: 5, 6, 7, 8

Stop bit(s): 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, SD x 1

LAN: 10M/Link x 2 (on connector), 100M/Link x 2 (on connector)

Serial: TxD x 2/4, RxD x 2/4 (2 LEDs for UC-7122, 4 LEDs for UC-7124)

Power Requirements

Power Consumption: 360 mA @ 12 VDC for UC-7124
340 mA @ 12 VDC for UC-7122

Mechanical

Dimensions (W x D x H): 77 x 111 x 26 mm (without wall-mount ear)

Weight: 190 g (UC-7122), 200 g (UC-7124)

Construction Material: Aluminum, 1 mm

Mounting: Wall-mounting, DIN-rail

Environment

Operating Temperature:

-10 to 60°C (14 to 140°F), 5 to 95% RH

Storage Temperature:

-20 to 80°C (-4 to 176°F), 5 to 95% RH

Regulatory Approvals

EMC:

FCC: Part 15 Subpart B, CISPR 22 Class A

CE: EN61000-6-4, EN61000-6-2, EN61000-3-3, EN61000-3-2

Safety:

LVD: EN60950-1

UL/cUL: UL60950-1, CSA C22.2 No. 60950-1-03

Warranty: 5 years

Software Specifications

Windows CE 5.0

Protocol Stacks: TCP, UDP, IPv4, SNMP, ICMP, IGMP, ARP, HTTP, CHAP, PAP, SSL, DHCP, SNMP, SMTP, Telnet, FTP, PPP

File Systems: TFAT (on-board flash)

System Utilities: Windows command shell, telnet, ftp, web-based administration manager

Supporting Services and Daemons:

Telnet Server: Allows remote administration through a standard telnet client

FTP Server: Used for transferring files to and from remote computer systems over a network.

Web Server (httpd): WinCE IIS, offer ASP, ISAPI Secure Socket Layer support, SSL 2, SSL 3, and Transport Layer Security (TLS/SSL 3.1) public key-based protocols, and Web Administration ISAPI Extensions.

Dial-up Networking Service: RAS client API and PPP, support Extensible Authentication Protocol (EAP)

Application Development Environment:

MOXA WinCE 5.0 SDK

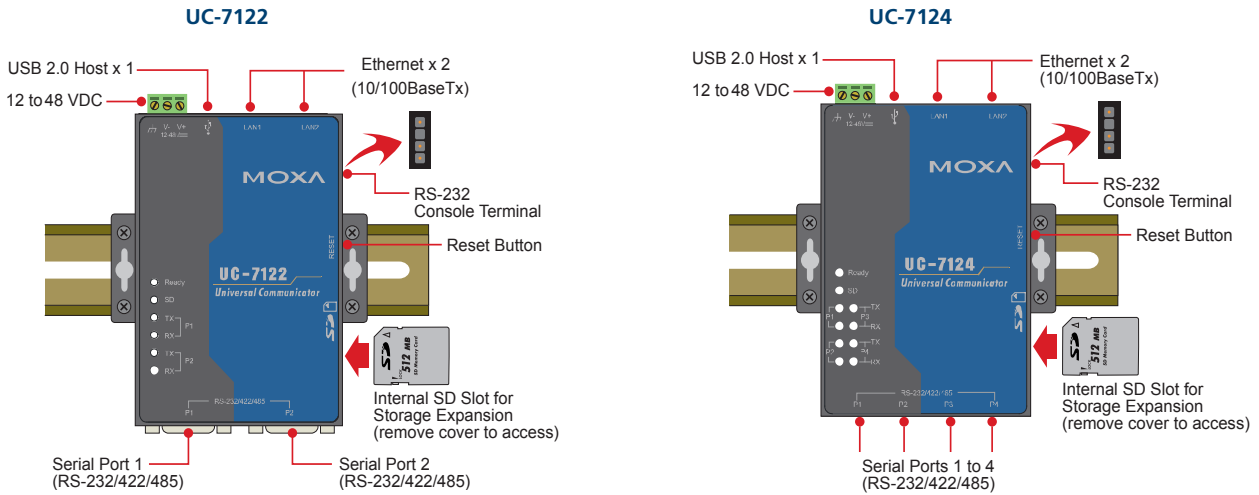
C Libraries and Run-times

Component Services (COM and DCOM)

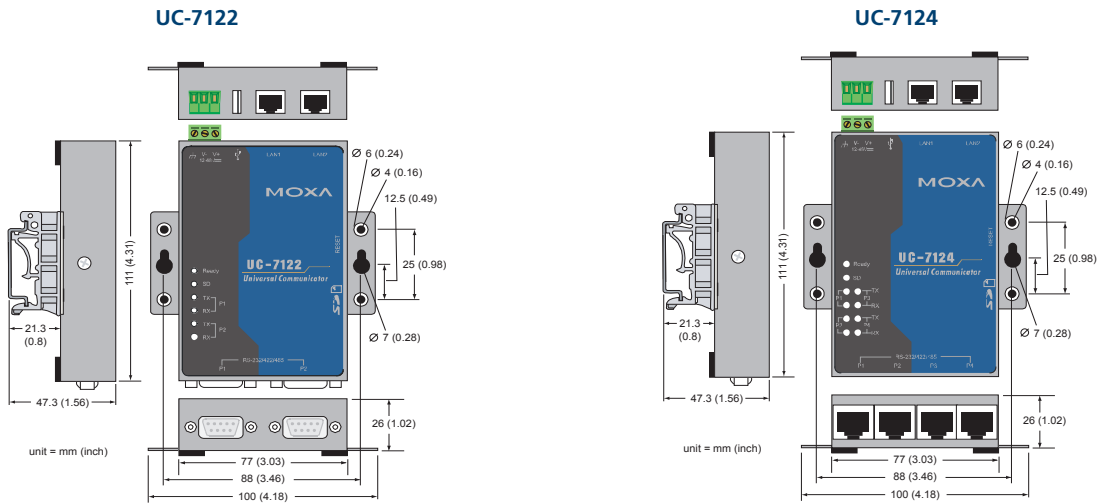
Microsoft Foundation Classes (MFC)

Winsock 2.2

Appearance



Dimensions



Ordering Information

UC-7122-CE New

Mini RISC-based Ready-to-Run Embedded Computer with Dual LANs, 2 Serial Ports, SD, USB, WinCE 5.0

UC-7124-CE New

Mini RISC-based Ready-to-Run Embedded Computer with Dual LANs, 4 Serial Ports, SD, USB, WinCE 5.0

Optional Accessories

- DK35A: DIN-Rail Mounting kit (35mm)

All items include

- 1 UC-7124 or UC-7122
- Quick Installation Guide
- Documentation & 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
- Serial Port Cable: CBL-RJ45M9-150 8-pin RJ45 to male DB9 cable, 150 cm (UC-7124 only)
- Universal Power Adaptor (includes terminal block to power jack converter)
- Product Warranty Statement

UC-7124/UC-7122 Product Comparison Chart

Model Name	UC-7122	UC-7124
CPU	Cirrus Logic EP9302 ARM9 CPU 200 MHz	Cirrus Logic EP9302 ARM9 CPU 200 MHz
RAM	32 MB	32 MB
Flash	16 MB	16 MB
OS	WinCE 5.0	WinCE 5.0
Network Interface	10/100 Mbps x 2	10/100 Mbps x 2
Serial Port	RS-232/422/485 x 2 DB9 Male Connector	RS-232/422/485 x 4 RJ45 Connector
Serial Protection	15 KV ESD for all signal	
Data Bits	5, 6, 7, 8	
Stop Bits	1, 1.5, 2	
Parity	none, even, odd, space, mark	
Flow Control	RTS/CT, XON/XOFF, RS-485 ADDC™	
Speed	50 bps to 921.6 Kbps, supports ANY BAUDRATE	
Serial Console	RS-232 x 1 Pin-header Connecto	RS-232 x 1 Pin-header Connecto
Storage Expansion	SD x 1	SD x 1
USB	USB 2.0 Full Speed Host (OHCI) x 1	USB 2.0 Full Speed Host (OHCI) x 1
Real Time Clock	Yes	Yes
Buzzer Signal	Yes	Yes
Watchdog Timer	Yes	Yes
Reset Signal	Reset to Default x 1	Reset to Default x 1
Power Input	12 to 48 VDC	12 to 48 VDC
Power Consumption	340mA@12 VDC	360mA@12 VDC
Dimensions (W x D x H) (mm)	77 x 111 x 26	77 x 111 x 26
Weight (g)	190	200
Operating Temperature	-10 to 60°C (14 to 141°F), 5 to 95% RH	
Storage Temperature	-20 to 80°C (-4 to 176°F), 5 to 95% RH	
Regulatory Approvals	EMC: FCC Class A, CE Class A, Safety: LVD, UL, cUL	
Warranty	5 years	5 years