UC-7120 Series

Arm-based 200 MHz industrial computer with Windows CE 5.0 preinstalled, 2 LAN ports, up to 4 serial ports

Features and Benefits

- Cirrus Logic EP9302 Arm9 32-bit 200 MHz processor
- Onboard 32 MB RAM, 16 MB flash disk
- 2 or 4 software-selectable RS-232/422/485 serial ports
- 50 bps to 921.6 kbps baudrate (nonstandard baudrates supported)
- Dual 10/100 Mbps Ethernet ports
- SD slot for storage expansion
- Built-in real-time clock (RTC), buzzer, watchdog timer (WDT)
- Ready-to-run WinCE 5.0 platform
- -40 to 75°C wide-temperature models available

Certifications

Introduction

The UC-7122/7124 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 Arm-based embedded computers ideal for your embedded applications.

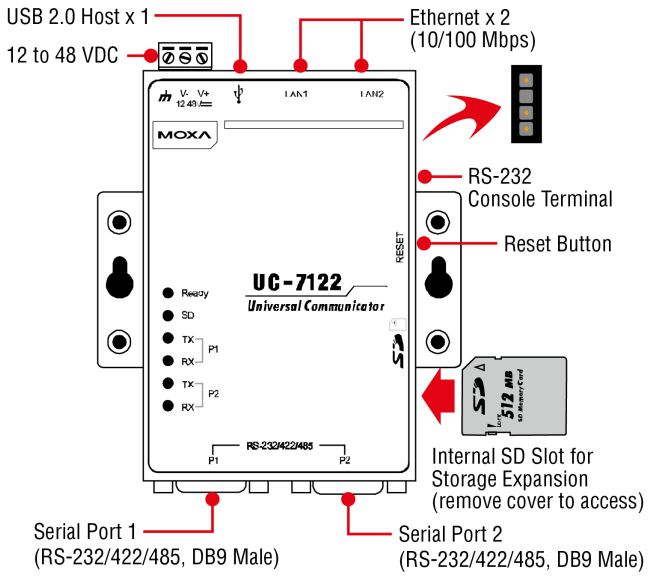
The UC-7122/7124 embedded computers use the Cirrus Logic EP9302 Arm9 200 MHz RISC CPU. Unlike the x86 CPU, which uses a CISC design, the Arm9's RISC design architecture and modern semiconductor technology provide the UC-7122/7124 with a powerful computing engine and communication functions, but without generating too much heat. Moreover, the built-in 16 MB NOR Flash ROM and 32 MB SDRAM give you enough storage capacity to run applications on the UC-7122/7124 computers. The additional SD slot provides the flexibility of adding storage expansion disks, and the dual LAN ports built into the Arm9 make the UC-7122/7124 ideal communication platforms for simple data acquisition and protocol conversion applications.

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

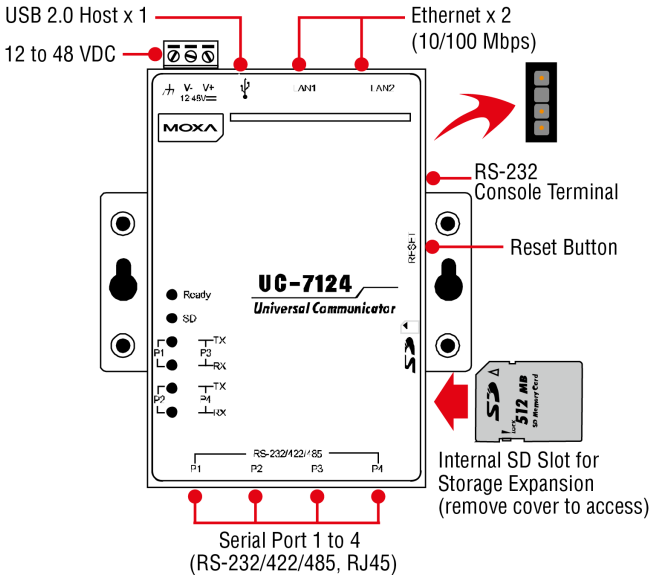
The preinstalled WinCE 5.0 operating system provides a common Windows-based software operating system for software program development. This means that software written in Visual C/C++ for desktop PCs can easily be ported to the UC-7122/7124 computers with a general programming tool such as Microsoft Embedded Visual C++ or Microsoft Visual Studio 2005. You will not need to spend time modifying existing software code, the operating system, device or the drivers. You can store the software that you created on the computer's flash memory without any modification.

Appearance

UC-7122



UC-7124



Specifications

Computer

CPU	Cirrus EP9302 Arm9, 200 MHz
Supported OS	Windows Embedded Compact 5.0
Storage Slot	SD slots x 1

Computer Interface

Ethernet Ports	Auto-sensing 10/100 Mbps ports (RJ45 connector) x 2
Serial Ports	UC-7122 Series: RS-232/422/485 ports x 2, software-selectable (DB9 male) UC-7124: RS-232/422/485 ports x 4, software-selectable (RJ45)
USB 2.0	USB 2.0 hosts x 1, type-A connectors
Console Port	RS-232 (TxD, RxD, GND), 4-pin header output (115200, n, 8, 1)

Memory

Flash	16 MB
SDRAM	32 MB

Ethernet Interface

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

USB Interface

Storage Port	USB Type A
USB Standards	USB 1.1/2.0 compliant

LED Indicators

System	System Ready x 1 SD slots 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	UC-7122 Series: DB9 male UC-7124 Series: RJ45
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-7122 Series: 2 UC-7124 Series: 4
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	UC-7122 Series: 170 mA @ 24 VDC, 340 mA @ 12 VDC UC-7124 Series: 180 mA @ 24 VDC, 360 mA @ 12 VDC
Input Voltage	12 to 48 VDC
No. of Power Inputs	1
Operating Voltage	12 to 48 VDC
Power Connector	3-pin terminal block Terminal block (for DC models)
Power Consumption	UC-7122 Series: 4.1 W (max.) UC-7124 Series: 4.3 W (max.)

Physical Characteristics

Housing	Metal
Dimensions (with ears)	100 x 111 x 26 mm (4.18 x 4.37 x 1.02 in)
Dimensions (without ears)	77 x 111 x 26 mm (3.03 x 4.37 x 1.02 in)

Weight	UC-7122 Series: 190 g (0.42 lb) UC-7124 Series: 200 g (0.44 lb)
Installation	DIN-rail mounting (with optional kit), Wall mounting (standard)

Environmental Limits

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)

Standards and Certifications

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: 10 V/m; Signal: 10 V/m IEC 61000-4-8 PFMF
Safety	EN 60950-1, IEC 60950-1, UL 60950-1
Vibration	IEC 60068-2-6

Declaration

Green Product	RoHS, CRoHS, WEEE

MTBF

Time	UC-7122 Series: 234,746 hrs UC-7124 Series: 210,233 hrs
Standards	Telcordia (Bellcore), GB

Warranty

Warranty Period	5 years
Details	See www.moxa.com/warranty

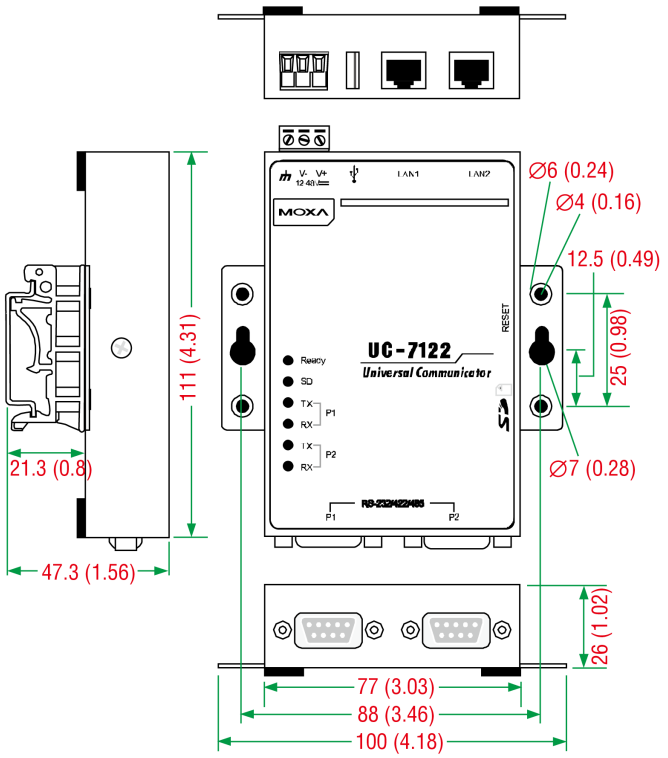
Package Contents

Device	1 x UC-7120 Series computer
Cable	1 x 4-pin header to DB9 console port 1 x DB9 male to RJ45 8-pin 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

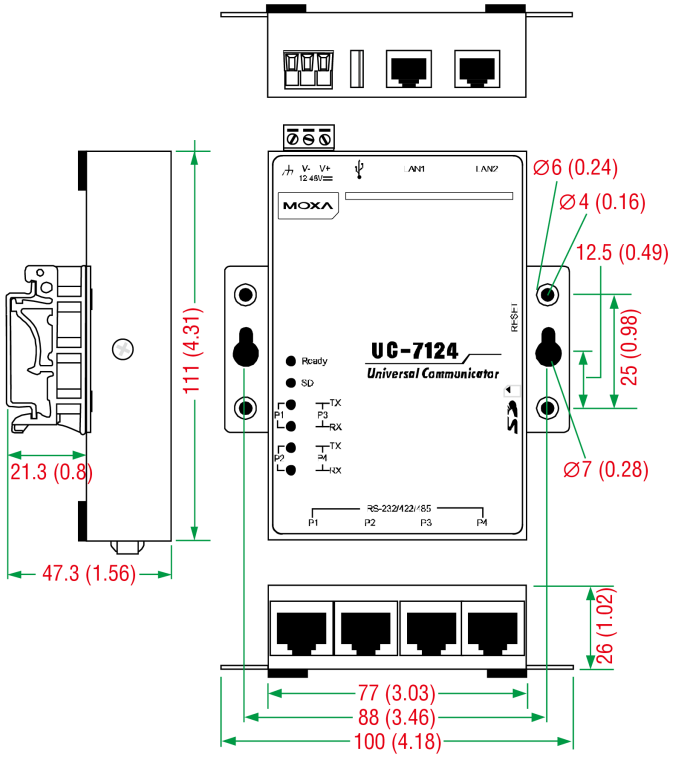
UC-7122

Unit: mm (inch)



UC-7124

Unit: mm (inch)



Ordering Information

Model Name	Serial Ports	LAN Ports	USB 2.0	Storage Slots	OS	Operating Temp.
UC-7122-CE	2	2	1	SD Card	WinCE 5.0	-10 to 60°C
UC-7124-CE	4	2	1	SD Card	WinCE 5.0	-10 to 60°C
UC-7122-T-CE	2	2	1	SD Card	WinCE 5.0	-40 to 75°C
UC-7124-T-CE	4	2	1	SD Card	WinCE 5.0	-40 to 75°C

Accessories (sold separately)

DIN-Rail Mounting Kits

DK35A	DIN-rail mounting kit, 35 mm