



UC-7122/7124 Quick Installation Guide

Second Edition, June 2008

1. Overview

The UC-7122/7124 Series of mini size RISC-based ready-to-run embedded computers come with the WinCE operating system pre-installed. The embedded computers have dual 10/100 Mbps Ethernet ports and 2 or 4 RS-232/422/485 serial ports in an ARM9 box. In addition, the UC-7122 and UC-7124 have an internal SD socket and one USB 2.0 host port for storage expansion, to provide high performance communication and unlimited storage in a super compact, palm-size box. The UC-7122 and UC-7124 are the right solutions for embedded applications that use a lot of memory, but that must be housed in a small physical space without sacrificing performance.

2. Package Checklist

Before installing the UC-7122/7124, verify that the package contains the following items:

- 1 UC-7122 or UC-7124
- UC-7122/7124 Quick Installation Guide
- Document & Software CD
- Cross-over Ethernet cable: RJ45 to RJ45, 100 cm
- CBL-4PINDB9F-100 console port cable: 4-pin header to female DB9 cable, 100 cm
- Universal Power Adaptor
- Product Warranty Statement

Optional Accessories

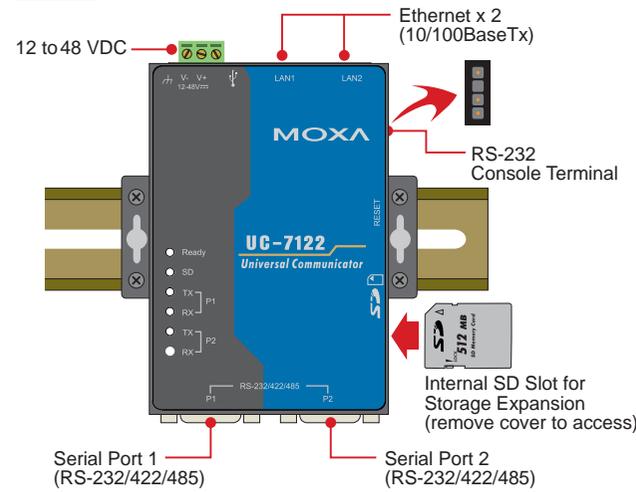
- DK-35A DIN-Rail Mounting Kit (35 mm)

Notify your sales representative if any of the above items are missing or damaged.

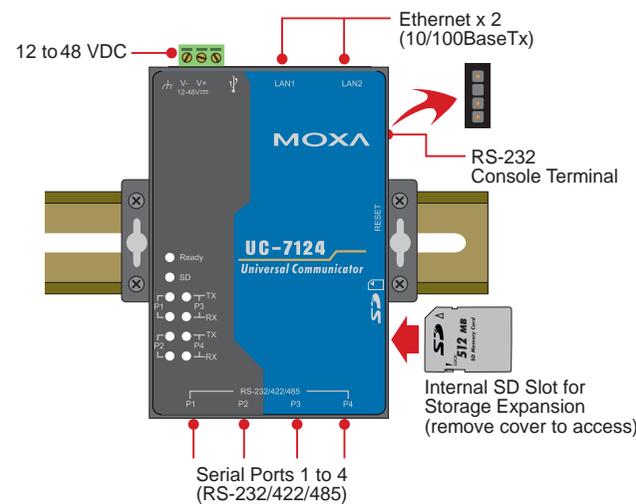
3. UC-7122/7124 Panel Layout

The UC-7122/7124 come with 2 or 4 software selectable RS-232/422/485 serial ports, one RS-232 console port, two 10/100 Mbps LAN ports, one internal SD slot, and one USB 2.0 host port. The following figures show the panel layouts of the UC-7122/7124.

UC-7122



UC-7124



LED Indicators

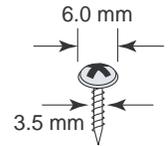
The following LED indicators are located on the top panel of the UC-7122/7124.

LED Name	LED Color	LED Function
Ready	Green	Power is on and functioning normally
	Off	Power is off or power error exists
SD	Green	SD card is detected
	Off	No SD card is detected
TxD P1-P4	Green	Serial ports P1-P4 transmitting data
	Off	Serial ports P1-P4 not transmitting data
RxD P1-P4	Yellow	Serial ports P1-P4 receiving data
	Off	Serial ports P1-P4 not receiving data

4. Installing the UC-7122/7124

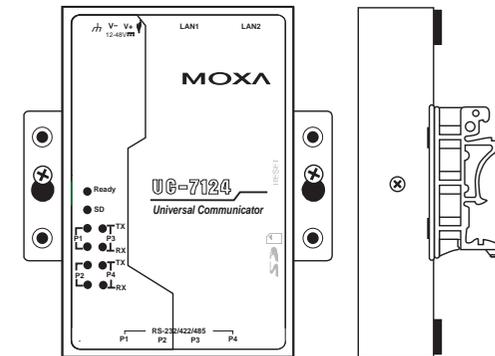
Wall or Cabinet Mounting

The UC-7122/7124 have built-in “ears” for attaching the embedded computers to a wall or the inside of a cabinet. We suggest using two screws per ear to attach the UC-7122/7124 to a wall or cabinet. The heads of the screws should be less than 6.0 mm in diameter, and the shafts should be less than 3.5 mm in diameter, as shown by the figure at the right.



DIN-Rail Mounting

DIN-rail attachments can be purchased separately to attach the product to a DIN-rail.



P/N: 1802071220011

5. Connector Description

Power Connector

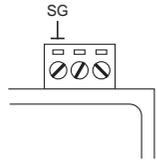
Connect the 12 to 48 VDC LPS or Class 2 power line to the UC-7122/7124's terminal block. If the power is properly supplied, the Power LED will light up. The OS is ready when the Ready LED glows a solid green.

Grounding the UC-7122/7124

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from the ground screw to the grounding surface prior to connecting the power.

ATTENTION

This product is intended to be mounted to a well-grounded mounting surface, such as a metal panel.

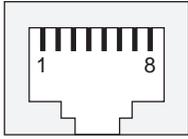


SG: The Shielded Ground (sometimes called Protected Ground) contact is the left most contact of the 3-pin power terminal block connector when viewed from the angle shown here. Connect the SG wire to an appropriate grounded metal surface.

Ethernet Ports

The 10/100 Mbps Ethernet port uses RJ45 connectors.

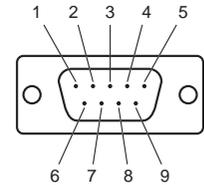
PIN	Signal
1	ETx+
2	ETx-
3	ERx+
6	ERx-



Serial Ports

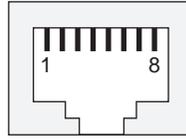
The serial ports use DB9 connectors for the UC-7122, and RJ45 connectors for the UC-7124. Each port can be configured by software for RS-232, RS-422, or RS-485. The pin assignments for the ports are shown in the following table:

DB9 Male (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	---	---	---

RJ45 (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	---	---

SD Slot

The UC-7122/7124 have internal SD slots for storage expansion. To install an SD card, first use a screw driver to remove the SD slot cover to access the slot. The slot is located on the right panel of the UC-7122/7124. Plug the SD card directly into the socket, and then replace the SD slot cover. When an SD card is inserted, the system will create a directory called **StorageDisk** for accessing SD storage. To remove the SD card from the slot, press the SD card in slightly with your finger, and then remove your finger to cause the card to spring out partially. You may then grasp the top of the card with two fingers and pull it out.

USB

The UC-7122/7124 has one USB 2.0 host port located on the top panel for storage expansion. When a USB storage device is plugged in, the system will create a directory called **StorageDisk** for accessing the data stored on the device. If there is already an SD card in the SD slot, the system will name the newly created directory "StorageDisk2".

Console Port

The serial console port is an RS-232 port that uses a 4-pin pin-header connector. The port is designed for serial console terminals, which are useful for viewing boot-up messages. Use the CBL-4PINDB9F-100 cable included with the product to connect a PC to the UC-7122/7124's serial console port.



Pin	Signal
4	GND
3	NC*
2	RxD
1	TxD

*NC=Not Connected



Reset

Press the "Reset" button and hold it in for at least 5 seconds to load the factory default configuration. After the factory default configuration has been loaded, the system will reboot automatically. The Ready LED will blink on and off for the first 5 seconds, and then maintain a steady glow once the system has rebooted.

6. Powering on the UC-7122/7124

To power on the UC-7122/7124, connect the "terminal block to power jack converter" to the UC-7122/7124's DC terminal block (located on the left side of the top panel), and then connect the power adaptor. Note that the Shielded Ground wire should be connected to the right most pin of the terminal block. Once the system is ready, the Ready LED will light up.

7. Connecting the UC-7122/7124 to a PC

There are two ways to connect the UC-7122/7124 to a PC: (1) through the serial console port, and (2) by Telnet over the network. The COM settings for the serial console port are: **Baudrate=115200 bps, Parity=None, Data bits=8, Stop bits =1, Flow Control=None.**

ATTENTION

Use the CBL-4PINDB9F-100 cable included with the product to connect a PC to the UC-7122/7124's serial console port. Remember to choose "VT100" terminal type for the connection settings.

To use Telnet, you need to know the UC-7122/7124's IP address and netmask. The default LAN settings are shown below. For first-time configuration, you may find it convenient to use a cross-over Ethernet cable to connect directly from the PC to the UC-7122/7124.

	Default IP Address	Netmask
LAN 1	192.168.3.127	255.255.255.0
LAN 2	192.168.4.127	255.255.255.0

Once the UC-7122/7124 is powered on, the Ready LED will light up. Use the following default login name and password to proceed. The defaults are:

Login: admin

Password: admin

8. Configuring the Ethernet Interface

Please refer to the UC-7122/7124 User's Manual for information on how to configure the Ethernet interface.

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