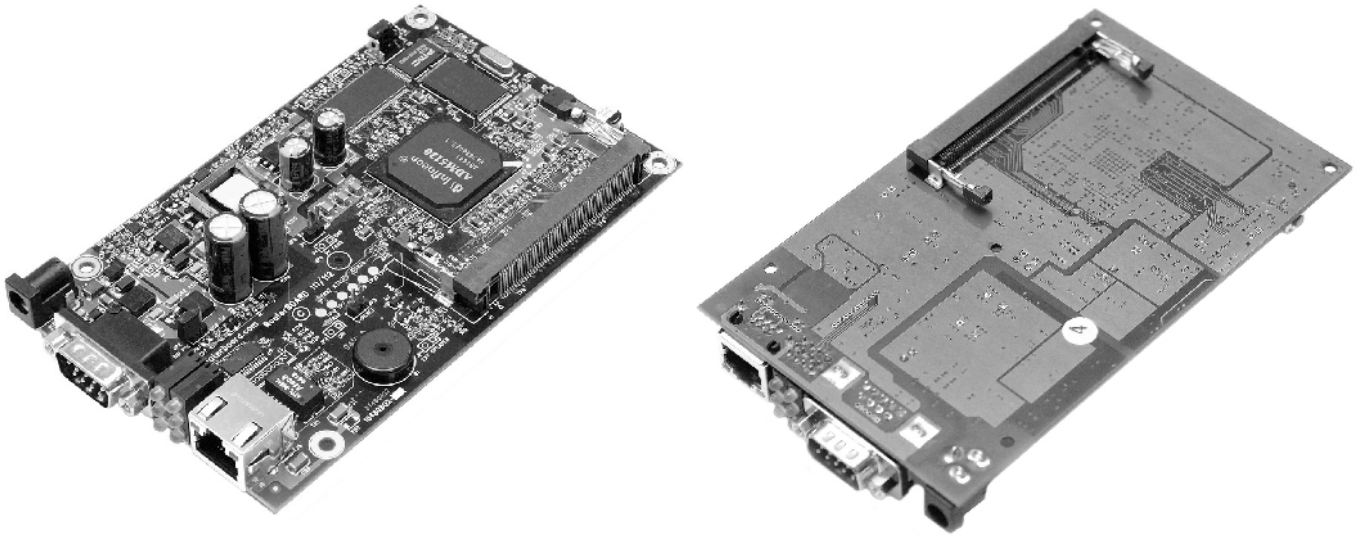# RouterBOARD 111/112
## Quick Setup Guide and Warranty Information

Board Build Versions

- **RB112** – complete build with two MiniPCI
- **RB111** – only one (top) MiniPCI slot

Assembling the Hardware

First to use the board:

- Insert the MiniPCI cards. There are two MiniPCI sockets on both sides of the RB112 build, and only one top connector on the RB111 build.

- In case it is planned to power the board up from a standard 48V DC PoE injector (note that the RouterBOARD does not support power over datalines), the **JP2** jumper should be opened.

- Install the board in a case and connect other peripherals and cables.

- Plug in power cable to turn on the board.
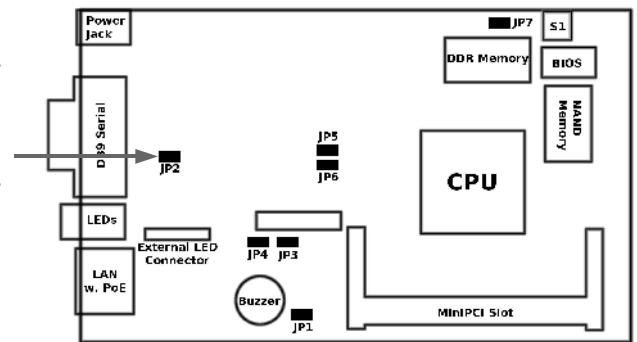
Powering

The board accepts 11..60 V DC from either power jack or Ethernet port:

- direct-input power jack **J7** – 5.5mm outside and 2mm inside diameter, female, pin positive plug.

- PoE compliant with IEEE802.3af Power over Ethernet standard (except for no power over datalines is supported), which also accepts a wide range of non-standard input voltages. IEEE802.3af PoE controller is only operational starting from 22-24V DC, so the **JP2** jumper should only be opened when powering from high-voltage standard-compliant PoE injector. Note that the **JP2** jumper position applies for both the power jack and PoE input.

The maximal output of the power supply is normally 3.0A, but the efficiency is decreased on lower voltages, so it is about 2-2.5A when powered from 12V DC.

Booting process

First, RouterBOOT loader is started. It displays some useful information on the onboard RS232C asynchronous serial port. The serial port is set to 115200bit/s, 8 data bits, 1 stop bit, no parity by default. **Note** that the device does not fully implement the hardware (RTS/CTS) flow control, so it is suggested to try to disable hardware flow control in the terminal emulation program in case the serial console does not work as expected, and if it does not help, make a new cable using the pinout given in the User's manual. The loader may be configured to boot the system from the onboard NAND, and/or from network. See the respective section of User's manual on how to configure booting sequence and other BIOS parameters.

DHCP or BOOTP (configurable in loader) protocols allow the RouterBOARD 500 series computer to get an initial IP address, and provide the address of a TFTP server to download an ELF boot image from. It is especially useful for software installation purpose. See the User's manual for more information and protocol details. Note that you must connect the RouterBOARD you want to boot and the BOOTP/DHCP and TFTP servers to the same broadcast domain (i.e., there must not be any routers between them).

Ports

The Ethernet port is compatible with IEEE802.3af Power over Ethernet standard and passive PoE (non-standard). The board accepts 11 to 60 V DC input voltage range. The Ethernet port support automatic cross/straight cable correction (Auto MDI/X), so you can use either straight or cross-over cables for connecting to other network devices.

Operating System Support

Currently tested operating system is MikroTik RouterOS (starting from version 2.9.12).

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Hardware. MikroTikls SIA warrants all RouterBOARD series equipment for the term of one year from the shipping date to be free of defects in materials and workmanship under normal use and service. All parts will be repaired or replaced with similar or functionally equivalent parts by MikroTikls SIA during the warranty term, except in case the returned parts have mechanical, electrical or other accidental or intended damages caused by improper use or due to wind, rain, fire or other acts of nature.

Parts (or systems) must be shipped pre-paid to our facility in Riga, Latvia. All items must have a Return Material Authorization (RMA) which you can get by contacting us via email, telephone or fax. RMA must be printed, signed, and enclosed with the shipment, also the RMA number must be written on the package itself. Parts sent without following the proper procedure will be treated as those not to be repaired or replaced due to the above mentioned conditions. Items proved to be free of defects in our lab will be returned to the customer at the customer's expense. Those that do meet the warranty repair requirements will be repaired or replaced, and returned to the customer's location at our expense, extending the warranty term for the time the items are being shipped to and from our facility and replaced or repaired.

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