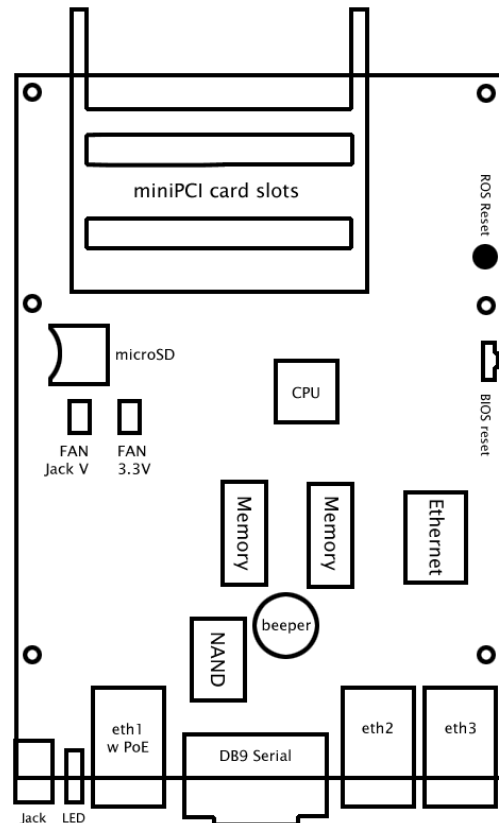
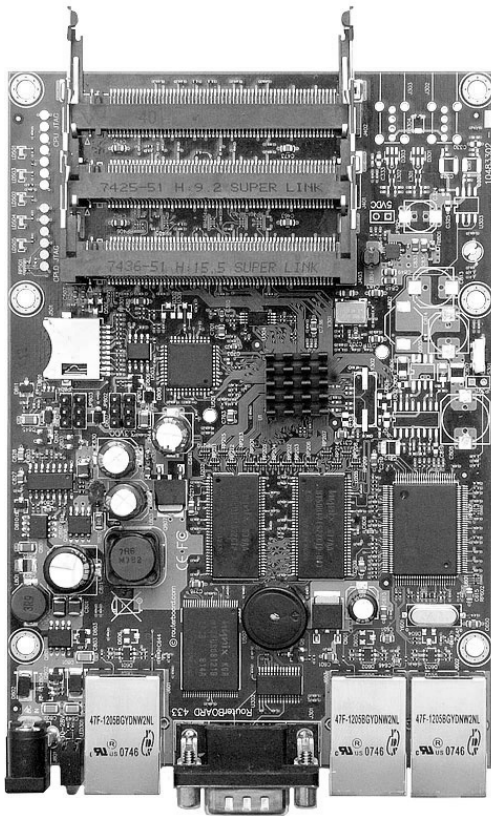


# RouterBOARD 433/433AH

## Quick Setup Guide and Warranty Information



### Assembling the Hardware

First use of the board:

- Insert the MiniPCI cards;
- Install the board in a case and connect antenna wires, if needed;
- Connect other peripherals and cables;
- Plug in power cable to turn on the board.

### Powering

The board accepts powering from either the power jack or the LAN1 Ethernet port:

- direct-input power jack **J801** (5.5mm outside and 2mm inside diameter, female, pin positive plug) accepts 10..28 V DC (overvoltage protection starts at 30V).
- LAN1 Ethernet port **J601** accepts 10..28 V DC input (at the board; higher voltage needed to compensate for power loss on long cables; at least 18V suggested) from **non-standard (passive)** Power over Ethernet injectors (no power over datalines).

The maximum output of the power supply available for extension cards is normally 16W.

### Booting process

First, RouterBOOT loader is started. It displays some useful information on the onboard RS232C asynchronous serial port. The serial port is set by default to 115200bit/s, 8 data bits, 1 stop bit, no parity. **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 433 series board 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. 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 – they must be on the same Ethernet switch).

## Extension Slots and Ports

- Three Ethernet ports, supporting automatic cross/straight cable correction (Auto MDI/X), so you can use either straight or cross-over cables for connecting to other network devices. The first Ethernet port accepts 10..28 V DC powering from a passive PoE injector. The other two Ethernet ports **do not** support PoE powering.
- Three MiniPCI Type IIIA/IIIB ports with 3.3V power signaling.
- DB9 RS232C asynchronous serial port.
- microSD card slot for storage expansion (only on RB433AH)

## Buttons

- ROS reset hole. While booting, and holding a metal object in this hole (so that it's metal sides short-circuit) will cause RouterOS software to be reset to defaults
- BIOS Loader backup button. Holding the button while booting will cause the backup bootloader to be used.

## Operating System Support

Currently tested operating system is MikroTik RouterOS (starting from version 3.4).

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Instructions are located on our webpage here: <http://rma.mikrotik.com>

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