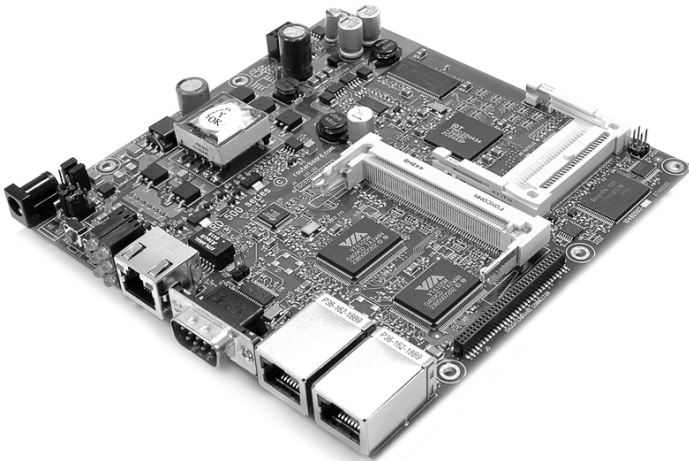


# RouterBOARD 500

## Quick Setup Guide and Warranty Information

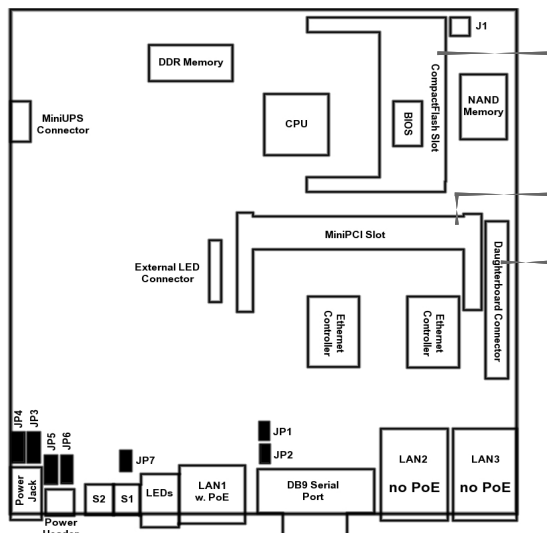


### Board Build Versions

- **RB532c** – complete build with all connectors except the telecom power header
- **RB511** – no high voltage support (no transformer); one Ethernet port; one MiniPCI slot; no daughterboard and CF connector; no telecom power header
- **RB512** – no high voltage support (no transformer); one Ethernet port; two MiniPCI slot; no daughterboard and CF connector; no telecom power header

### Assembling the Hardware

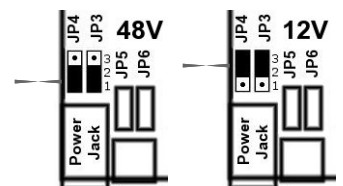
First to use the board:



- In most cases you do not need to use any additional boot devices, as you can boot the RouterBOARD from the onboard NAND memory. On RB532 build you can also install a CompactFlash module or Microdrive drive, which can be used as an alternative boot device or an additional storage medium. **Warning! The RouterBOARD 500 series does not support hot insert of CompactFlash/Microdrive devices.**
- MiniPCI socket. There is also one MiniPCI socket on the other side of the board.
- One of the RouterBOARD 500 Daughterboard options (ordered separately) may be secured on top of the main board.
- Configure jumpers. The board should have 4 jumpers already set in some positions. Be very careful setting the jumpers as you can permanently damage the board should you set them incorrectly. The Jumper Index of the User's manual describes all possible jumper positions. The most important ones are described further on.
- Install the board in a case and connect other peripherals and cables.
- Plug in power cable to turn on the board.

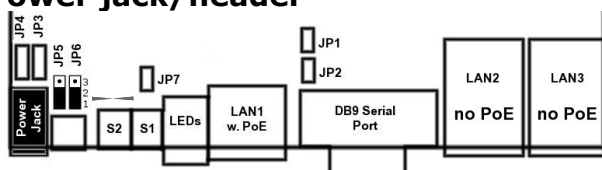
### Powering

JP3 and JP4 choose input voltage (**1-2** for 25..56V DC, **2-3** for 6..22V DC). Because of wire resistance, PoE requires higher voltage (it is recommended to use 11V minimum). Note that the RB511/512 build versions do not accept 25..56V DC powering. **CAUTION! If JP3 and JP4 are switched to the 2-3 position, and a higher voltage (e.g. 48V) power adapter or a standard PoE injector is used, the board will be irreparably broken and exchange will not be covered by warranty.**



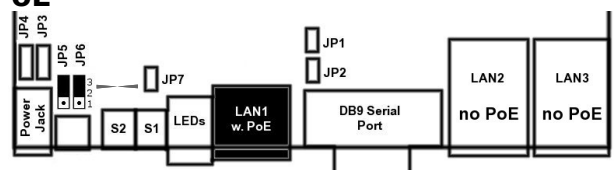
Power source is chosen with jumpers JP5 and JP6:

### Power jack/header



Power jack/header (both JP5 and JP6 **must** be switched to the **1-2** position) accepts 6 to 22 V or 25 to 56 V DC depending on the position of JP3 and JP4

### PoE



IEEE802.3af Power over Ethernet (both JP5 and JP6 **must** be switched to the **2-3** position) accepts 12V or 48V DC powering depending on the position of JP3 and JP4. **Note: LAN2 and LAN3 ports are not compatible with PoE!**

## 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, hardware (RTS/CTS) flow control by default. **Note** that some null-modem cables do not implement or implement incompletely 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 an internal storage device (an onboard NAND or CompactFlash/Microdrive device on RB532 build), 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 first Ethernet port is compatible with IEEE802.3af Power over Ethernet standard and passive PoE (non-standard). The board accepts either 12 or 48 V DC input voltage according to the configuration (see Powering section of this manual on how to choose the PoE option and select voltage). The second and third Ethernet ports (RB532 build option only) do not support Power over Ethernet. **CAUTION! You may seriously damage the board by connecting PoE injector to the ports, which do not support PoE powering.** Note that all three Ethernet ports 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 systems are: MikroTik RouterOS (version 2.9 and up) and GNU/Linux (kernel 2.4). Linux kernel patch required to boot up the board is downloadable from [www.routerboard.com](http://www.routerboard.com).

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**Hardware.** MikroTiks 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 MikroTiks 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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