Manuals+ — User Manuals Simplified.

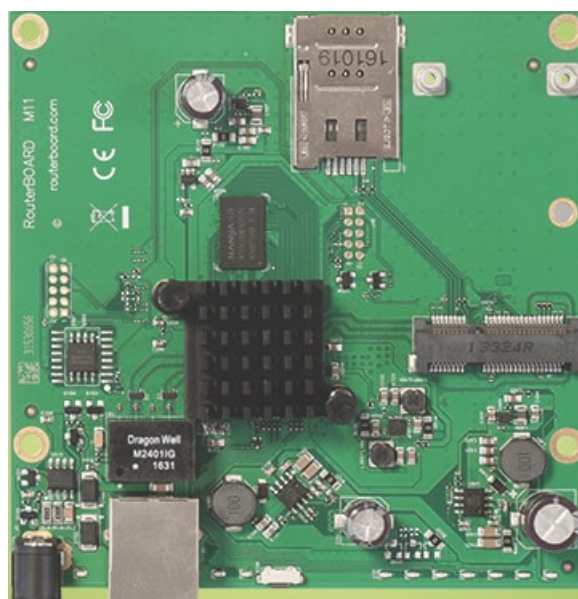# MikroTik RBM11G Wireless Routerboard User Manual

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MikroTik RBM11G Wireless Routerboard

Quick Setup Guide and Warranty Information

RB912G is a dual chain 5GHz 802.11n wireless device with a Gigabit Ethernet port. Two models are available with 5GHz wireless: RB912UAG- SHPnD (miniPCIe, SIM slot for 36, USB 2.0 port, 64MB RAM), and RB9116-SHPnD (32MB RAM, no SIM, no USB, no MiniPCIe)
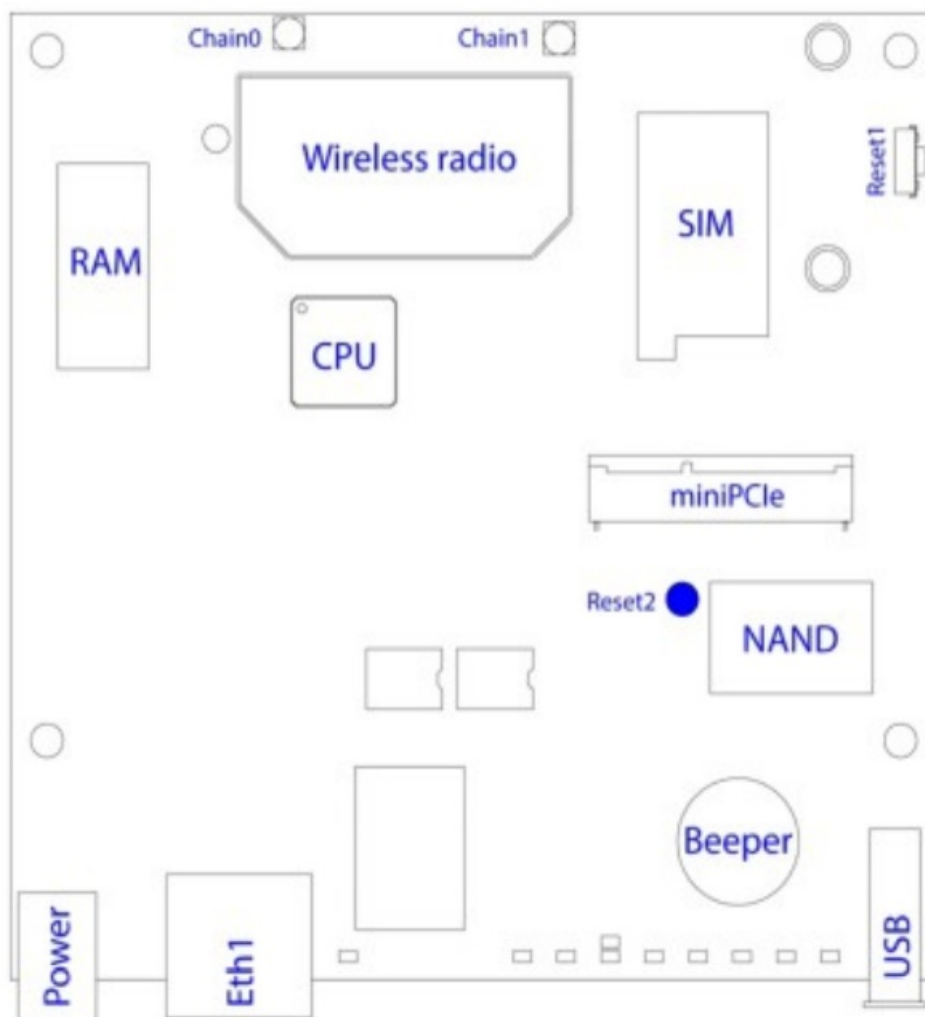
First use

- Connect antenna cables to the built in Wi-Fi connectors
- Device accepts 8-30V with a passive PoE powered Ethernet cable or with a power connector to the Power Jack

Powering

The board accepts power with the following modes:

- With PoE to Ether1 port. It accepts 8-30V 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 data lines). The board does not work with IEEE802.3af compliant 48V power injectors.
- Direct input to the power jack 8-30V

Booting process

RouterOS is the operating system of all RouterBOARD routers. Please see detailed configuration guide here:

This device doesn't come fitted with a Serial Port connector, so initial connection has to be done via the Ethernet cable, using the MikroTik Winbox utility. Winbox should be used to connect to the default IP address of 192.168.88.1 with the username admin and no password. In case you wish to boot the device from network, for example to use MikroTik Netinstall, hold the RESET button of the device when starting it until the LED light turns off, and Groove will start to look for Netinstall servers. In case IP connection is not available, Winbox can also be used to connect to the MAC address of the device. More infor- mation here: **http://wiki.mikrotik.com/wiki/First_ time_startup**

Extension Slots and Ports

- One Gigabit Ethernet port (With Auto MDI/X so you can use either straight or cross-over cables for connecting to other network devices). The Ethernet port accepts 8-30V DC powering from a passive PoE injector.
- Built-in 802.a/n WiFi card (AR9342) with two MMCX connectors
- Only RB912UAG-5HPnD: miniPCl-e slot for either a 802.11 Wireless card, or a 3G modem (when a 3G modem is used in min PCle slot, USB port will become inactive. In RouterOS you can select which of the 3G modems you want to use, USB or miniPCle). SIM slot is available for miniPCle 3G cards.
- Only RB912UAG-SHPnD: USB 2.0 port

Federal Communication Commission Interference Statement (FCC ID: R4N-EMV5GHZ)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference,
2. this device must accept any interference received, including interference that may cause undesired operation.

This device and its antenna must not be co-located or opera- tion in conjunction with any other antenna or transmitter.
IMPORTANT: Exposure to Radio Frequency Radiation. 20 cm minimum distance has to be maintained between the antenna and general public. Under such configuration, the FCC radiation exposure limits set forth for an population/uncontrolled environment can be satisfied.

Antenna Installation. WARNING: It is installer's responsibility to ensure that when using the authorized antennas in the United States (or where FCC rules apply); only those antennas certified with the product are used. The use of any antenna other than those certified with the product is expressly forbidden in accordance to FCC rules

CFR47 part 15.204. The installer should configure the output power level of antennas, according to country regulations and per antenna type. Professional installation is required of equipment with connectors to ensure compliance with health and safety issues.

OEM statement. This module is intended for OEM installations only. As such the OEM integrator is responsible for ensuring that the end-user has no manual instructions to remove install or modify the module. This module is limited to installations in mobile or fixed applications. OEM integrators may utilize antennas of like an equal or lesser gain as appearing in the list in this document (reference 47 CFR, paragraph 15.204(c)(4) for further information on this topic. The MikroTik OEM RF Module complies with Part 15 of the FCC rules and regulations. OEM Modules have been certified by the FCC for use with other products without any further certification (as per FCC section 2.1091). Separate approval is required for other operating configurations including portable configurations with respect to 47CFR paragraph 2.1093 and different antenna configurations. The OEM is required to comply with all 47CFR labeling instructions and requirements for the finished products. Changes or modifications not expressly approved by MikroTik could void the OEM authority to install or operate the equipment. OEMs must test their final product to comply with unintentional radiators (FCC section 15.107 and 15.109) before declaring compliance of their final product to Part 15 of the FCC Rules.

WARNING: the OEM must ensure that the FCC labeling requirements are met. This includes a clearly visible label on the outside of the OEM enclosure specifying the appropriate MikroTik OEM RF Module FCC identifier for this product as well as any other required FCC notices as presented below. Contains FCC ID: R4N-EMV5GHZ This enclosed device complies with 47CFR paragraph 15 C of the FCC rules and regulations. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Labeling and text information should be of a size of type large enough to be readily legible, consistent with the dimensions of the equipment and the label.

Documents / Resources

MikroTik RBM11G Wireless Routerboard [pdf] User Manual
EMV5GHZ, R4N-EMV5GHZ, RBM11G, Wireless Routerboard