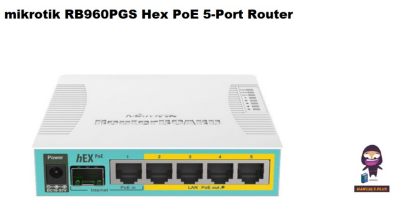


# mikrotik RB960PGS Hex PoE 5-Port Router User Manual



Contents



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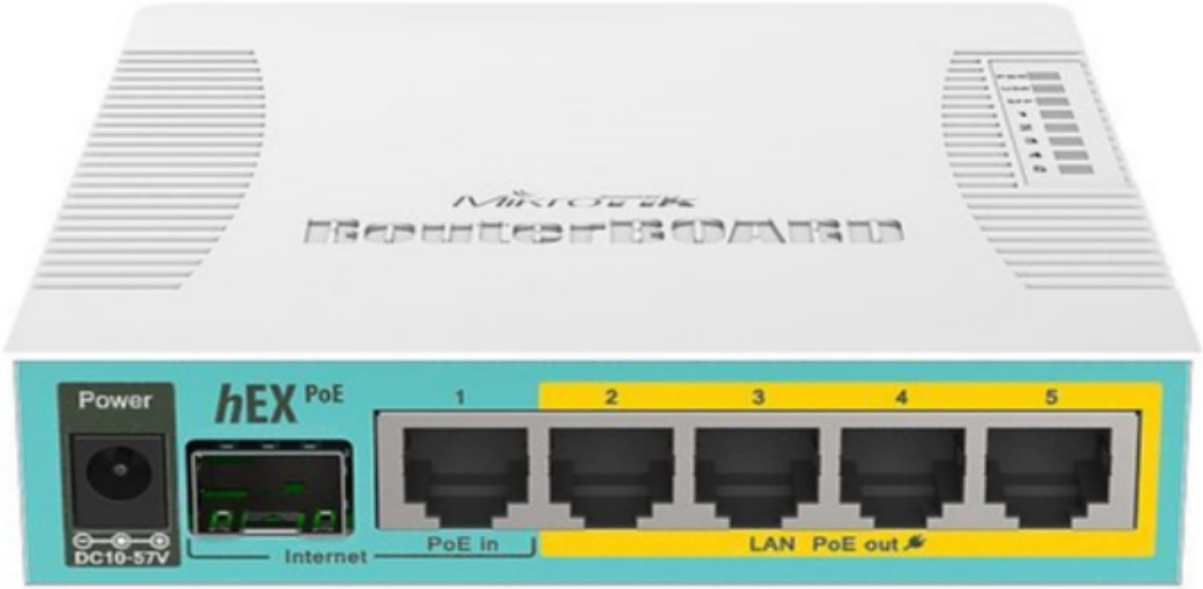



### Product Specifications

- **Model:** hEX PoE (RB960PGS)
- **Ports:** 5 Gigabit Ethernet ports, 1 SFP port
- **Power Consumption:** 6W without attachments, 59W under maximum load with attachments
- **Mounting:** Indoor wall mountable
- **IP Rating:** IPX0

### Product Usage Instructions

- This device is designed for indoor use. You can place it on a flat surface or mount it on the wall using screws (not included).
- Ensure the cable feed points downwards when wall-mounted. Use Cat6 cable for optimal performance.
- The device consumes 6W without attachments and 59W under maximum load. Connect the power cord to power the device.
- The device features five Gigabit Ethernet ports with auto MDI/X support, a 1G SFP port, and a USB type-A slot for connectivity.
- The reset button on the device can be used for various functions related to routerOS configuration and recovery.
- Refer to the manual for detailed instructions on using the reset button.
- Connect the Ethernet cable from the device to the POE port of the POE adapter.
- Connect an Ethernet cable from your LAN to the LAN port of the POE adapter, following the arrows for data and power flow.
- Connect the power cord to the adapter and plug it into a power outlet.

### FAQ

- **Q:** Does the hEX PoE router support Power over Ethernet (PoE)?
- **A:** Yes, the hEX PoE router supports PoE and can power other compatible devices through its ports.
- **Q:** What is the default power consumption of the hEX PoE router?

- **A:** The default power consumption of the hEX PoE router is 6W without any attachments.

hEX PoE is a powerful five-port Gigabit Ethernet router with an SFP port capable of powering other devices.

**Safety Warnings**

- Before you work on any equipment, be aware of the hazards involved with electrical circuitry, and be familiar with standard practices for preventing accidents.
- Ultimate disposal of this product should be handled according to all national laws and regulations.
- The Installation of the equipment must comply with local and national electrical codes.
- This unit is intended to be installed in the rackmount. Please read the mounting instructions carefully before beginning installation. Failure to use the correct hardware or to follow the correct procedures could result in a hazardous situation for people and damage to the system.
- This product is intended to be installed indoors. Keep this product away from water, fire, humidity or hot environments.
- Use only the power supply and accessories approved by the manufacturer, and which can be found in the original packaging of this product.
- Read the installation instructions before connecting the system to the power source.
- We cannot guarantee that no accidents or damage will occur due to the improper use of the device. Please use this product with care and operate at your own risk!
- In the case of device failure, please disconnect it from power. The fastest way to do so is by unplugging the power plug from the power outlet.
- It is the customer's responsibility to follow local country regulations, including operation within legal frequency channels, output power, cabling requirements, and Dynamic Frequency Selection (DFS) requirements. All Mikrotik devices must be professionally installed.

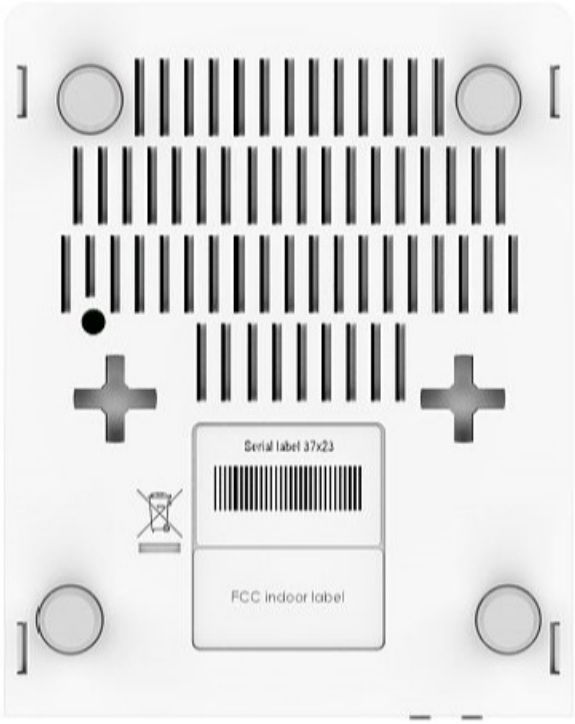
## First use

1. Choose your powering solution, please see the Powering section for possibilities.
2. Connect your Internet cable to port 1 (labeled "Internet"), and local network computers to ports 2-5.
3. Connect your direct input power jack if not using POE, to start up the device.
4. If using POE please see section POE Adapter on how to connect.
5. The device will boot up and after the short beep, the network will be available for connecting.
6. Set your computer IP configuration to automatic (DHCP).
7. Once connected to the network, open http://192.168.88.1 in your web browser to start configuration, since there isno password by default, you will be logged in automatically (or, for some models, check user and wireless passwords on the sticker)
8. We recommend clicking the "Check for updates" button and updating your routerOS software to the latest version to ensure the best performance and stability.
9. Set up your password on the screen that loads.

## Mounting

This device is designed for use indoors by placing it on a flat surface or mounting on the wall, mounting points

areshown in the picture below, screws are not included in the package. Screws with size 4×25 mm fit nicely, depending on your wall structure you can use dowels 6×30 mm and 6 mm drill bit if needed.




- When mounting on the wall, please ensure that the cable feed is pointing downwards. We recommend using a Cat6 cable for our devices. The IP rating scale for this device is IPX0.
- **Warning!** This equipment should be installed and operated with a minimum distance of 20 cm between the device andyour body. The operation of this equipment in the residential environment could cause radio interference.

## Powering

The device accepts power from the power jack or the first Ethernet port (Passive PoE):

- Direct input power jack (5.5mm outside and 2mm inside, female, pin positive) accepts 12 – 57 V  DC.
- The first Ethernet port accepts passive Power over Ethernet 12 – 57 V  DC.
- PoE out on 2 – 5 Ethernet port,
- It also supports passive PoE input and passive or 802.3af/at PoE output. Ethernet ports 2-5 can power other PoE-capable devices with the same voltage as applied to the unit. It can power at/afmode B (4,5+)(7,8-) compatible devices if 48-57 input voltage is used.

The power consumption of this device under maximum load with attachments is 59 W. Without attachments 6 W.

**Power output**
This device can supply PoE power to external devices from its Ethernet ports. This is convenient as you don’t need any additional PoE injectors to power other devices. The output voltage will be the same as the input voltage. The maximum power output of each Ethernet port in this mode is 1 A (the total maximum for all ports is 2 A). Once Power Output is enabled in RouterOS, the Ethernet LED adds red color to it (green means an Ethernet link is made, red means power but no link, red and green both mean there is link and power).

**Booting process**

RouterOS includes many configuration options in addition to what is described in this document. We suggest starting here to get yourself accustomed to the possibilities: **https://mt.lv/help**. In case an IP connection is not available, the Winbox tool (**https://mt.lv/winbox**) can be used to connect to the MAC address of the device from the LAN side (all access is blocked from the Internet port by default).
For recovery purposes, it is possible to boot the device from the network, see the section Reset button.

## Extension Slots and Ports

- The device has five individual Ethernet ports, supporting automatic cross/straight cable correction (Auto MDI/X), soyou can use either straight or cross-over cables for connecting to other network devices.
- 1G SFP port.
- USB type-A slot.

Please visit wiki pages for the MikroTik SFP module compatibility table:
**https://wiki.mikrotik.com/wiki/MikroTik_SFP_module_compatibility_table**

**Buttons and jumpers**
Reset button

- The RouterBOOT reset button has the following functions. Press the button and apply the power, then:
- Release the button when green LED starts flashing, to reset the RouterOS configuration to defaults.
- Release the button when the LED turns solid green to clear all configuration and bridge all interfaces.
- Release the button after LED is no longer lit (~20 seconds) to cause a device to look for Netinstall servers(required for reinstalling RouterOS over the network).

Regardless of the above option used, the system will load the backup routerBOOT loader if the button is pressed before power is applied to the device. Useful for RouterBOOT debugging and recovery.

**Connecting to a POE Adapter**

1. Connect the Ethernet cable from the device to the POE port of the POE adapter.
2. Connect an Ethernet cable from your LAN to the LAN port of the POE adapter, please mind arrows for data and power flow.
3. Connect the power cord to the adapter, and then plug the power cord into a power outlet.

## Accessories

- The package includes the following accessories that come with the device:

24V 2.5A power adapter

IEC cord

**Specifications**
For more information about this product, specifications, and pictures please visit our web page:
**https://mikrotik.com/product/RB960PGS**

**Operating System Support**
The device supports RouterOS software version 6. The specific factory-installed version number is indicated in the router menu /system resource. Other operating systems have not been tested.

To avoid pollution of the environment, please separate the device from household waste and dispose of it in asafe manner, such as in designated waste disposal sites. Familiarize yourself with the procedures for the proper transportation of the equipment to the designated disposal sites in your area.

## FCC STATEMENT

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to 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, and
2. this device must accept any interference received, including interference that may cause undesired operation.

**Note:** This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to ensure compliance.

This Class B digital apparatus complies with Canadian ICES-003.

**UKCA Marking**

**CE Declaration of Conformity**

- Manufacturer: Mikrotikls SIA, Brivibas gatve 214i Riga, Latvia, LV1039.
- The full text of the EU Declaration of Conformity is available at the following internet address: https://mikrotik.com/products

Information contained here is subject to change. Please visit the product page on www.mikrotik.com for the most up-to-date version of this document.

## Documents / Resources

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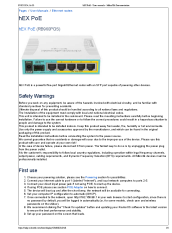
|  | mikrotik RB960PGS Hex PoE 5-Port Router [pdf] User Manual<br>RB960PGS, RB960PGS Hex PoE 5-Port Router, Hex PoE 5-Port Router, PoE 5-Port Router, 5-Port Router, Router |

## References

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- MikroTik Routers and Wireless
- User Manual