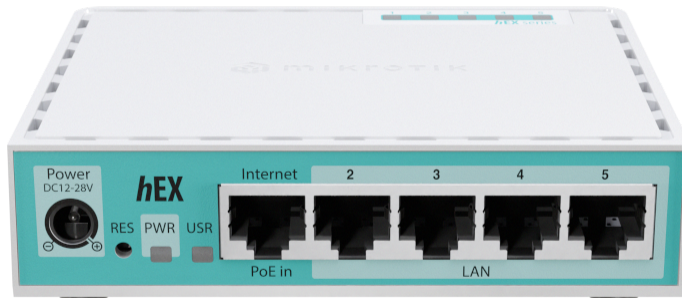# hEX refresh

[hEX refresh](#) (E50UG)

Safety Warnings

Before you work on any MikroTik equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. The installer should be familiar with network structures, terms, and concepts.
Use only the power supply and accessories approved by the manufacturer, and which can be found in the original packaging of this product.
This equipment is to be installed by trained and qualified personnel, as per these installation instructions. The installer is responsible for making sure, that the Installation of the equipment is compliant with local and national electrical codes. Do not attempt to disassemble, repair, or modify the device.
This product is intended to be installed indoors. Keep this product away from water, fire, humidity, or hot environments.
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!
The socket-outlet shall be installed near the equipment and shall be easily accessible.
In the case of device failure, please disconnect it from power. The fastest way to do so is by unplugging the power adapter from the power outlet.
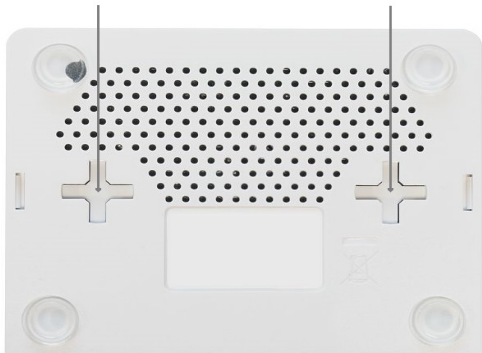
First use

1. Choose your powering solution, please see Powering section for possibilities.
2. Make sure your ISP is accepting hardware changes and will automatically assign an IP address;
3. Connect the ISP cable to the Ethernet1 port;
4. Connect the device to the power source;
5. Configure your network card settings to obtain the IP address automatically using DHCP;
6. Connect the PC to any port except Ethernet1;
7. Configuration should be made using a web browser WebFig or the WinBox configuration tool https://mt.lv/WinBox;
8. Open http://192.168.88.1 in a web browser to start setup. If the IP address is unavailable, use WinBox and connect using the MAC address. The username is "admin", and there is no password (or, for some models, check user and wireless passwords on the sticker);
9. Click the "Check for updates" button and update RouterOS to the latest version;
10. For a manual update, visit the products page at https://mikrotik.com/products to find your product. The required packages are accessible under the "Support&Downloads" menu;
11. Upload downloaded packages to the WinBox "Files" menu and reboot the device;
12. By upgrading your RouterOS software to the latest version, you can ensure optimal performance, stability, and security updates;
13. Set up your router password.

Mounting

This device is designed for use indoors by placing it on the flat surface or mounting on the wall, mounting points are shown in the picture below, screws are not included in the package. Screws with size 4x25 mm fit nicely, depending on your wall structure you can use dowels 6x30 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 Cat6 cable for our devices.

Powering

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

- Direct input power jack (5.5mm outside and 2mm inside, female, pin positive) accepts 12-28 V DC.
- The first Ethernet port accepts passive Power over Ethernet 12-28 V DC.

The power consumption of this device under maximum load with attachments is 10 W. Without attachments 4 W.

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 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 a section Reset button.

Extension slots and ports

- Product code E50UG
- CPU EN7562CT 950 MHz
- CPU architecture ARM
- CPU core count 2
- Size of RAM 512 MB
- RAM type DDR3L
- Storage 128 MB, NAND
- Number of 1G Ethernet ports 5
- USB port 1 (2.0 type A)
- PoE-in Ether1
- Operating system RouterOS (License level 4)
- Switch chip model EN7562CT
- Operating temperature -40°C to +70°C
- Dimensions 113 x 89 x 28 mm
- IP20

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 a green LED starts flashing, to reset RouterOS configuration to defaults.
- Release the button after LED is no longer lit 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.

Mode button

The action of the mode buttons can be configured from RouterOS software to execute any user-supplied RouterOS script. You can also disable this button. The mode button can be configured in RouterOS menu /system routerboard mode-button

Accessories

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

- DC EU/US Switching Power Supply 24 V, 0.38 A, 9 W, Level VI, cable:1.5 m.

Specifications

For more information about this product, specification and pictures please visit our web page: https://mikrotik.com/product/hex_2024

Operating System Support

The device supports RouterOS software version 7. The specific factory-installed version number is indicated in the RouterOS 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 a safe 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.

> ⓘ *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.*