MikroTik PWR-LINE AP User Manual

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PWR-LINE AP

The PWR-LINE series devices allow Ethernet-like connectivity between supported devices over regular electrical power lines. When plugged into the same electrical circuit, the PWR devices will establish Ethernet connectivity by using the HomePlug AV standard. The PWR-LINE AP is a wireless access point with a single Ethernet port, a built-in 802.11b/g/n WiFi Access Point and integrated PWR-LINE support. Simply plug this device directly into one of the LAN ports of your MikroTik router, and add another one somewhere further in your premises, allowing to extend wireless network coverage without needing to install any LAN cables. You can install more PWR-LINE devices to further build your network, up to eight devices are supported.

Connecting

1. Plug one PWR-LINE AP device into a power socket.

2. The main device should be plugged into one of the LAN ports of a router.

3. Other PWR-LINE AP devices can be placed anywhere in any sockets in the same power circuit.

4. Use the Winbox "Neighbors" tab to discover the addresses of the PWR LINE units.

5. Since there is no password by default, you will be logged in automatically. Set up your WiFi password and your country, to make sure local regulations are observed.

6. To add more devices that will connect over the electrical lines, add compatible devices somewhere in the same electrical circuit. See section Buttons and Jumpers on how to pair individual PWR-LINE devices.

Important note! The device is configured as a bridge, for extending your LAN network. By default, it does not have a password or firewall, and should not be connected directly to the internet, without configuring it accordingly.
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 section **Buttons and Jumpers**.

Powering

The device accepts powering directly from 100-240 V ~50/60Hz wall socket it is plugged into. The power consumption under maximum load can reach 7 W.

Extension Slots and Ports

- One 10/100 Ethernet port, 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.
- Integrated Wireless 2.4 GHz 802.11b/g/n with onboard PIF antennas, max gain 1.5 dBi.

Buttons and Jumpers

The PWR-LINE AP has the following buttons:

Reset button

- Hold the button before powering on the device, and at power-up, the button will force load the backup boot loader. Continue holding the button for the other two functions of this button.
- Release the button when the green LED starts flashing, to reset RouterOS configuration. To not load the backup boot loader, you can start holding the button after power is already applied.
- Release the button after LED is no longer flashing (~20 seconds) to cause the 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.

Sync button

Hold 0.5 3 seconds. For 120 seconds will try to communicate with another PWR-LINE device. A blinking orange LED light indicates that it is in search mode. You have to also do the same on the other PWR device, so they can synchronize. Press button again to cancel the search. You can also manually set the security keys in RouterOS settings. Hold 5 8 seconds. A new security key is generated. This is needed to remove a PWR-LINE device from an existing PWR network. Hold 10 15 seconds. Resets all PWR related settings.

Mode button

This button can be configured from RouterOS software to execute any user-supplied RouterOS script. You can also disable this button.

Notice

- The Frequency band 5.470-5.725 GHz isn't allowed for commercial use.
- In case WLAN devices work with different ranges than the above regulations, then a customized firmware version from the manufacturer/supplier is required to be applied to the end-user equipment and also prevent the end-user from reconfiguration.
- For Outdoor Usage: End-user requires approval/license from the NTRA.
- Datasheet for any device is available on the official manufacturer website.
- Products with the letters "EG" at the end of their serial number have their wireless frequency range limited to 2.400 2.4835 GHz, the TX power is limited to 20dBm (EIRP).

- Products with the letters "EG" at the end of their serial number have their wireless frequency range limited to 5.150 5.250 GHz, the TX power is limited to 23dBm (EIRP).
- Products with the letters "EG" at the end of their serial number have their wireless frequency range limited to 5.250 5.350 GHz, the TX power is limited to 20dBm (EIRP).

> Please make sure the device has a lock package (firmware version from the manufacturer) which is required to be applied to the end-user equipment to prevent the end-user from reconfiguration. The product will be marked with country code "-EG". This device needs to be upgraded to the latest version to ensure compliance with local authority regulations! It is the end users responsibility to follow local country regulations, including operation within legal frequency channels, output power, cabling requirements, and Dynamic Frequency Selection (DFS) requirements. All MikroTik radio devices must be professionally installed.

Operating system support

The device supports RouterOS software with the version number at or above what is indicated in the RouterOS menu /system resource. Other operating systems have not been tested.

Federal Communication Commission Interference Statement

FCC ID: TV7PL64112ND

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, and (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 operation 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 the user. Under such configuration, the FCC radiation exposure limits set forth for a population/uncontrolled environment can be satisfied. Antenna Installation.
WARNING: It is the 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 with 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 for equipment with connectors to ensure compliance with health and safety issues.

Industry Canada

IC: 7442A-PL64112ND This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

CE Declaration of Conformity

Full Declaration of Conformity (DoC) may be obtained by visiting our product page on **https://mikrotik.com/products** Manufacturer: Mikrotikls SIA, Brivibas gatve 214i Riga, Latvia, LV1039.

> Hereby, Mikrotīkls SIA declares that this routerboard is in compliance with the essential requirements and other relevant provisions of directive 2014/53/EC.

MPE statement

This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body unless specifically stated otherwise in page 1 of this document. In RouterOS you must specify your country, to make sure local wireless regulations are observed.

EAC **Frequency bands terms of use**

Frequency range (for applicable models)	Channels used	Maximum Output Power (EIRP)	Restriction
2412-2472 MHz	1 – 13	20 dBm	Without any restriction to use in all EU Member States
5150-5250 MHz	26 – 48	23 dBm	Restricted to indoor use only*
5250-5350 MHz	52 – 64	20 dBm	Restricted to indoor use only*
5470-5725 MHz	100 – 140	27 dBm	Without any restriction to use in all EU Member States

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 radio devices must be professionally installed!

Note. 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

MikroTik PWR-LINE AP [pdf] User Manual
MikroTik, PWR-LINE, AP

References

- **Collaboration software for software, IT and business teams**
- **MikroTik Routers and Wireless**
- **Pages - User manuals - MikroTik Documentation**
- **Data over Powerlines - User manuals - MikroTik Documentation**
- **PWR-LINE AP - User manuals - MikroTik Documentation**
- **User Manuals - User manuals - MikroTik Documentation**
- **Labelled content - User manuals - MikroTik Documentation**
- **Labelled content - User manuals - MikroTik Documentation**
- **PWR-LINE AP - User manuals - MikroTik Documentation**
- **MikroTik Routers and Wireless - Products: PWR-LINE AP (EU plug)**
- **MikroTik Wiki**
- **MikroTik Routers and Wireless**

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