Wi-Fi signal repeater

RR-11

User manual
Firmware version 1.5.0

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1 Introduction

1.1 Abstract

Despite the variety of modern access points, the problem of insufficient coverage area remains relevant. There are many ways of solving such a problem, and one of the simplest ways from the point of view of installation and configuration is to use special network devices — repeaters. RR-11 is a Wi-Fi signal repeater, designed to expand the coverage area of wireless networks. The device allows you to eliminate blind spots in detached houses, multi-room apartments, as well as small offices.

This user manual describes the purpose, main technical features, design, installation procedure, rules for configuring, monitoring and changing the software of RR-11 wireless signal repeaters.

1.2 Symbols

Tips, notes and warnings

Tips
Tips provide important information, tips or suggestions for using and setting up the device.

Notes
Notes contain important information, tips or recommendations on device operation and configuration.

Warnings
Warnings inform the user about situations that can harm the device or a person, lead to incorrect operation of the device or loss of data.

2 Device description

2.1 Purpose

RR-11 is a wireless signal repeater designed to expand the coverage area of wireless networks. The device allows you to eliminate blind spots and optimize the performance of your Wi-Fi network.

With support for IEEE 802.11n/ac standards, RR-11 repeater provides high data transfer rates. The use of MIMO technology and internal antennas makes RR-11 a universal solution for expanding your home network and provides high-quality multimedia transmission of 4K content. RR-11 supports EasyMesh technology and can be used in EasyMesh network as an agent.

2.2 Device specification

The device is powered from 100 — 240 V, 50 — 60 Hz power network.

Interfaces:

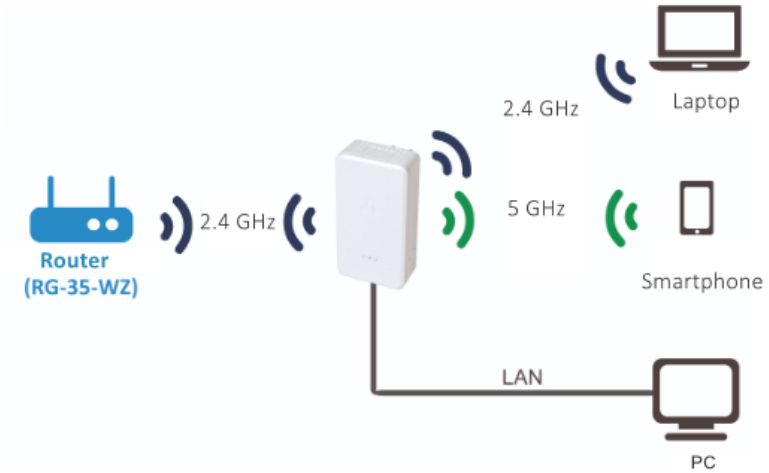
- LAN: 1 Ethernet port RJ-45 10/100/1000BASE-T;
- WLAN:
  - IEEE 802.11b/g/n 2.4 GHz;
  - IEEE 802.11a/n/ac 5 GHz.

Functions:

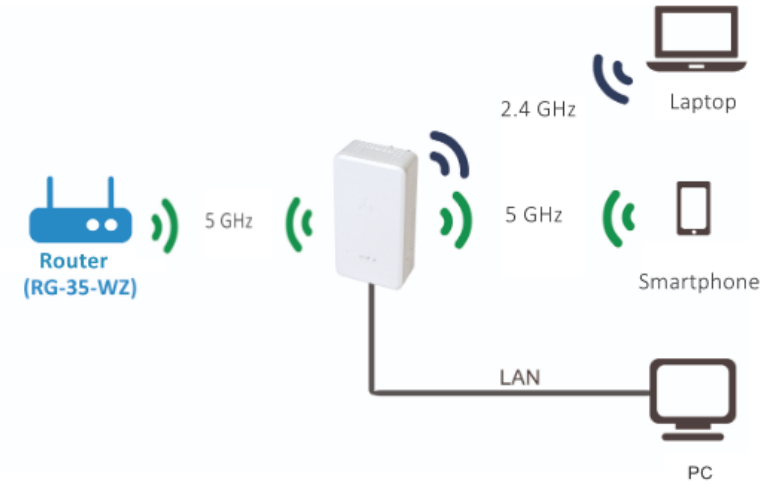
- Support for WPA/WPA2 encryption standards;
- Support for WMM (IEEE 802.11e);
- Support for WPS;
- Wireless Multicast Forwarding;
- Support for SU-MIMO 2x2;
- Support for EasyMesh (IEEE 802.11k/v).

2.3 Connection diagrams for RR-11

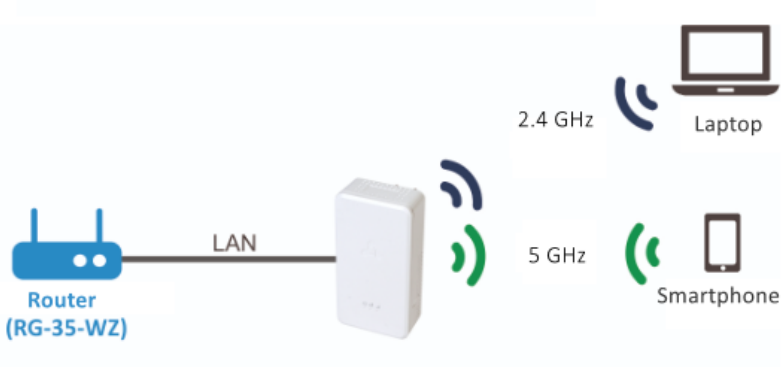
2.4 GHz repeater:



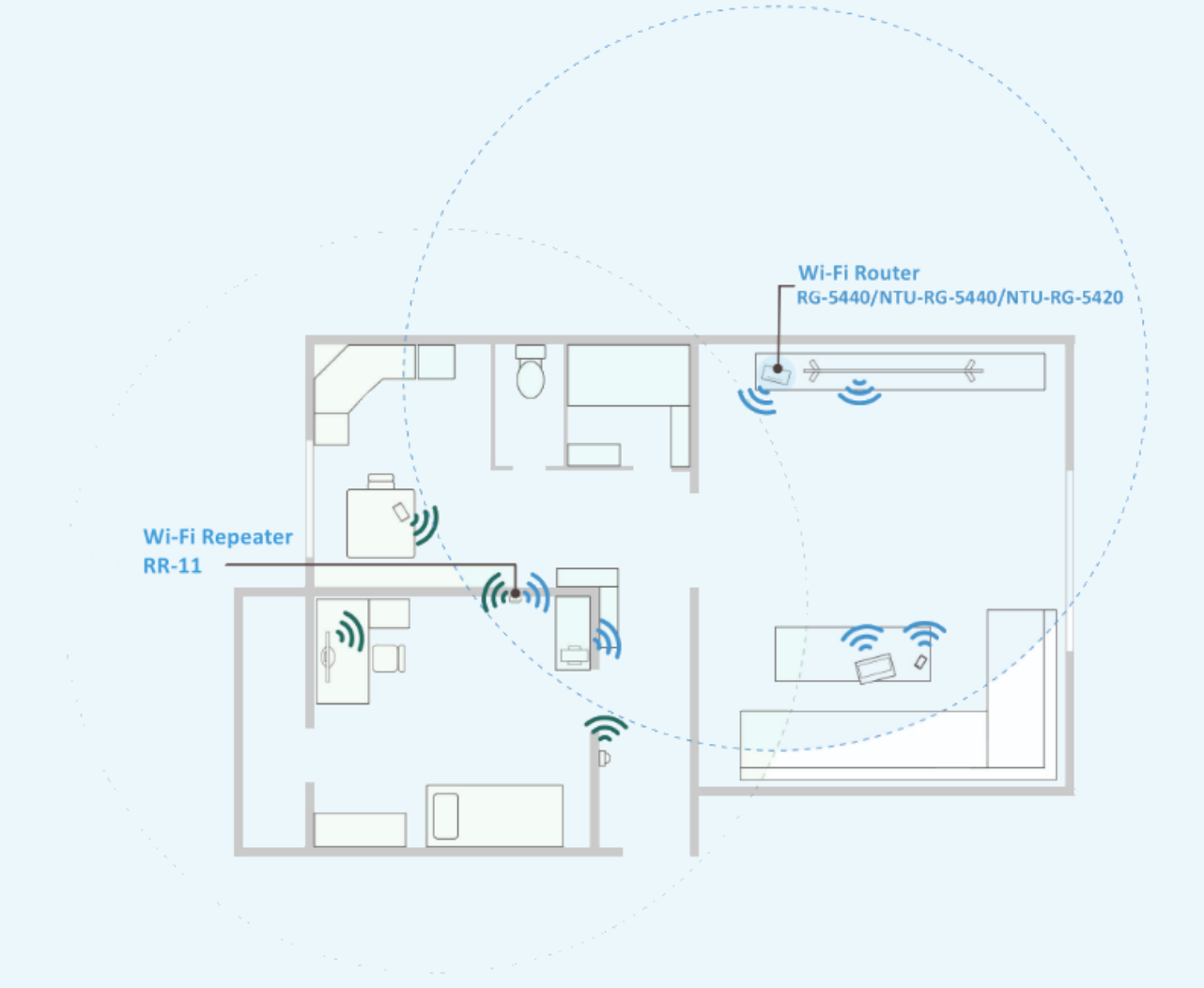
5 GHz repeater:



Access point:



2.4 RR-11 use case



Agent in EasyMesh network
When connected to an ELTEX router with a firmware version that supports EasyMesh, RR-11 repeater will be automatically configured as an agent in the EasyMesh network.

2.5 Technical features

General parameters	
Clock frequency	1 GHz
RAM	128 MB
ROM	16 MB
Operating system	Linux 3.10
LAN Ethernet interface parameters	
Number of interfaces	1
Connector type	RJ-45
Data rate, Mbps	10/100/1000, autonegotiation
Standards	BASE-T
Wireless interface parameters	
Wi-Fi class	AC1200
Number of antennas	2
Antenna type	internal
Standards	802.11 a/b/g/n/ac/k/v
Frequency range	2402-2482 MHz 5170-5330 MHz 5650-5835 MHz
MIMO	2.4 GHz 2×2 SU-MIMO 5 GHz 2×2 SU-MIMO
Modulation	2.4 GHz: DSSS, CCK, BPSK, QPSK, 16QAM, 64QAM 5 GHz: BPSK, QPSK, 16QAM, 64QAM, 256QAM

Data transfer rate	802.11b: up to 11 Mbps 802.11a: up to 54 Mbps 802.11g: up to 54 Mbps 802.11n (HT20): up to 144 Mbps 802.11n (HT40): up to 300 Mbps 802.11ac (HT80): up to 867 Mbps
Maximum output power of the transmitter [1]	2.4 GHz: up to 20 dBm 5 GHz: up to 20 dBm
Antenna gain	2.4 GHz: 3.5 dBi 5 GHz: 3 dBi
Receiver sensitivity	2.4 GHz: up to -90 dBm (MCS0, HT20) up to -71 dBm (MCS7, HT20) 5 GHz: up to -93 dBm (MCS0, HT20) up to -73 dBm (MCS7, HT20)
Security	WPA (TKIP+AES), WPA2 (TKIP+AES), WPA/WPA2 (TKIP+AES)
Control	
Remote control	web interface
Access restriction	by password
Physical specifications	
Power	from 100–240 V, 50–60 Hz power network
Maximum power consumption	not more than 7 W
Operating temperatures	from +5 to +40 °C
Relative humidity at 25 °C	up to 80 %
Dimensions (W×H×D)	68×131×73 mm
Weight	0.172 kg

[1] The number of channels and the maximum output power will vary according to the Radio Frequency Regulation in your country.

2.6 Design

RR-11 wireless signal repeater is implemented in a plastic case.

2.6.1 Front panel of the device

RR-11 Front panel

Description of front panel LED indicators

	LED	LED status	Device state	
1	Power	Solid red	The device is launching (1 minute max.)	
		Red, flashing	The firmware is updating/the device is resetting	
		Solid green	The device is powered on	
2	WPS	Green, flashing	The device is connecting to an access point (router) using WPS technology	
3	Signal	Not lit	No connection to an access point (router)	
		Solid green	The device has been connected to an access point (router) and has access to the Internet	The signal level is good, more than -70 dBm
		Green, flashing	The device is connected to an access point (router), no access to the Internet	
		Solid red	There is an Internet connection	The signal level is weak, -70 dBm or less
		Red, flashing	There is no Internet connection	

2.6.2 Left panel of the device

RR-11 left panel

Description of the left panel elements

	Left panel elements	Description
1	F	Button for restoring the factory default settings

2.6.3 Right panel of the device

RR-11 right panel

Description of the right panel elements

	Right panel elements	Description
1	WPS	Button for connecting the client via the WPS protocol

2.6.4 Bottom panel of the device

RR-11 bottom panel

Description of RR-11 bottom panel elements

	Bottom panel elements	Description
1	LAN	10/100/1000BASE-T port (RJ-45 connector) for network connection
2	LEDs	LAN connector LEDs

LAN connection indication

LED status	Device state
Only green lights	The connection is established at 10/100 Mbps
Green and orange light	The connection is established at 1000 Mbps
Green flashes	The process of packet data transmission via LAN interface is going on

2.7 Restoring the factory default settings

To restore the device factory default settings, press and hold the "F" button for more than 3 seconds until ⏻ indicator on the front panel starts flashing red. When ⏻ indicator stops flashing, the factory reset has been completed, the device is rebooting.

By default, the DHCP server is running on all interfaces;
- **LAN interface address is 192.168.0.1, the subnet mask is 255.255.255.0;**
- **The username/password for access via the web interface: admin/password.**

2.8 WPS button management

The device supports connection to the router Wi-Fi networks via WPS. To configure the connection, enable the WPS function on the router, also press and hold the WPS button on the device right panel for 3 seconds.
After that, the device will connect to the router automatically. Connection to the router takes no more than two minutes. In case the connection is not successful, try again and make sure that the WPS function on the repeater was activated no later than 2 minutes after the WPS function was enabled on the router.

Configuring with WPS technology as a client is only available for non-configured devices. Before using the WPS button, you must reset your device to the factory settings.

Once configured, a DHCP client is launched on the device.

2.9 Delivery package

RR-11 standard delivery package includes:

1. RR-11 Wi-Fi signal repeater;
2. Device quick configuration guide.

3 Installation order

3.1 Safety rules

1. Do not install this device near any heat sources or in places where temperature is below 5 °C or above 40 °C.
2. Keep this device away from the direct sunlight.
3. Do not subject this device to smoke, dust, water or other liquids. Prevent mechanical damage to the device.
4. Do not open the device case. There are no user serviceable parts inside.
5. At the end of the useful life, do not dispose of the device with normal household waste.

In order to avoid components overheating and device malfunctioning, do not place any objects on the device surface.

3.2 Installation recommendations

1. Check the device for visible mechanical damage before installing and turning it on. If the device is damaged, stop the installation process, fill in a corresponding document and contact your supplier.
2. If your device has been exposed to the cold for a long period of time, let it warm up at room temperature for two hours before starting work. If your device has been exposed to high humidity for a long period of time, let it stay under normal conditions for at least 12 hours before turning it on.
3. The device shall be installed horizontally, following the safety rules.
4. When placing your device, in order to provide the best Wi-Fi coverage consider the following rules:
    - Install the device in the area where the wireless network of the router is securely received;
    - Minimize the number of barriers (walls, ceilings, furniture, etc.) between RR-11, the router, and other wireless network devices;
    - Do not install the device near (about 2 m) electrical and radio devices;
    - It is not recommended to use radiotelephones and other equipment operating at the frequency of 2.4 GHz, 5 GHz, within the range of a Wi-Fi network;
    - Obstacles like glass/metal constructions, brick/concrete walls, water cans and mirrors can significantly reduce Wi-Fi action radius.

3.3 Connecting RR-11 to a network

To extend Wi-Fi coverage area, connect RR-11 to a network of your access point (or router).

> **The way of connection of RR-11 with EasyMesh technology support and without EasyMesh technology support is different.**
> **If RR-11 is connected to the equipmnet without EasyMesh technology support, RR-11 is not launched in EasyMesh agent mode.**

3.3.1 Connecting RR-11 to a network router without EasyMesh technology support

3.3.1.1 Method 1. Using WPS button

1. Plug RR-11 into the power socket near the Wi-Fi router (or access point) you want to connect to. Wait until led turns green.
2. Press WPS button on the Wi-Fi router.

> **The way of WPS connection may vary for different routers. Please read the manual for your router.**

> **For a successful connection, the user has 2 minutes after pressing WPS button on the router to press WPS on RR-11.**

3. Press and hold WPS button on RR-11 untill indicator starts flashing. When RR-11 is connected to the Internet, its indicator will turn green (successful connection) or flash green (no Internet access).

> **By default, the repeater copies the name and Wi-Fi settings of the network to which it will be connected in both ranges: 5 GHz and 2.4 GHz. If necessary, you can change the name and Wi-Fi network settings via the web interface.**

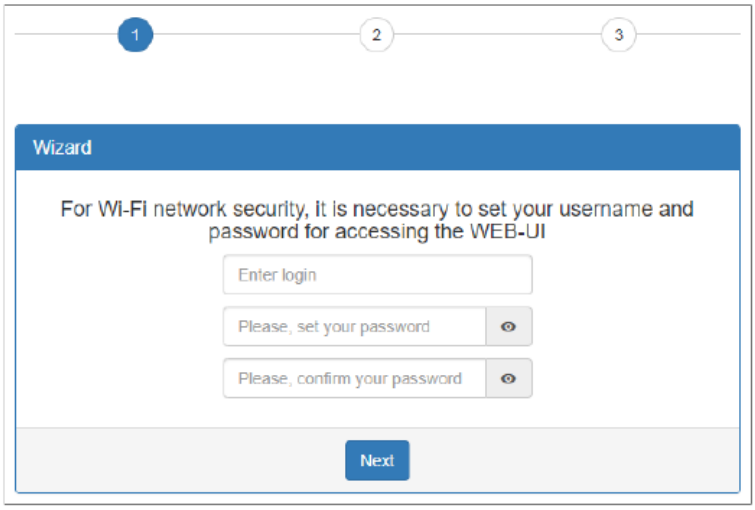
> **EasyMesh network settings**
> **When connecting to ELTEX router with a firmware version that supports EasyMesh, RR-11 repeater will be automatically configured as an agent in the EasyMesh network. In the EasyMesh network, all network parameters are synchronized between the controller and the agent.**

3.3.1.2 Method 2. Via web interface in repeater mode

1. Plug RR-11 into the power socket near the Wi-Fi router (or access point) you want to connect to. Wait until led turns green.
2. Connect to the repeater using smartphone or PC via Wi-Fi or Ethernet cable (not supplied in the delivery package).
    a. Via Wi-Fi: connect PC (smartphone) to a Wi-Fi network of the repeater — RR-WiFi-XXXX (where XXXX — the last 4 characters of SSID, specified on the label on the device case top panel);

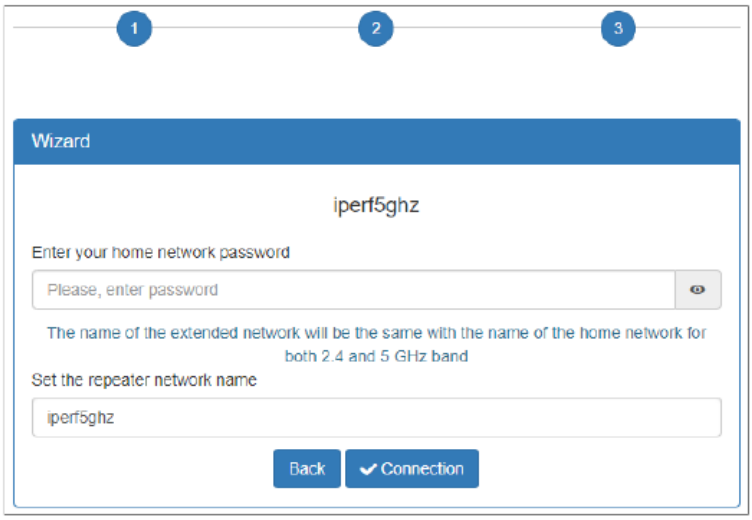
b. Using Ethernet cable: connect LAN port of the repeater to LAN port of your PC using Ethernet cable (not supplied in the delivery package).

3. Open a web browser and type the address of the device into URL bar: http://rr.loc/ or http://192.168.0.1.
4. Enter username and password to the authorization window. By default, *admin* and *password* are used for username and password correspondingly. Click "Log in".
5. The "Wizard" window will open. Set the username and password to access the repeater web interface. Click "Next".



6. In the list that appears, select your Wi-Fi network and click on the line with its name.

7. Specify your Wi-Fi network password, as well as the repeater network name, then click "Connection". When the repeater is connected to the Internet, its indicator will turn green.



By default, the repeater copies the name and Wi-Fi settings of the network to which it will be connected in both ranges: 5 GHz and 2.4 GHz. If necessary, you can change the network name at the last wizard step. It is also available to change the name and settings later via web interface.

EasyMesh network configuration via web interface is not available in firmware version 1.5.0. When connecting a repeater to an EasyMesh network via web interface, its IP address will not be displayed in the EasyMesh topology, but it will be displayed in the list of DHCP clients.
It is necessary to connect using WPS or Ethernet.

3.3.1.3 Method 3. Via web interface in access point mode

1. Plug RR-11 into the power socket near the Wi-Fi router (or access point) you want to connect to. Wait until led turns green.
2. Connect to the repeater using smartphone or PC through Wi-Fi network or Ethernet cable (not supplied in the delivery package):
   a. Through Wi-Fi network: connect PC (smartphone) to a Wi-Fi network of the repeater — RR-WiFi-XXXX (where XXXX — the last 4 characters of SSID, specified on the label on the device case top panel);
   b. Through Ethernet cable: connect LAN port of the repeater to LAN port of your PC using Ethernet cable (not supplied in the delivery package).
3. Open a web browser and type the device address into URL bar — http://rr.loc/ or http://192.168.0.1.
4. Enter username and password into the authorization window. Default username and password are *admin* and *password* correspondingly. Click "Log in".
5. Go to the "Wi-Fi" > "Extended Network" page. Set the required network name (SSID), security mode, password, channel and channel bandwidth for an extended 5 GHz and 2.4 GHz network. Click "Apply".
6. In case of connection via Wi-Fi, reconnect to the repeater using the extended Wi-Fi network parameters configured in step 5. In case of connection using Ethernet cable, please skip this step.

7. Update the device web interface page in the browser. The "Wi-Fi" > "Extended Network" page with updated parameters will be loaded.
8. Go to the "Network" page. In the network settings, set "Attain IP Address Automatically". Click "Apply".
9. Connect the LAN port of the repeater via an Ethernet cable to the LAN port of your router.

   When the repeater is connected to the Internet, its indicator will turn green.

3.3.2 Connecting RR-11 to a network with ELTEX router

3.3.2.1 EasyMesh agent mode

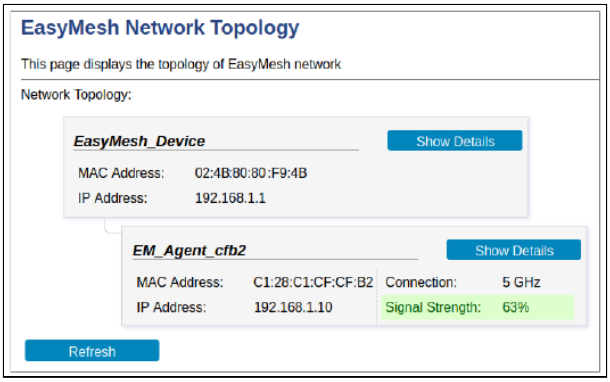
When using the RR-11 repeater together with the router (with firmware version that supports EasyMesh) it is possible to operate in EasyMesh agent mode.

3.3.2.2 Connecting to EasyMesh network using WPS button

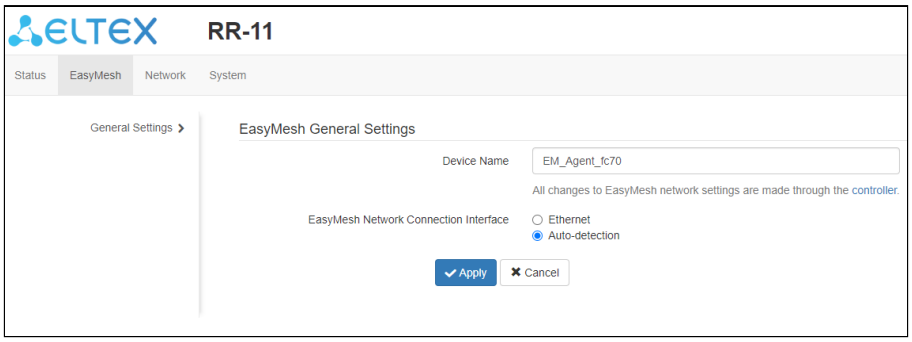
1. Plug RR-11 into the power socket near EasyMesh controller (router). Wait until led turns green.
2. Ensure that EasyMesh controller mode is enabled on the router. Press WPS button on the router.
3. Press and hold WPS button on RR-11 untill indicator starts flashing. When the repeater is connected to the Internet, indicator will turn green.

   You have 2 minutes after pressing WPS button on the router to press WPS on RR-11 for a successful connection.

4. The router web interface will display changes in the EasyMesh network topology:



5. Now it is available to change agent name in the repeater web interface:



In EasyMesh agent mode the repeater will copy the name and Wi-Fi network parameters from the EasyMesh controller for the 5 GHz and 2.4 GHz bands separately. In the EasyMesh network, the parameters that are changed on the controller, are synchronized between the controller and the agent.

Please note that the web interface will be automatically changed in EasyMesh agent mode. It will not be available to change Wi-Fi parameters on the repeater. All changes in Wi-Fi parameters should be made on the EasyMesh controller.

3.3.2.3 Connecting to EasyMesh network throung Ethernet

1. Plug RR-11 into the power socket near the Wi-Fi router (or access point) you want to connect to. Wait until led turns green.
2. Ensure that EasyMesh controller mode is enabled on the router. Connect LAN port of the repeater to a free LAN port of your router through an Ethernet cable (not supplied in the delivery package).

By default, the EasyMesh network interface on the RR-11 is set to auto-detection.

3. When RR-11 is connected to EasyMesh network, indicator will turn green.
4. The router web interface will display changes in the EasyMesh network topology.
5. In the RR-11 web interface, the EasyMesh tab will allow you to change the agent name.

Upon getting access to RR-11 web interface, it will be possible to manually configure the interface for connecting to EasyMesh network.

Once RR-11 has been successfully connected to the router, you can disconnect the Ethernet cable. The device in auto-detection mode will connect via the 5GHz Wi-Fi wireless connection.

4 Device management using web interface

4.1 Getting started

1. To start, you need to connect the device using LAN or Wi-Fi interface:

   - Wireless connection (Wi-Fi):

     Connect your PC, phone or tablet to the device Wi-Fi network (*RR-WiFi-XXXX*, where *XXXX* — the last 4 characters of RR-11 MAC address);

   - Wired connection (LAN):

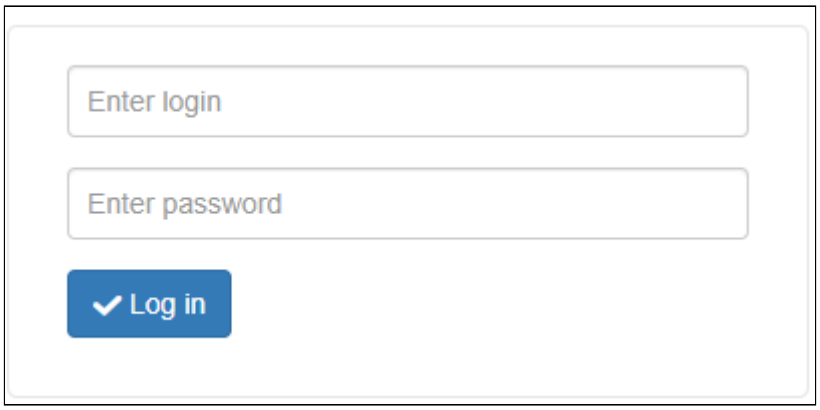
     Connect your PC to the device using an Ethernet cable.

2. Open a web browser, enter the device address into the address bar of the browser.

> **Factory device address:** http://rr.loc/ **, IP address: 192.168.0.1, subnet mask: 255.255.255.0.**

> **If you are connected to a Wi-Fi network with an already configured repeater, make sure that you are connected to the repeater and not to the access point (router), otherwise it will not be available to get access to** http://rr.loc**.**

If the device is successfully detected, a web interface login page will be displayed in the browser window asking for a username (login) and password.



Web interface authorization page

3. Enter login and password.

> **Factory default: login – admin, password – password.**

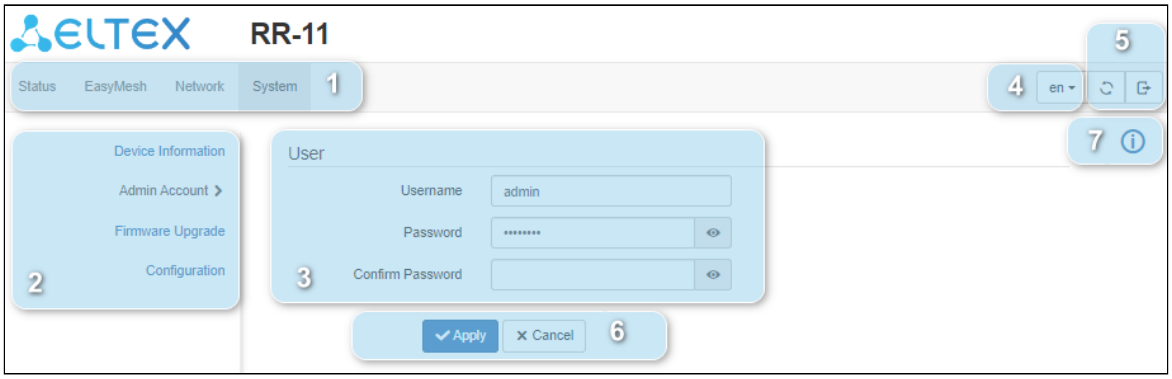
4. Click "Log in". The "Wizard" page will be displayed in the browser window.

> **If the device was already configured, the "Status" page will open. The "Wizard" page is only available on a device with factory default settings.**

4.2 Device control panel

All changes to the device settings are made using the "Control panel" tabs located at the top of the web interface and links to pages located on the left side of the web interface.

4.2.1 **Key elements of the web interface**



Key elements of the web interface

1. Top horizontal tab menu.
2. Left vertical menu of the selected tab pages.
3. The main field of device settings corresponding to the selected page from field 2.
4. Button for changing a web interface language.
5. Buttons for rebooting the device and exiting the web interface.
6. Buttons for applying or cancelling configuration changes on the page.
7. Help.

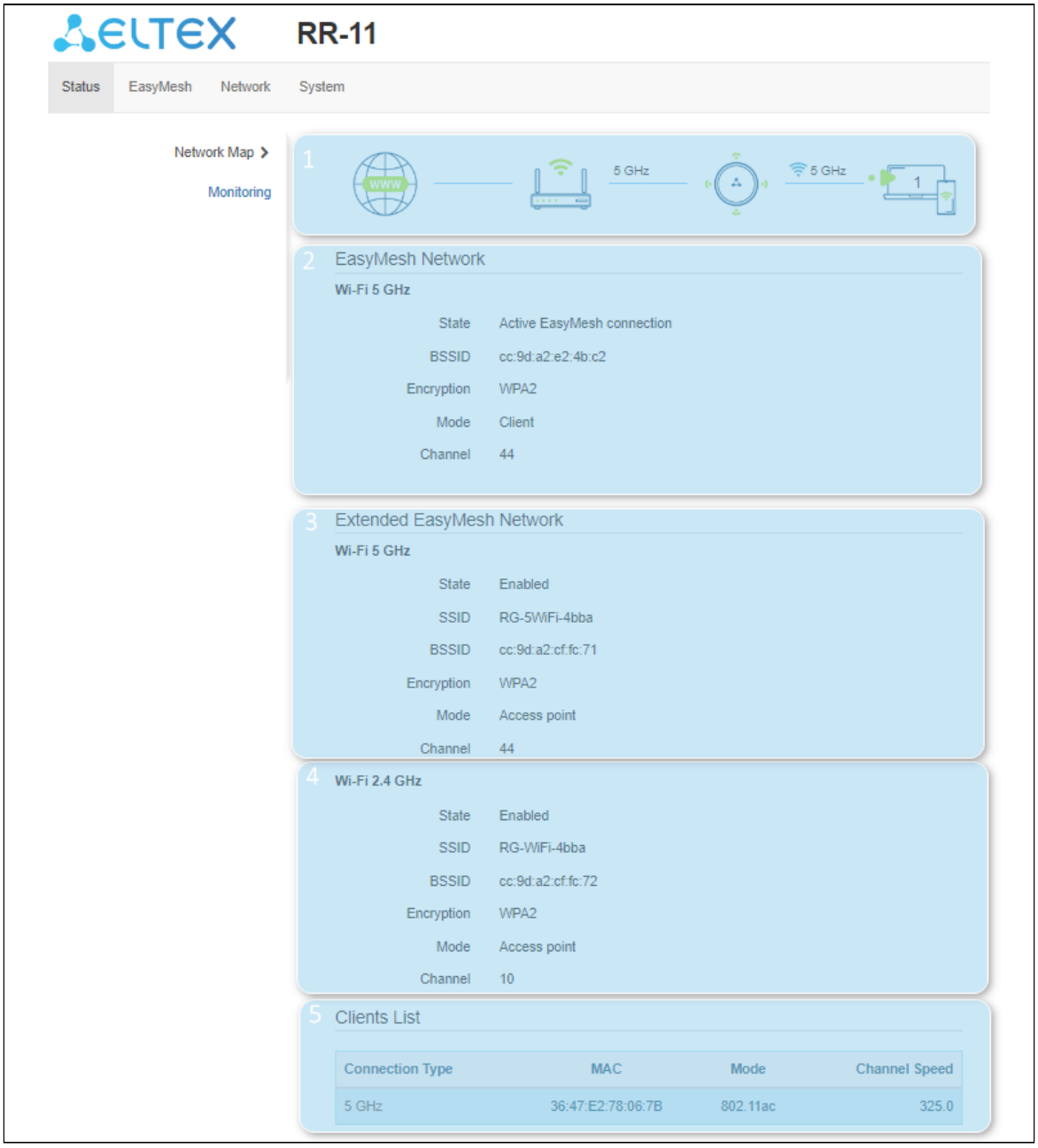
4.3 Repeater mode

In the repeater mode, the web interface displays 4 tabs.

4.3.1 **The "Status" tab**

4.3.1.1 The "Network Map" page

This page displays information on the device wireless interfaces and wireless clients that are connected to the device.



The "Network Map" page

The "Network Map" page block contains information about the active network topology.

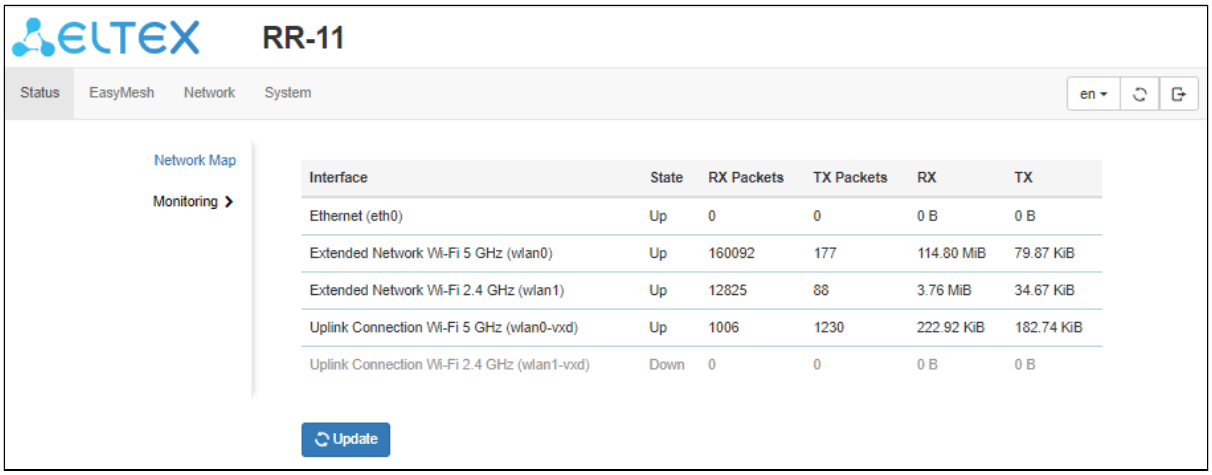
Symbol	Function description
	"Internet" icon indicates access to the Internet
	"Router" icon indicates access to the network gateway
	"Repeater" icon means, that the device is in the network
	"Clients" icon informs about wireless devices connected to the repeater

The "EasyMesh Network" block contains information about the networks to which the repeater is connected for their expansion.
The "Extended EasyMesh Network" block contains information about the repeater access points. Repeater clients are connected to this network.
The "Clients List" block contains information about wireless clients connected to the repeater.

1. Icons of active connections.
2. Information on connection to the access point (router) in the range of 5 GHz or 2.4 GHz.
3. Basic information on the "Extended network" parameters in the 5 GHz band.
4. Basic information on the "Extended network" parameters in the 2.4 GHz band.
5. List of the device wireless clients.

4.3.1.2 The "Monitoring" page

This page displays information on the state of wired and wireless interfaces, received and sent packets, and data bytes.

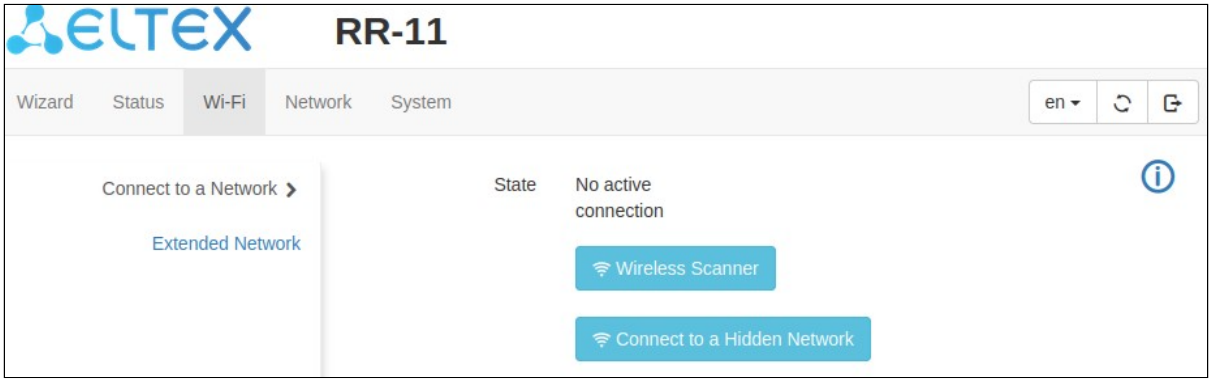


The "Monitoring" page

4.3.2 The "Wi-Fi" tab

4.3.2.1 The "Connect to a Network" page

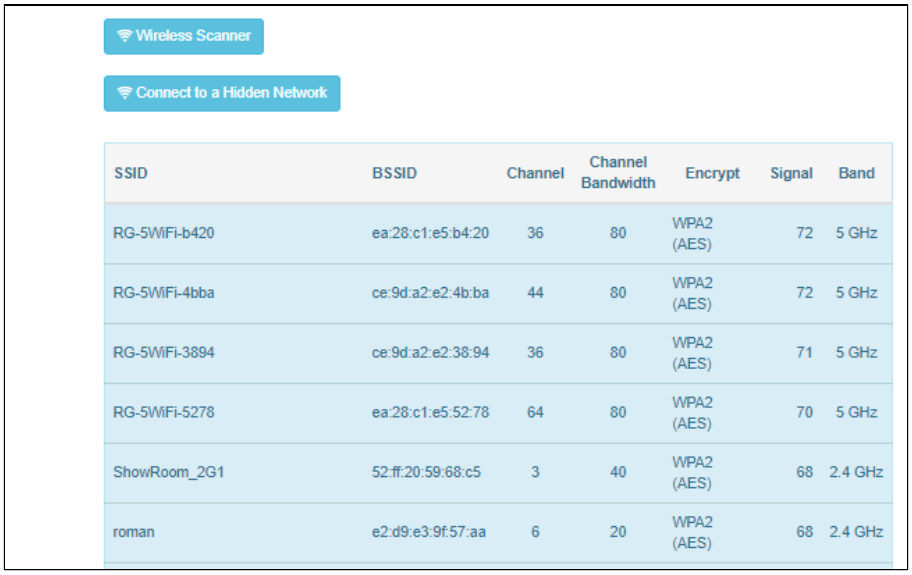
On the "Connect to a Network" page you can configure the RR-11 connection to the access point (router) network.



The "Connect to a Network" page

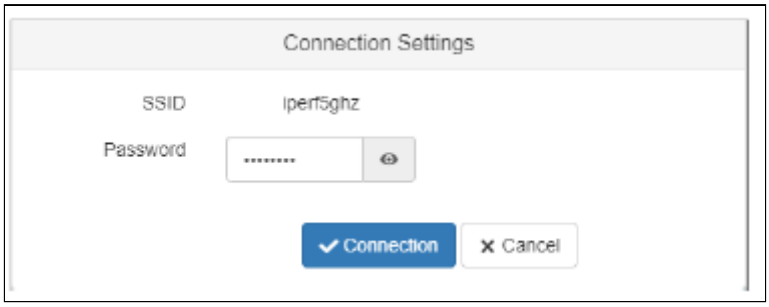
4.3.2.2 *Connecting to the access point (router) network*

1. To search wireless networks, click the "Wireless Scanner" button. After clicking, a table listing the available Wi-Fi networks and their parameters will appear.



Selecting the network connection frequency band of the access point (router)

2. Select the desired Wi-Fi network, enter the password of this network and click "Connection".



Access point (router) network connection settings

If your Wi-Fi network uses the hidden SSID feature, it will not be displayed in the scan results. To connect to such a network, follow the steps given in the section "Connecting to a Hidden Network".

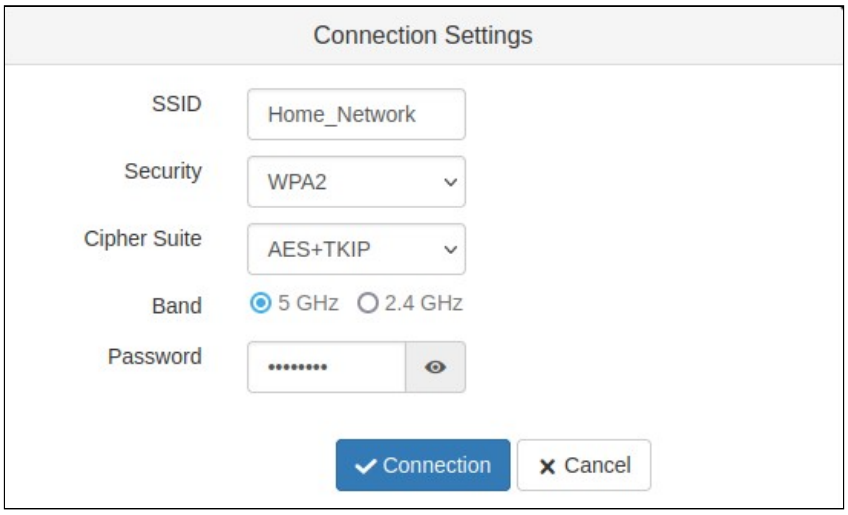
3. Click the "Connection" button to save and apply the settings, or the "Cancel" button to return to the saved device configuration.

After connecting to the access point network, its parameters (network name, encryption mode, security type, password, channel) will be copied into both ranges: 5 GHz and 2.4 GHz.

To prevent malfunction of the device, it is not recommended to power off the device while settings are being applied.

*4.3.2.3 **Connecting to a hidden network of the access point (router)***

1. To connect to a hidden network, click the "Connect to a Hidden Network" button. After clicking, a form for entering Wi-Fi network connection settings will appear.
2. Enter the SSID of the network to which you are connecting and the password (if encryption is used), select the security mode, encryption type, and band of the network.



Access point (router) connection settings

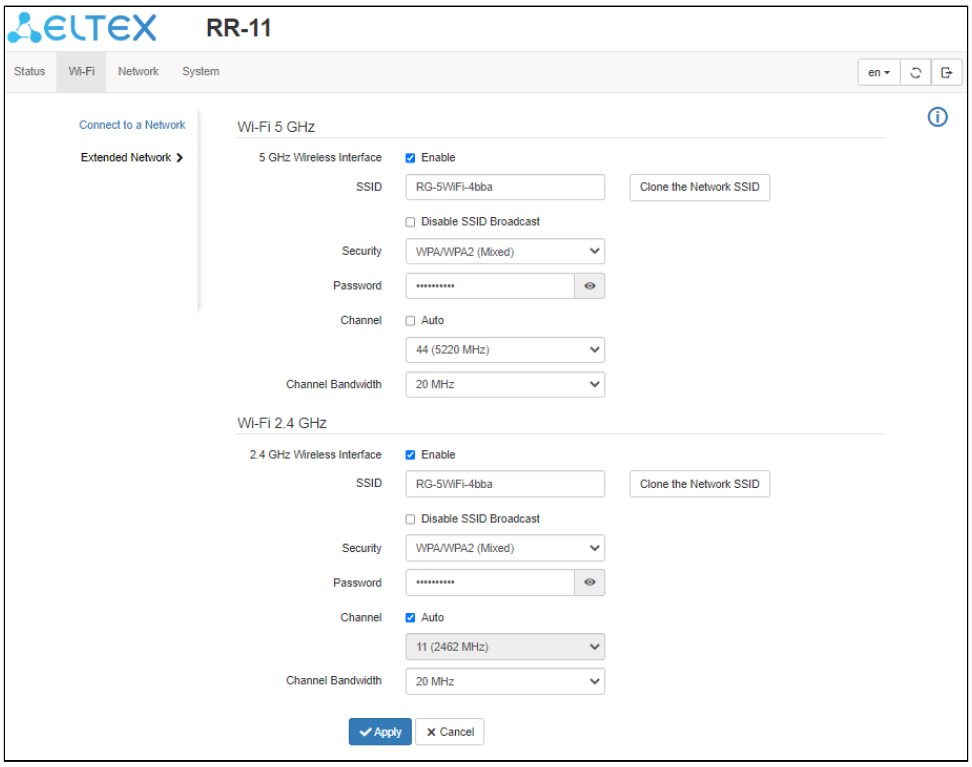
3. Click the "Connection" button to save and apply the settings, or the "Cancel" button to reset to the saved device configuration.

Once the connection to the access point network is completed, its parameters (network name, encryption mode, security type, password, channel) will be copied into both ranges: 5 GHz and 2.4 GHz.

To prevent malfunction of the device, it is not recommended to power off the device while settings are being applied.

4.3.2.4 *The "Extended Network" page*

On the "Extended Network" page, you can change the basic settings for RR-11 wireless interfaces.



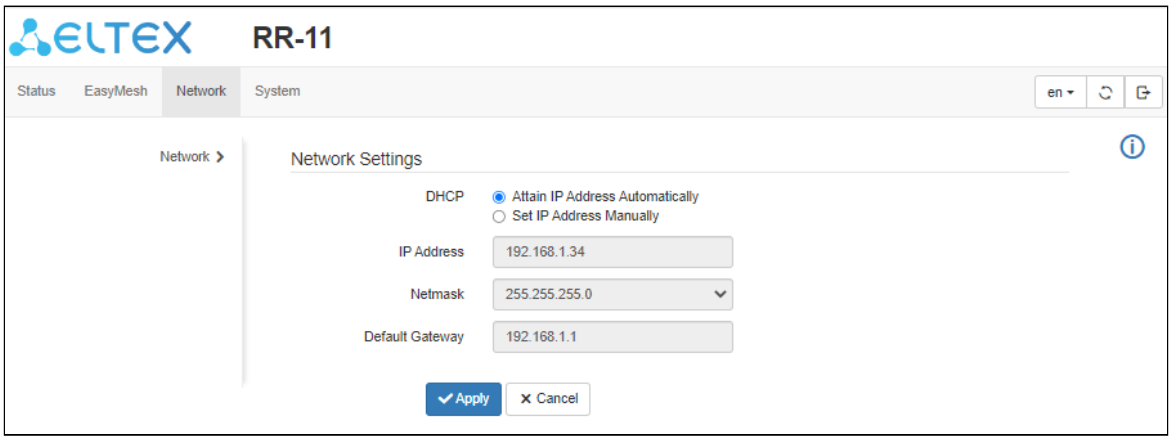
The "Extended Network" settings

- *5 GHz Wireless Interface* — if checked, the Wi-Fi network for 5 GHz is enabled;
- *2.4 GHz Wireless Interface* — if checked, the Wi-Fi network for 2.4 GHz is enabled;
- *SSID*— the wireless network name; it is used for connection to the device. The maximum length of the name is 32 characters, with case-sensitive keyboard input. This parameter can consist of digits, Latin letters, spaces, and symbols"-", "_", ".","!", ";", "#", in this case, the characters “!”, “;” , “#” and a space cannot be placed first;
- *Clone the Network SSID* helps to copy the SSID of the network which the RR-11 is connected to;
- *Disable SSID Broadcast* — if checked, the extended network will not be detected by devices. You will be able to connect to this network only by specifying the SSID manually;
- *Security* — network authentication type. The following authentication types are available:
  - *Off*— open authentication, without using encryption and password;
  - *WPA* — WPA authentication using PSK key and TKIP+AES encryption;
  - *WPA2* — WPA2 authentication using PSK key and TKIP+AES encryption;
  - *WPA/WPA2 (Mixed)* — mixed authentication type. When it is selected, devices that use WPA or WPA2 authentication type can connect to the wireless network.
- *Channel* — the channel number for the wireless network. When "Auto" is selected, the channel with less interference is automatically detected;
- *Channel Bandwidth* — the bandwidth of the channel on which RR-11 extended network operates, it takes values of 20, 40 MHz at 2.4 GHz or 20, 40, 80 MHz at 5 GHz.

It is recommended to use WPA2 security as the most secure mode.

4.3.3 **The "Network" tab**

The "Network" tab contains the device local network settings.



The "Network" tab

- *DHCP* — select the operation mode of the device interface;
- *IP Address* — local IP address of the device. By default: **192.168.0.1**;
- *Netmask*— the value of LAN subnet mask. By default: **255.255.255.0**;
- *Default gateway* – IP address of the gateway on the network.

The "DHCP" server option is available with the default settings only. After connecting the device to an access point (router), this item becomes unavailable, as the DHCP agent mode is on.

4.3.3.1 Connecting to the access point (router) network via Ethernet

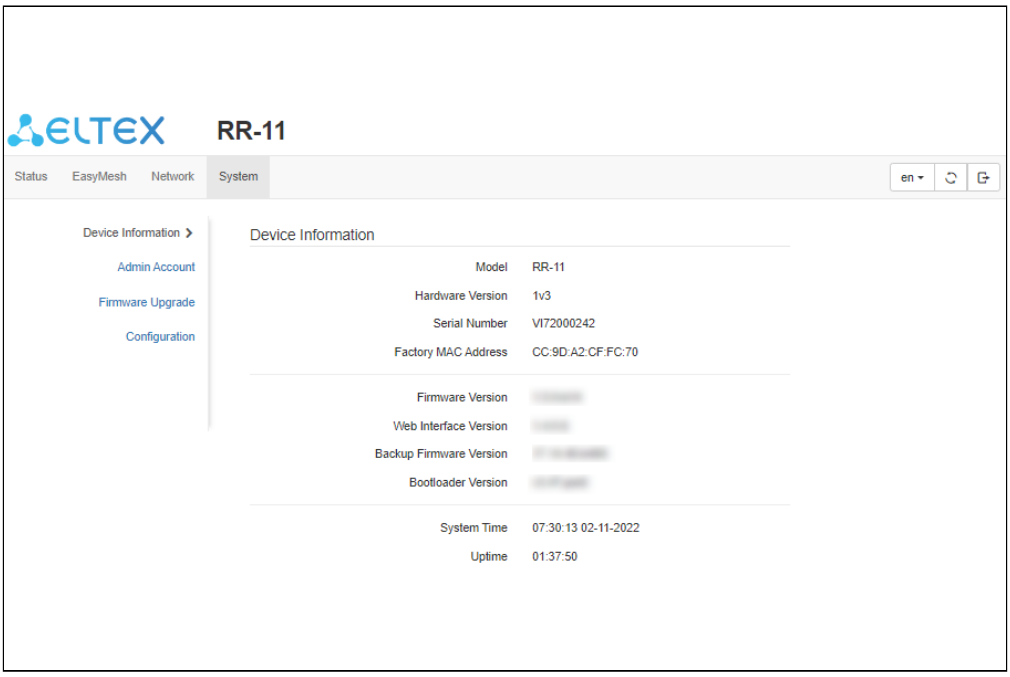
1. Select "Attain IP address automatically" and click "Apply".
2. Connect the repeater to the router using an Ethernet cable.

Please note: if you connect an access point (router) to the network via Ethernet, you will need to manually configure the device extended network. By default, the device extended network does not use encryption and password.

4.3.4 The "System" tab

4.3.4.1 The "Device Information" page

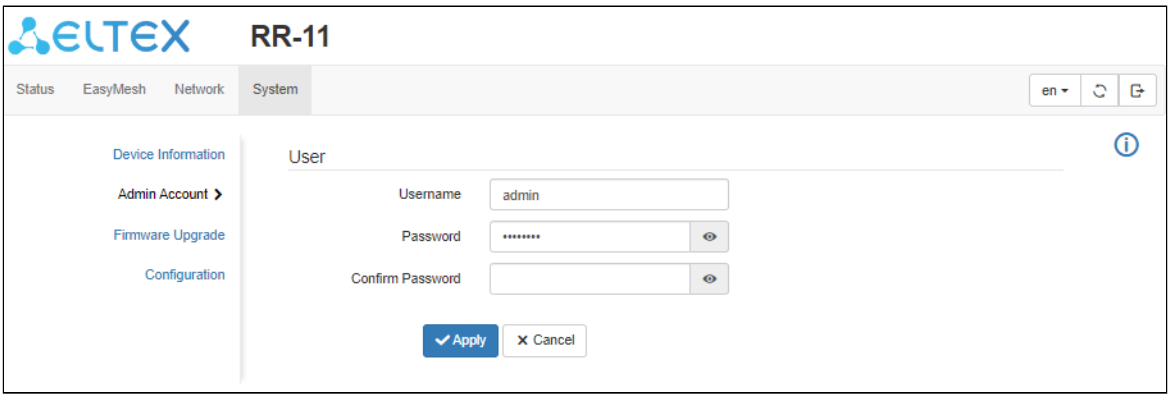
This page displays information about the device.



The "Device Information" page

4.3.4.2 The "Admin Account" page

On the "Admin Account" page, you may set username and password to access a web user interface for the device.



The "Admin Account" page

- *Username* – you can change the username here. By default: **admin**;
- *Password* – you can enter a new password for the device here. By default: **password**;
- *Confirm Password* – enter the new password in this field to confirm it.

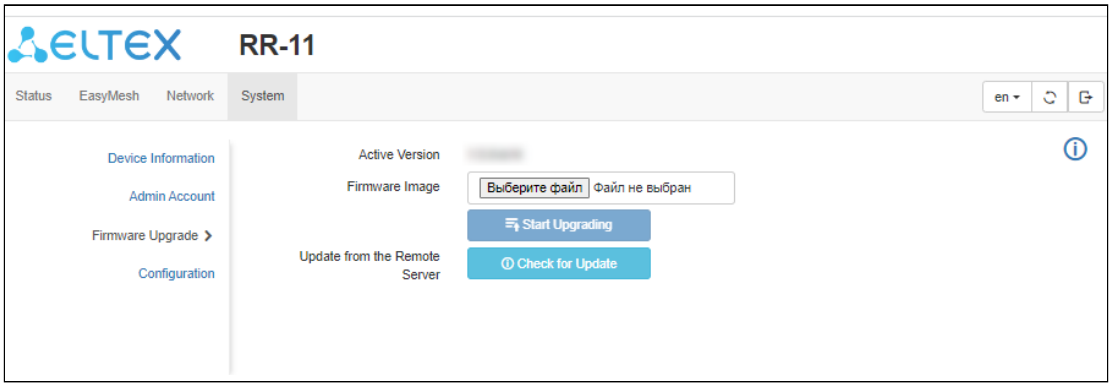
To apply the new settings, click the "Apply" button. To cancel changes, leave the page without saving the changes, or click the "Cancel" button.

For the security purposes, it is recommended to change login and password during the device configuration.

Username and password can also be set on the first step of the Wizard.

4.3.4.3 *The "Firmware Upgrade" page*

The "Firmware upgrade" page is used to update the device control firmware.



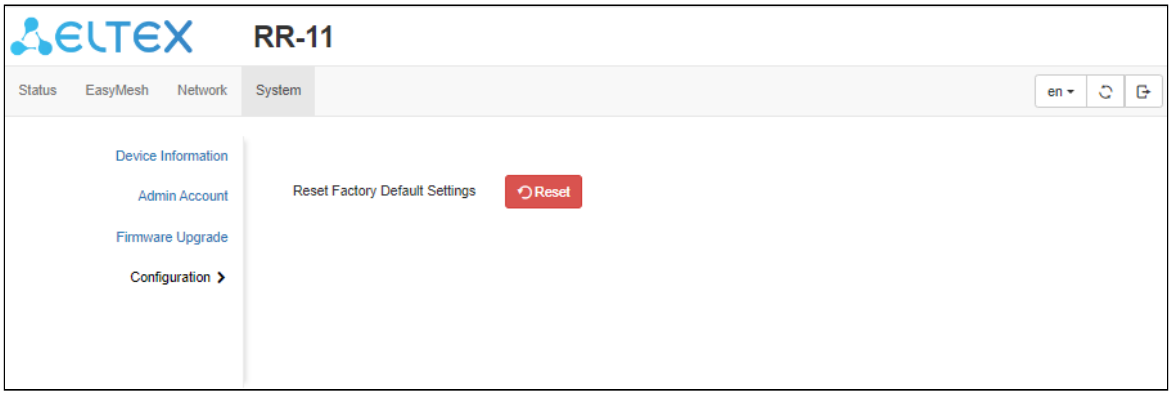
The "Firmware Upgrade" page

- *Active Version* — a firmware version currently installed on the device;
- *Firmware image* – the button for selecting a firmware update file. The latest firmware can be downloaded from the website https://eltex-co.com/.
- *Update from the Remote Server* – the button to automatically check for updates. If you have the latest firmware version, you can update it by clicking the button. Performing this action needs Internet connection.

Do not power off or reboot the device when updating the firmware.

4.3.4.4 *The "Configuration" page*

The "Configuration" page is designed to change the device configuration.



The "Configuration" page

- *Reset Factory Default Settings* – reset repeater settings to the factory default.

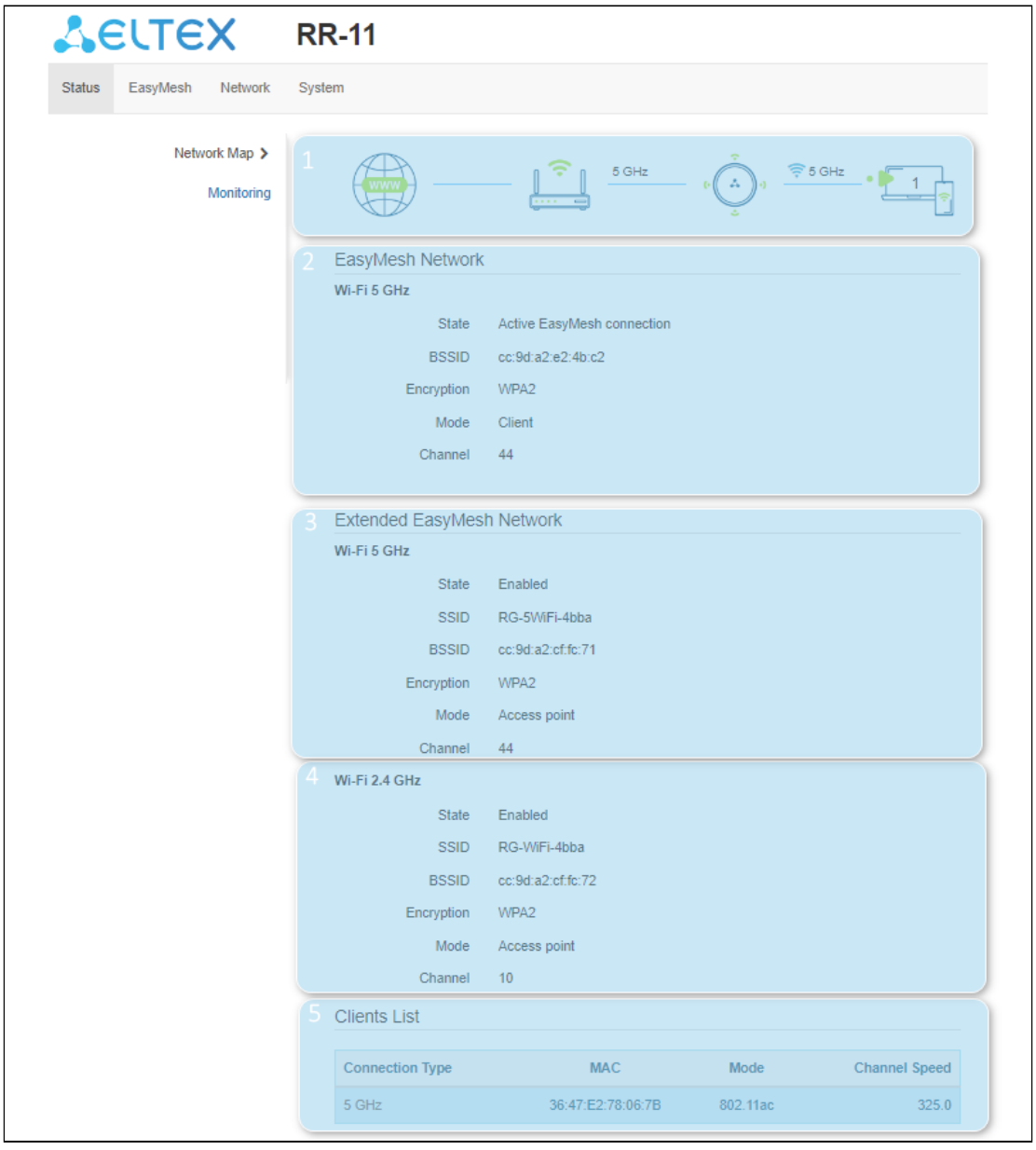
4.4 EasyMesh agent mode

In EasyMesh agent mode, the web interface adapts to EasyMesh technology. There are changes on the "Network Map" page of the "Status" tab. The "Network" and "System" tabs remain unchanged. The "Wi-Fi" tab is replaced by the "EasyMesh" tab.

4.4.1 **The "Status" tab**

4.4.1.1 The "Network Map" page

This page displays information about the device wireless interfaces and the wireless clients connected to the device.



The "Network Map" page

The "Network Map" block contains information about the active network topology and includes the following symbols:

Symbol	**Function description**
	"Internet" indicates access to the Internet
	"Router" indicates access to the EasyMesh network controller
	"Repeater" is the current agent in the EasyMesh network
	"Clients" icon informs about wireless devices connected to the repeater

"EasyMesh network" block contains the information about an active EasyMesh connection.

The "Extended EasyMesh Network" block contains information about the repeater access points. Repeater clients are connected to this network.

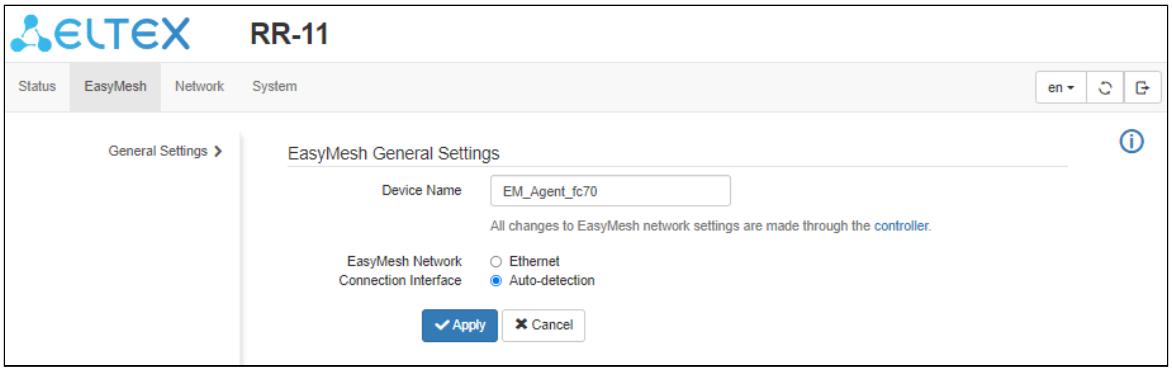
The "Clients List" block contains information about wireless clients connected to the repeater.

1. Icons of active connections.
2. Information on active connection to EasyMesh network in the range of 5 GHz or 2.4 GHz.
3. Basic information on the «Extended network» parameters in the 5 GHz band.
4. Basic information on the «Extended network» parameters in the 2.4 GHz band.
5. List of the wireless clients connected to the device.

4.4.2 The "EasyMesh" tab

4.4.2.1 The "General Settings" page

On the EasyMesh "General Settings" page you can change the name of the device in the EasyMesh network, as well as the interface for connecting to the EasyMesh network.



The "General Settings" page

By default, the EasyMesh network connection interface is in the "Auto-detection" state.

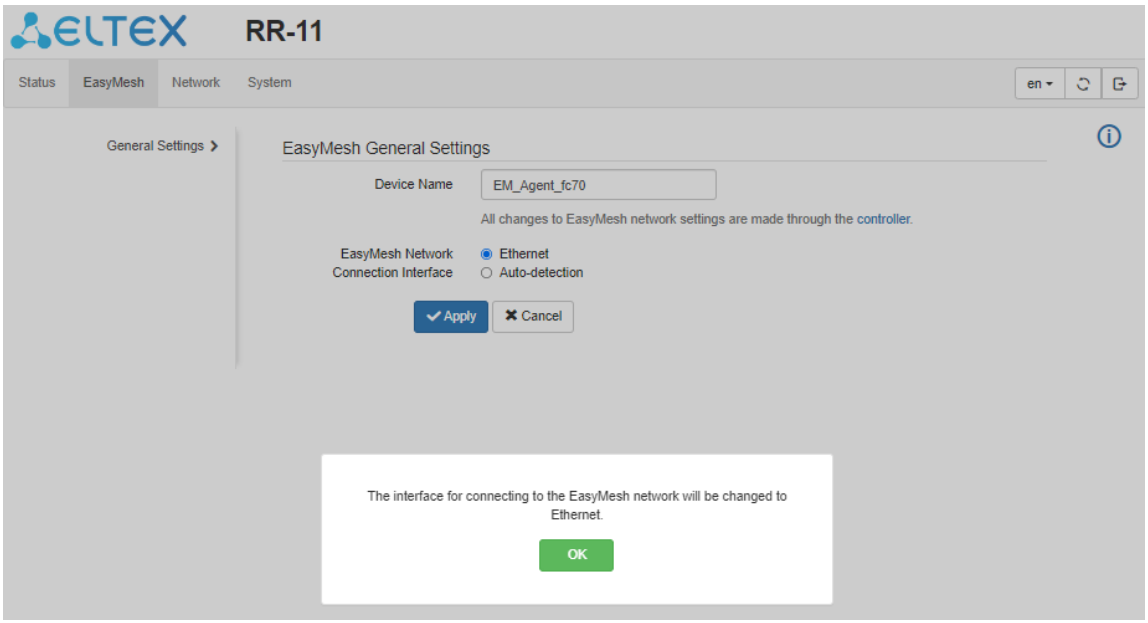
- *Ethernet* — wired connection mode. The device will connect as an EasyMesh agent only over an Ethernet connection (only if an EasyMesh controller is enabled on the router);
- *Auto-detection*— in this mode, the device can be connected in the EasyMesh agent mode either via a wired Ethernet connection or via a 5 GHz Wi-Fi wireless interface.

In "Auto-detection" mode, the device automatically switches between a wired Ethernet connection and a 5GHz Wi-Fi wireless connection.
If there is an active enabled wired Ethernet connection, the device being in auto-detection mode will be switched to this type of connection, since the priority of Ethernet is over 5GHz Wi-Fi wireless connection.

4.4.2.2 *Selection of the interface connection*

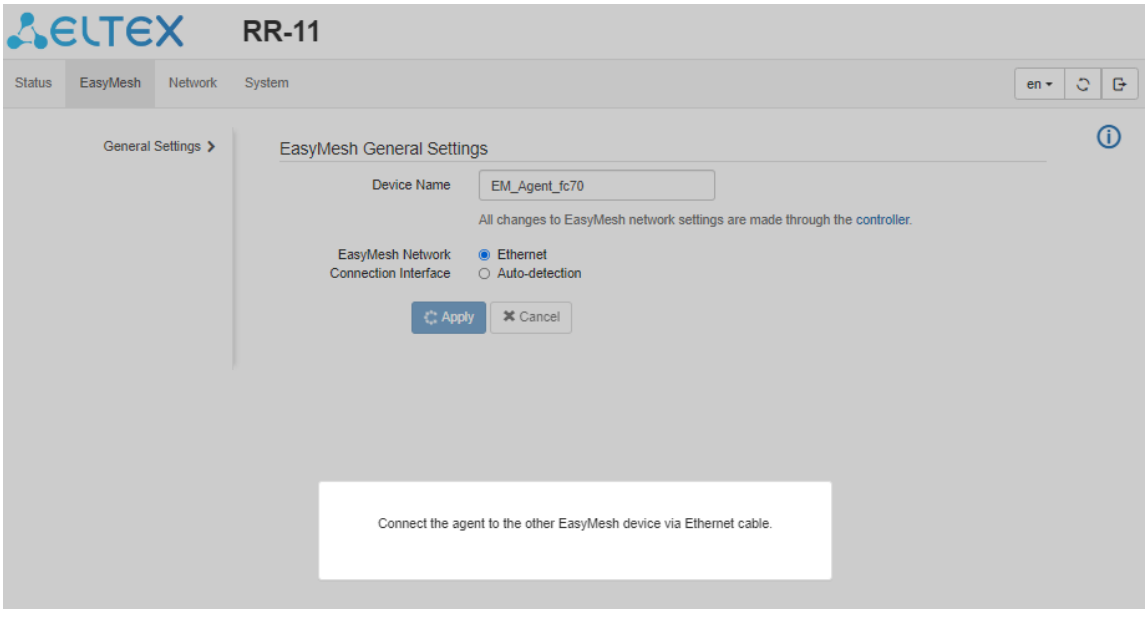
To change the agent connection method in the EasyMesh network, perform the following steps:

1. Select the desired interface, a confirmation window should appear after selection.



Pop-up window when changing EasyMesh connection interface

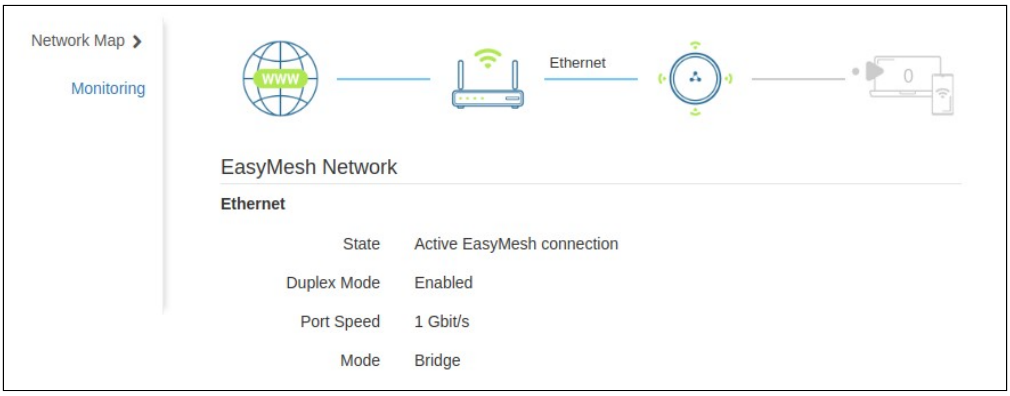
2. Click the "Apply" button. A pop-up should appear.



Pop-up window after pressing the "Apply" button

Once the "Apply" button is clicked, the action cannot be undone.

3. After a few seconds, the device will apply the settings and the "Network Map" page will update the EasyMesh Network status.



EasyMesh Network status

- **In the EasyMesh agent mode, it is not available to change the Wi-Fi parameters on the agent. All configuration changes are made through the EasyMesh controller.**

- **In the EasyMesh network, the parameters that are changed on controller (Wi-Fi network name, password, channel), are synchronized between the controller and the agent.**

5 Possible problems and solutions

Problem	Possible cause	Solution
It is not possible to access the device web interface by the addresses: http://rr.loc/ or http://192.168.0.1/	The device has not been launched, ⏻ indicator is red	Wait until the device launches and the operating system is fully loaded. If it takes more than 2 minutes to launch, reboot the device.
	The device IP address was received from the DHCP server in the access point (router) network, 📶 indicator is green	Use the address given to the device by the DHCP server in the access point (router) network. The information can be accessed in the web interface of the router which the repeater is connected to.
	When connecting via Wi-Fi, another network is used	Make sure that your device is connected to the SSID of "RR-WiFi-XXXX" (where XXXX is the last 4 characters of the RR-11 MAC address) and the «Cellular data» function (if available) is disabled. If your device is connected to an access point (router) network, make sure that your device is connected to it.
	When connecting via LAN, the client uses static network settings	Make sure that the computer is connected to the repeater using an Ethernet cable, and that its network settings are set to "Attain IP address automatically" and "Attain DNS server address automatically".
	Device failure	Reset the repeater to factory settings and try again.
The router Wi-Fi network is not displayed after clicking the "Wireless Scanner" button	The Wi-Fi network uses a hidden SSID	Fill in the parameters manually.
	The signal strength of the Wi-Fi network is too weak	Increase the Wi-Fi signal level of your access point (router), or install the device closer to the access point (router) according to the installation recommendations.
	The router uses unsupported WEP encryption mode	Change the encryption mode on the router to WPA, WPA2 or WPA/WPA2.
Unable to connect to the router Wi-Fi network using WPS	WPS is not configured on the router	Make sure that WPS technology is configured on the router.
	No WPS button on the router	Make sure that the router supports WPS technology. Some routers have functionality to enable WPS via web interface.
	WPS was not activated by WPS button on the router	Different routers can offer different ways to activate WPS (either by holding down a button or by single pressing a button). Please read the user manual for your router.

Problem	Possible cause	Solution
	Device failure	Reset the repeater to factory settings and try again.
Unable to connect to the router Wi-Fi network via web interface	Incorrect password was entered	Re-enter the password.
	The router Wi-Fi network is disabled or does not work	Make sure that the router Wi-Fi network is enabled and operates.
No Wi-Fi settings in the web interface	Device operates in EasyMesh agent mode	Configure the EasyMesh network via the controller web interface.

6 List of changes

Firmware version	Document version	Issue date	Revisions
Version 1.5.0	Issue 4	09.2022	Fourth issue
Version 1.4.1	Issue 3	02.2022	Changes in sections: -Connecting RR-11 to a network -EasyMesh agent mode
Version 1.4.0	Issue 2	09.2021	Changes in sections: - Device description
Version 1.3.0	Issue 1	10.2020	First issue

TECHNICAL SUPPORT

For technical assistance in issues related to operation of Eltex Ltd. equipment, please contact the Service Centre.

Feedback form on the website: http://eltex-co.com/support/

Sevicedesk: https://servicedesk.eltex-co.ru/

Visit Eltex official website to get the relevant technical documentation and software for Eltex Ltd. equipment:

Official site: http://eltex-co.com/

Download center: http://eltex-co.com/support/downloads