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Installation and Operation Manual for Perenio® Red Atom IR Remote Control

(Model: PETRA01)

April, 2023

Introduction

The Red Atom infrared remote control is designed to manage IR-compatible household appliances (TV, air conditioning, etc.) via the **Perenio Smart** mobile app and/or virtual voice assistants. **Perenio®** Control Gateway or IoT Router is not required to operate the device.

The present Manual contains a detailed description of the device, as well as instructions for its installation and operation.

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Responsibility and Technical Support

The present document is prepared in accordance with all necessary requirements and contains detailed information on the device installation, configuration and control valid as of the date of its issue.

Perenio IoT reserves the right to modify the device and make corrections or changes to this document without prior notice of the User, and shall not be responsible for any potential negative consequences which may arise from the use of an outdated version of the document, as well as for any possible technical and/or typographical errors, either omitted or accidental, or any related damage that may result from the document transfer or the use of devices.

Perenio IoT shall make no guarantee with respect to any data contained herein including but not limited to the device merchantability and fitness for a particular purpose.

In case of any discrepancies between language versions of this document, the Russian version of this User Manual shall prevail.

For any technical issues, please contact your local *Perenio IoT* representative or the Tech Support Department at **perenio.com**.

The most common problems may be found in Section 7 of the present document and at **perenio.com** where you can also download the latest version of this Installation and Operation Manual.

Manufacturer:
Perenio IoT spol s r.o.
Na Dlouhem 79, Ricany – Jazlovice 251 01, Czech Republic
perenio.com

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Conformance to Standards

The device is CE certified and complies with requirements of the following Directives of the European Union:

- 2014/53/EU Radio Equipment Directive (RED);
- 2014/35/EU Low Voltage Directive;
- 2004/30/EC Electromagnetic Compatibility Directive.

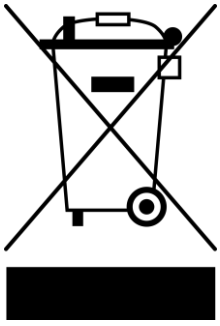
The device complies with the UKCA marking requirements for selling the device in the UK

The device has passed all procedures of assessments established in Technical Regulations of the Customs Union and conforms with standards of the Customs Union

The device complies with the requirements of Restriction of the Use of Certain Hazardous Substances in Electronic and Electrical Equipment (2011/65/EU Directive)

The device complies with requirements of the Technical Regulations of the Republic of Belarus TR 2018/024/BY (Telecommunications. Security)

The national conformity mark of the Ukraine indicating that the device meets requirements of all applicable technical regulations



The crossed-out trash can symbol is used to label electrical and electronic equipment, and indicates its separate collection.

The symbol is given in accordance with the Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE)* and indicates that this equipment requires separate collection at the end of its life and must be disposed of separately from unsorted household waste.

To protect the environment and human health, please dispose of used electrical and electronic equipment according to approved safe disposal guidelines

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BG	CZ	DE	ES	FR
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NL	NO	PL	RO	RU
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Details on available Certificates are specified in Section 6 of the present document. For copies of Certificates and Reports, please visit a corresponding Section at **perenio.com**.

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1 General Description and Specifications

1.1 Device Purpose

The **Perenio® Red Atom** infrared remote control simulates the operation of a typical remote control via the user interface implemented in the "**Perenio Smart Home & Office**" mobile application, as well as third-party virtual voice assistants.

Key features of the **Red Atom** device are as follows:

- Support for Wi-Fi;
- iOS (12.1 and higher) and Android (5.0 and higher) smartphone compatibility;
- Integration with Google Home (Google Assistant) and Amazon Alexa;
- Low power consumption;
- Library of IR compatible devices;
- Wide angle of infrared radiation;
- Possibility to mount on a vertical surface;
- Remote control via a free Mobile App.

Figure 1 - The Device Exterior

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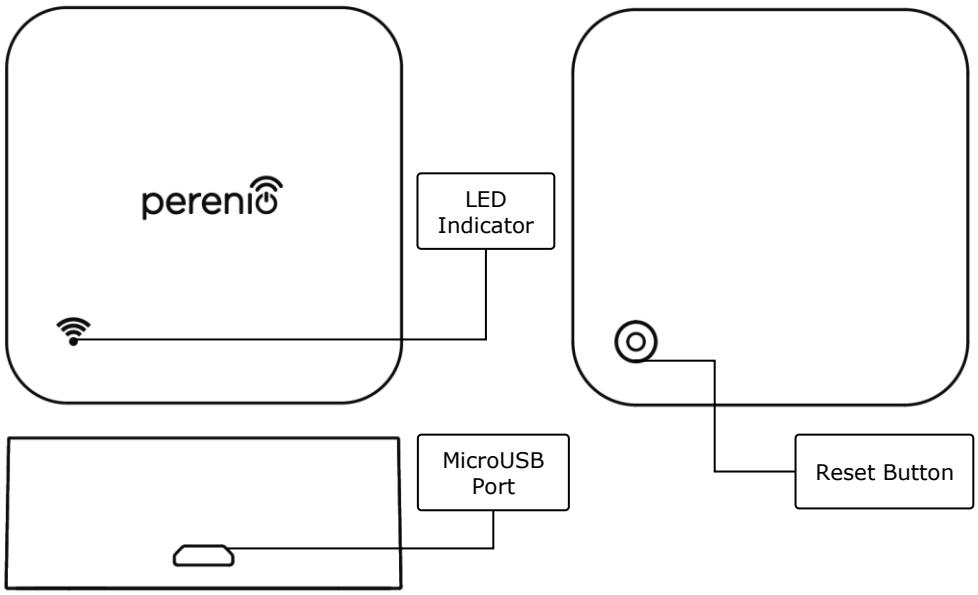

2-a – Top and Side View 2-b – Bottom View

Figure 2 - Buttons, Ports and Indicators

Buttons, Ports and Indicators

LED Indicator	Blue LED for various device statuses (See Table 1)
MicroUSB Port	The cable port used to connect a USB-MicroUSB Cable and supply power to the device
Reset Button	The button used to reset the device to factory settings or activate it in the app

Table 1 –LED Indicator Statuses

Indicator	Status	Description
Blue	On	The device is switched on but not activated in the mobile app; or the device is switched on and activated in the mobile app, but there is a Wi-Fi network failure
	Flashing	The device is in the process of being activated in the mobile application
	Flashing once	The device transfers data to the Remote Server
	Off	The device is not connected to the source of

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Indicator	Status	Description
		power, or is switched on, activated in the mobile app and operating normally

ATTENTION! All Products and the Mobile Application of the Company (including any future software and hardware whether in-house or third-party developed) are not intended for emergency responses and cannot be used as fire-extinguishing equipment and/or for emergency intervention, including but not limited to fires, flooding, gas leaks or explosions, burglary and theft, as well as natural disasters and other force majeure circumstances leading to damage and/or losses incurred by the Client or caused to their estates, personal property and/or other products, devices, personal data and privacy.

1.2 Technical Specification

Table 2 – Basic Technical Specifications

Parameter	Value
Article	PETRA01
Communication Technology	Wi-Fi (IEEE 802.11b/g/n)
Operating Frequency	2.4 GHz
Wi-Fi Coverage	up to 100 meters (open area)
Compatibility	iOS (12.1 and higher) and Android (5.0 and higher)
Integration	Google Home and Amazon Alexa
Server	Remote Server
Infrared Range	Up to 10 meters
Infrared Frequency	38 KHz
Infrared Radiation Angle	360°
Power	Rated input voltage: 5 VDC Input current: 1 A Max Operating voltage: 4.75 V to 5.25 V Standby power: 0.4 W Max

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Parameter	Value
Operating Temperature	0 °C to +50 °C
Operating Humidity	10 % to 85 % RH
Storage Temperature	0 °C to +70 °C
Storage Humidity	5 % to 95 % RH
Installation	On a horizontal or a vertical surface. For indoor installation only.
Casing Material	ABS
Color	Black
Dimensions (L x W x H)	50 x 50 x 19 mm
Weight	27 g
Warranty Period	2 years
Service Life	2 years
Certification	CE, EAC, RoHS, UA.TR
Data Protection	GDPR Compliance

1.3 Scope of Delivery

The following items and accessories are supplied within the **Perenio® PETRA01** Red Atom package:

1. PETRA01 IR Remote Control (1 pc.)
2. USB-MicroUSB Cable (1 pc.)
3. Quick Start Guide (1 pc.)
4. Warranty Card (1 pc.)
5. Polyurethane Adhesive Sticker (1 pc.)
6. Perenio® Sticker (1 pc.)

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1

2

6

Figure 3 - Scope of Supply*

1.4 Packaging and Labelling

The **Perenio® PETRA01** Red Atom device is supplied in a carton Gift Box of 104 x 104 x 25mm (L x W x H) containing the full name and marking of the device, the list of accessories provided and basic technical specifications thereof, as well as the date of manufacture and information about the manufacturing plant of devices.

Weights of the package are as follows:

- Net weight: 27 g;
- Gross weight: 130 g.

1.5 Safe Operation Rules

For the proper and safe operation of the IR Remote Control, follow the instructions and safety procedures described in the present Manual. The Manufacturer shall not be liable for any damage caused as a result of improper operation of devices.

Safe Operation Conditions

1. The device shall be installed indoors only.
2. Users shall observe storage/transportation conditions, as well as the operating temperature mode of the device as declared by the Manufacturer.
3. Do not use the device in areas with high humidity or extreme temperature variations.
4. Users must not drop, throw or bend the device, as well as disassemble or attempt to repair the device on their own.

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5. In order to avoid personal injury, it shall not be allowed to use the cracked or in any other way damaged device.
6. Use dry cloth or cloth soaked in a small amount of water for cleaning (don't use harsh chemicals/cleaning agents). The device must be powered off before cleaning.
7. Children shall not be allowed to use the device unsupervised and/or play with it.

1.6 The Use of Power Adapters

Only the original power adapter included in the delivery package, or some other adapter recommended by *Perenio IoT* shall be used to power or charge the device. This is due to the fact that an incompatible power adapter can cause longer charging time, or a device failure, or a fire, whereas the original power adapter considers all the mandatory technical parameters, namely:

a. **Voltage** the power supply output (See "OUTPUT, V" parameters on the adapter body);

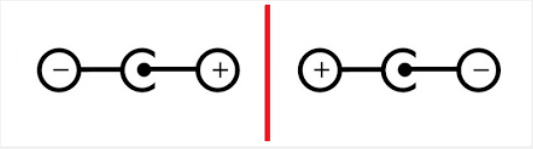
ATTENTION! The output voltage of the power adapter must strictly correspond to the voltage consumed by the main device.

b. **Current** at the power supply output (See "OUTPUT, A/mA" on the adaptor body);

NOTE. The current delivered by the power adapter must be equal to or slightly higher than the rated current for the main device.

c. **Polarity** on the connector (pin) of the power adapter;

NOTE. The polarity indicates the part (external or internal) of the connector that receives positive current.



The dot in the above image represents the connector's inner contact, and the crescent moon represents the outer contact. Most connectors have two contacts. One contact carries a voltage ("+"), while the other – zero ("-").

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ATTENTION! The poles must not be interchanged.

Some devices are charged by or run on an AC power adapter. In this case, the adapter has no indication of the polarity, and the AC "~" symbol is shown next to the indicated output voltage.

d. **Configuration** and size of the power adapter cable connector;

NOTE. Geometric shape, outer/inner diameter size and length of the power adapter cable connector must match the parameters of the power port connector of the main device.

Power adapters supplied by *Perenio IoT* with the devices have one of the following types of cable connectors:

1. Standard cylindrical shaped connectors for powering the Indoor Motor Camera and the Control Gateway.
2. USB connectors for powering the Indoor Fixed Camera, the IoT Router and the Ion Diffuser (MicroUSB, Type-C).

There are also devices that are supplied only with a cable (without a power adapter), such as Red Atom device and UV Mini Indigo lamp). Power cables for such devices are also equipped with the second type of the connector.

Table 3 – Types of connectors and USB Standards

Standard	Parameters	Description
USB1.0	5V, up to 150mA 0.75W DTS*: 12Mbps	Obsolete standard of information exchange and connection methods (not used due to too low data transfer rate)
USB2.0	5V, up to 500mA 2.5W DTS*: 480Mbps	Suitable for devices with low power consumption, but data can only be transmitted in one direction at a time
USB3.0	5V, up to 900mA 4.5W DTS*: 5Gbps	It supports backward compatibility with the old standard. It has the same shape as USB2.0 Type-A, but colored blue. Data can be transmitted in both directions at the same time

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Standard	Parameters	Description
USB Type-C (without PD**)	Up to 5V, up to 3A 15W DTS*: 10Gbps	This is an oval shaped connector with reversible key. It can be used for data transfer of the USB3.1 interface
USB-PD	Up to 20V, up to 5A 100W DTS*: 10Gbps	This is a USB Type-C with a power transfer function up to 100W. This option is suitable for powerful devices (laptops, large tablets), but may not be suitable for less powerful devices. **Therefore, it is not used with Perenio® devices**

* DTS means data transfer speed
**PD means Power Delivery protocol

NOTE. USB Type-C is not USB3.1, because USB2.0, USB 3.0 or USB3.1 can be used to supply power. On the other hand, USB Type-C is not USB Power Delivery and does not necessarily support USB Power Delivery or USB3.1.

ATTENTION! Currently, *Perenio IoT* **does not supply** power adapters with connectors that support USB-PD.

ATTENTION! Do not connect a USB-PD compatible power adapter (Power Delivery fast charging standard) to the device. It is also not permitted to use the charger to power or recharge incompatible devices (For more information on the charger, see the technical specifications).

The manufacturer shall not be liable for any consequences, whether direct or indirect, arising from the use of the power adapter for purposes other than its intended use, or to supply power or charge the device not included in the scope of delivery.

As the power adapter cable connectors are subjected to daily stress, they can become damaged over time. Below see basic signs of a faulty charger connector:

- Unreasonable switching off of the device;
- Unreasonable switching of the device to the battery mode;
- Overheating of the USB plug;
- Periodical switching off of the device in the absence of the mains failure;

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- Start of the charging process only after the cable is additionally fixed, or the plug is reconnected;
- No battery charging process when the power adapter is connected.

ATTENTION! Do not charge your device from external devices such as PC, laptop, tablet or smartphone if the maximum current of 500mA/900mA (USB2.0 and USB3.0 ports, respectively) is insufficient to provide the required power input level to the device.

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2 Installation and Setup

Before installation, the User shall select one of the following possible locations and mounting modes for the device:

- On a horizontal surface;
- On a vertical surface (wall, furniture, etc.

NOTE. An adhesive polyurethane sticker may be used to mount the device in order to provide its additional stability.

Also, make sure that the selected location meets the following requirements:

- Availability of the source of power near the installation site of the IR Remote Control;
- No clutter and obstructions in the infrared range area.

NOTE. It is not recommended to install the device in areas with interior ceilings and other obstacles in the IR coverage area, since it may block the wireless signal transmission.

Below see possible locations for the IR Remote Control:

Figure 4 - Example of Installation*

* Images are provided for informational purposes only

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2.1 Initial Powering On

To power on the device, it is enough to unpack it and connect to the source of power using the USB-MicroUSB Cable.

NOTE. Any suitable USB Charger (Output: 5 VDC / 1 A) may be used to connect the device to the mains socket.

The **Red Atom** device may also be powered by a third-party device with a USB connector (PC, laptop, portable charger, set-top box, external battery, etc.).

2.2 Selection of the Mobile App for Control

The **Red Atom** device may be remotely managed via one of the following applications:

- **Perenio Smart** mobile app (recommended);
- **Perenio Lite** mobile app.

NOTE that the **Perenio Smart** mobile app is recommended because it has more functions and allows for control of all **Perenio®** devices.

If third-party (voice assistants) software is used, the IR Remote control must be first activated in **Perenio Smart** or **Perenio Lite** mobile app.

NOTE. The *Perenio Smart Home & Office Mobile App Manual* document is available for downloading at the web-site.

2.3 Activation in the Perenio Smart App

To ensure proper installation and operation of the Red Atom device, the User shall perform the following steps:

1. Unpack the device and connect it to the power source.
2. Log in to the **Perenio Smart Home & Office** mobile application on your smartphone (See par. **A** below).
3. Activate the device in the mobile app (See pars. **B** and **C** below).
4. Enter the desired device name, Location and Room (See par. **D** below).
5. Connect IR compatible home appliances (See par. **E** below).

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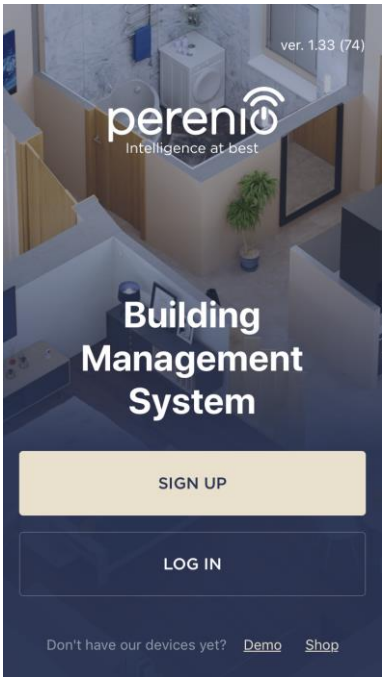
A. INSTALLATION OF THE PERENIO SMART MOBILE APP



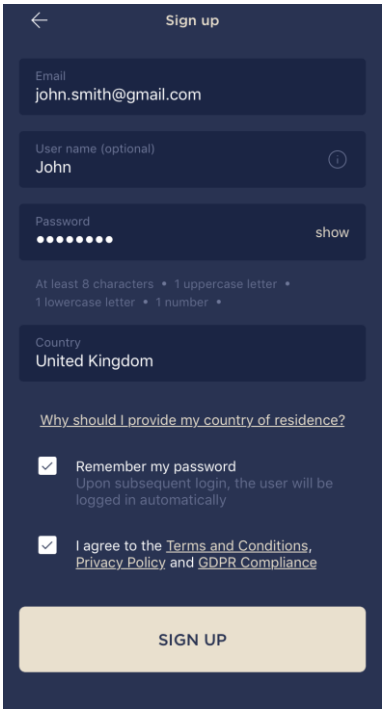
The device shall be managed via a free mobile application available for downloading in Google Play or App Store.

In order to log in to the User Account, follow the steps below:

a. Connect your smartphone to the Wi-Fi Network and download the **Perenio Smart Home & Office** app from Google Play or App Store;
b. Register a new User Account (See par. **A.1.** below) or sign in to an existing User Account (See par. **A.2.** below).

A.1. NEW USER ACCOUNT REGISTRATION

a. Fill in your e-mail address, user name and password (8 or more symbols including at least one capital letter and one number), then select the country of residence;
b. Agree to General Terms and Conditions, Privacy Policy and provisions for personal data protection (accessible by the link);
c. Click on the **SIGN UP** button.
The User will receive an email to verify the User Account (Follow the link);
d. Log in to the User Account.



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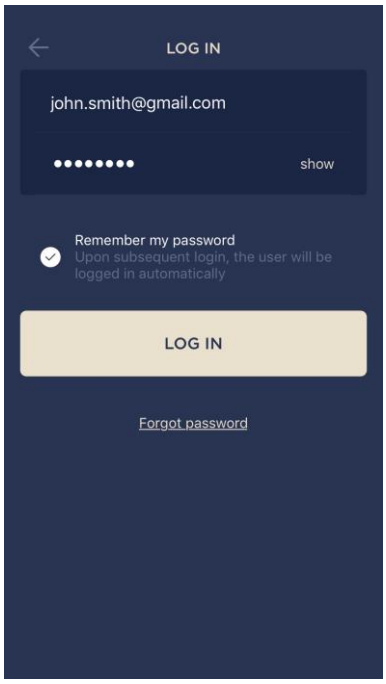
A.2. LOGGING IN TO THE EXISTING USER ACCOUNT



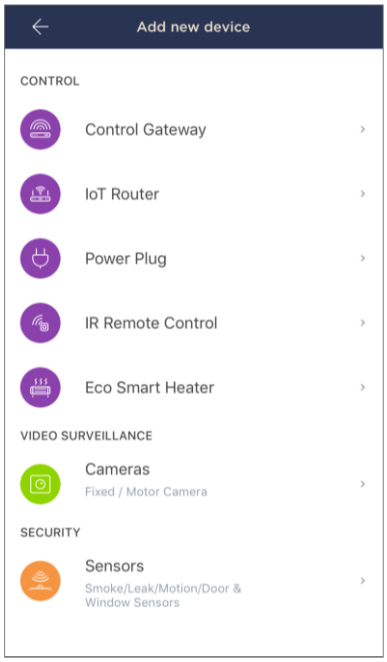
a. Enter your e-mail address and password in the login screen.
b. Click on the **LOG IN** button.

NOTE. If the password is lost, the User can restore it by clicking on a corresponding link on the screen.

To restore a forgotten password, use the e-mail address linked to your User Account, as instructions on changing the password will be sent thereto.

B. SELECTION OF THE DEVICE TYPE

a. After login to the Perenio Smart App User Account, click on the "+" icon in the upper right corner of the "Devices" tab and select the IR Remote Control in the list (See figure on the right);
b. Confirm the permission to access your camera in the pop-up window (It may not be available for certain smartphone models);



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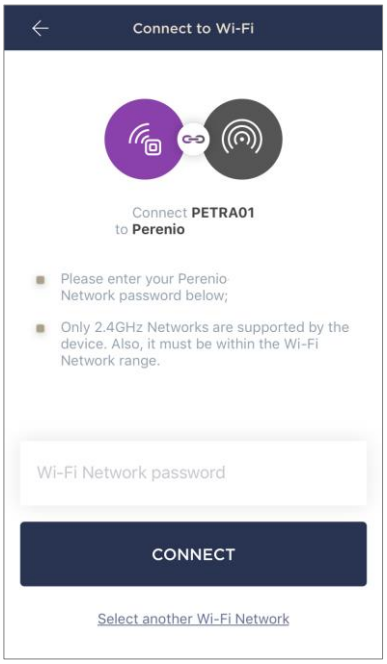
C. SENDING WI-FI NETWORK DATA TO THE DEVICE



Do as follows after the screen to connect the device to the Wi-Fi Network will be displayed:

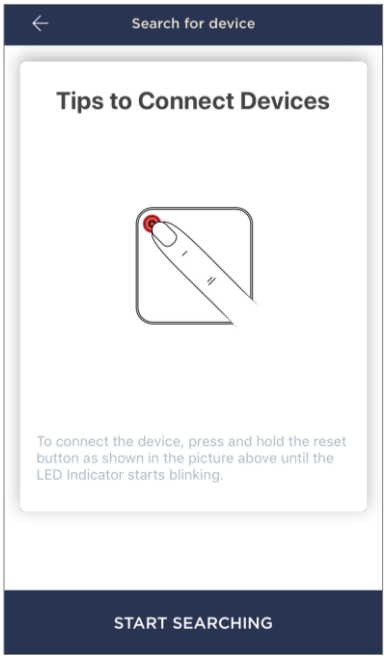
a. Enter the password from the Wi-Fi Network or select another network;

NOTE. The device may be connected to Wi-Fi Network of **2.4GHz** only.

b. Click on the **CONNECT** button.

NOTE. Before connecting, make sure that the Red Atom device is powered on and that the smartphone is located at a distance of not more than 2 meters from it.

c. Press and hold the power button until the LED indicator starts blinking;
d. Clink on **START SEARCHING** button;
e. Wait for the connection process to be completed.



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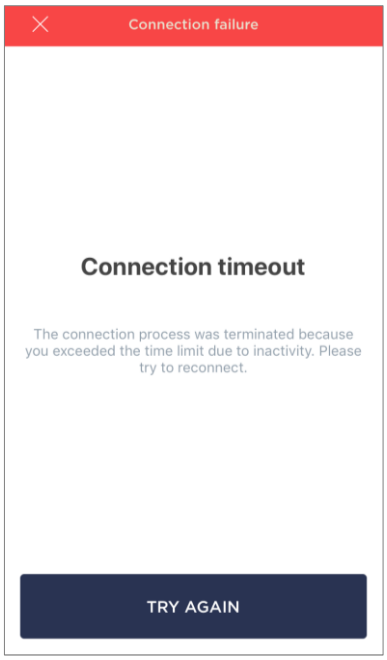
C.1. CONNECTION ERRORS



The connection failure of the device may occur due to one of the following reasons:

a. The device is switched off or at a too long distance from the smartphone;
b. The device was already activated in the current or some other User Account;
c. The device ID and/or password or Wi-Fi Network data was entered incorrectly;
d. Internet Provider failures.

NOTE. To eliminate connection failures, follow instructions specified on corresponding screens of the smartphone.

D. LOCATION AND ROOM SETTING

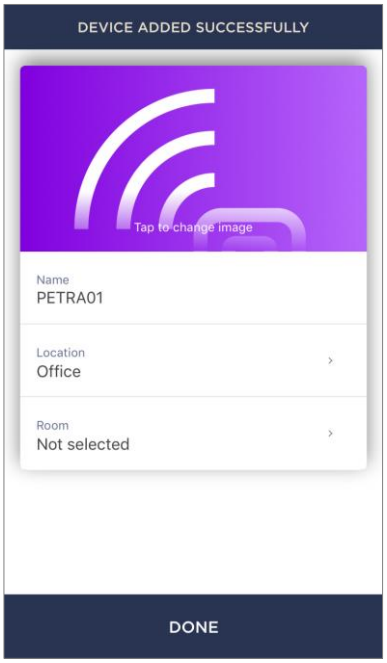
After successful connection of the device, the User may specify the following:

a. Image;
b. Device name;
c. Device Location;
d. Room.

After completion, click on the **DONE** button.

NOTE that all the above data may be entered or edited on a later basis in the device control panel.

The Red Atom device will be displayed in the "Devices" tab.



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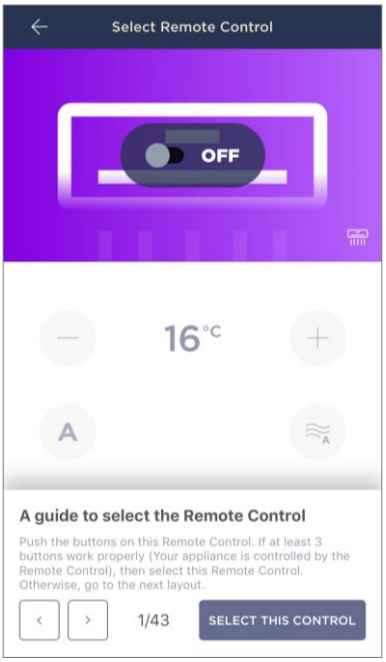
E. CONNECTION OF MANAGED APPLIANCES



a. Click on the "+" icon in the upper right corner of the IR Remote Control panel;
b. Select the type of your managed appliance;
c. Select the manufacturer of your managed appliance.
d. Select the virtual remote control layout to be used for control of your appliance (See Figure on the left);

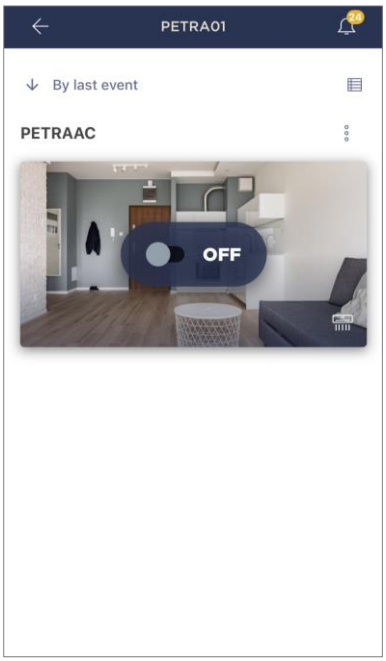
NOTE. To select an operating layout of the virtual remote control, and make sure that at least 3 (three) buttons on it are enabled and functioning (See Figure on the right).

Buttons are activated after the User switches the appliance to the ON mode on the smartphone screen. **In this case, the managed appliance must physically switch on!**

e. Enter the desired name for the selected virtual remote control and save settings.

After virtual remote controls were successfully set up for the managed appliances, the User will be able to see them in the "Devices" tab, as well as in the control panel of a selected Red Atom device.

To view the list of managed appliances, click on the "View" button.



The entire process of the IR Remote Control connection in the Mobile App is shown below.

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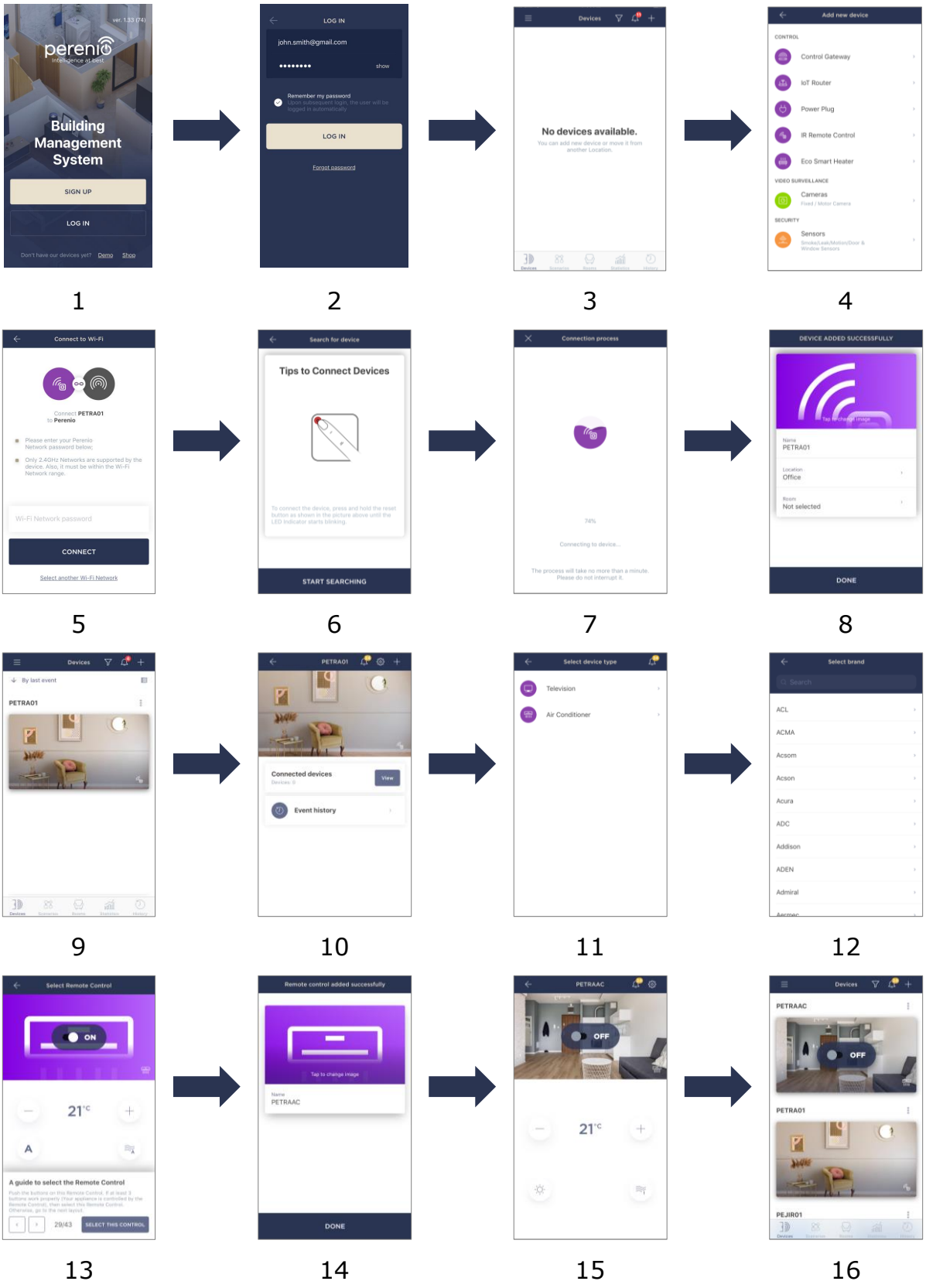

Figure 5 – Add new device procedure (Perenio Smart)

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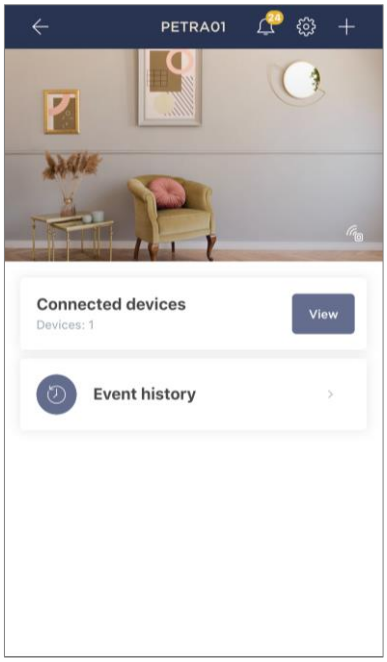
2.4 Management of Red Atom and Appliances (Perenio Smart)

2.4.1 Red Atom Control Panel



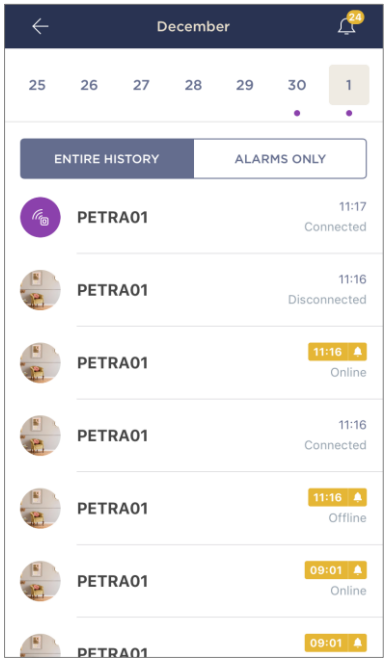
The Red Atom device control panel is displayed when you click on its image in the list of connected devices in the "Devices" tab.

In this control panel, the User may perform the following actions:

- Connect managed appliances to the IR Remote Control;
- View the list of connected appliances;
- View the history of events.

2.4.2 Event History

In this tab, the user can view the status of the device, as well as the time when the event occurred.



Functions are as follows:

- "ENTIRE HISTORY" filter, which allows viewing the following events:
  - Changes in the security modes ("Connected", "Disconnected");
  - Start and completion of the firmware update.
- "ALARMS ONLY" filter, which displays device actuation events for the Armed Mode only;
- Filter by date.

NOTE that the number of days available for viewing depends on the Subscription Plan (It is 7 days for free Subscription).

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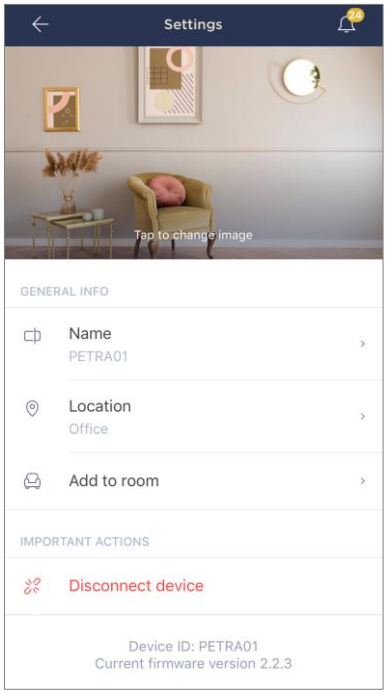
2.4.3 Additional Settings of the IR Remote Control

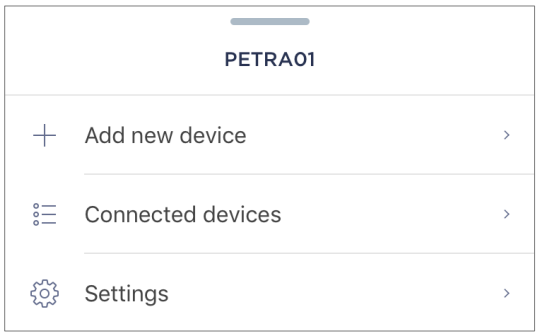


After the Red Atom is activated in the **Perenio Smart** app, the User can make the following settings remotely:

- Change or upload the device image for easier identification of the Red Atom in the list of connected devices;
- Change the name of the device;
- Move the device in a new or existing Location;
- Add the device to the Room or change the Room of installation;
- Remove the device from the mobile application;
- View the device ID;
- View the current firmware version of the device.

There are two ways to switch to the settings screen, namely:

1. Click on the icon with three dots in the right upper corner of the Red Atom image in the mobile application and select "Settings".



2. In the control panel, click on the settings icon.

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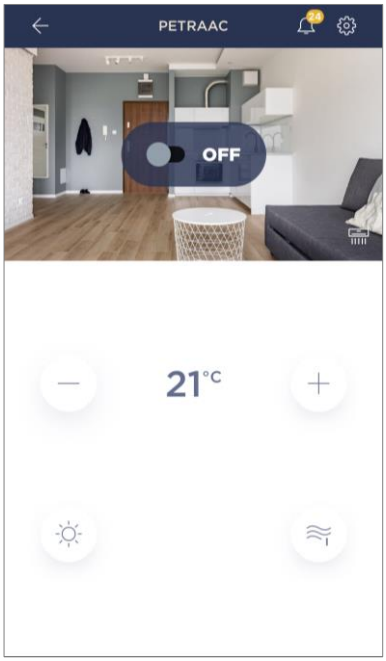
2.4.4 Control Panel for Home Appliances

The Red Atom control panel is displayed when you click on its image in the list of connected devices in the "Devices" tab.

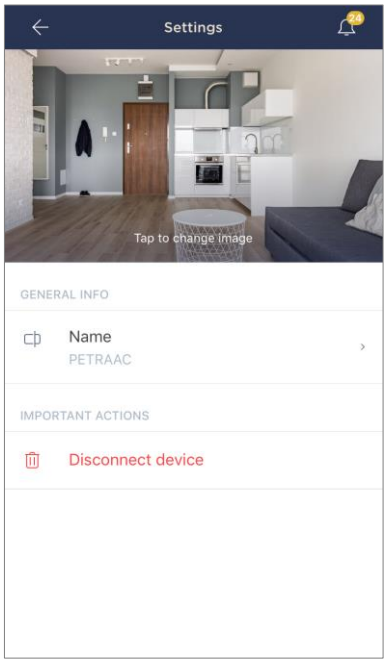


In this control panel, the User may perform the following actions:

- Turn on and off the household appliance remotely;
- Make available settings (Change the temperature and operating mode of the air conditioner, change the TV volume, etc.).

NOTE. The list of available settings depends on the type of device connected and the version of the selected virtual remote control.

2.4.5 Additional Settings of the Home Appliance Remote Control



After the Red Atom is activated in the **Perenio Smart** app, the User can make the following settings remotely:

- Change or upload the device image for easier identification of the virtual remote control in the list of connected devices;
- Change the name of the virtual remote control;
- Remove the virtual remote control from the mobile application.

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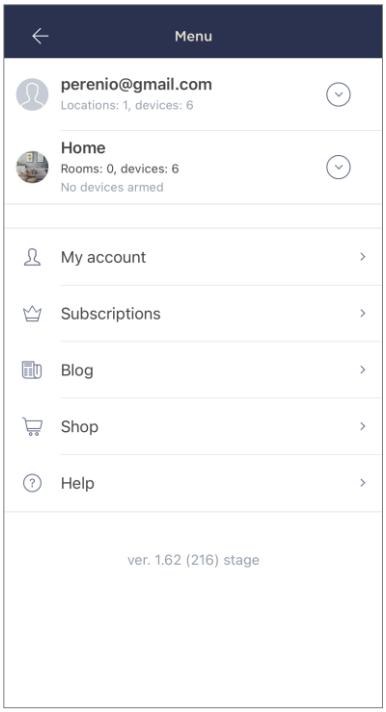
2.4.6 Subscriptions



Subscriptions allow the User to increase the storage period of the following information and data in the cloud:

- Videos and images;
- History of events;
- Statistics.

By default, all users of the **"Perenio Smart Home & Office"** Mobile App are subscribed to a free plan with a limited storage period.

To view and change the current type of Subscription, the User shall go to the Side Menu and click on a corresponding button (See Figure on the right).

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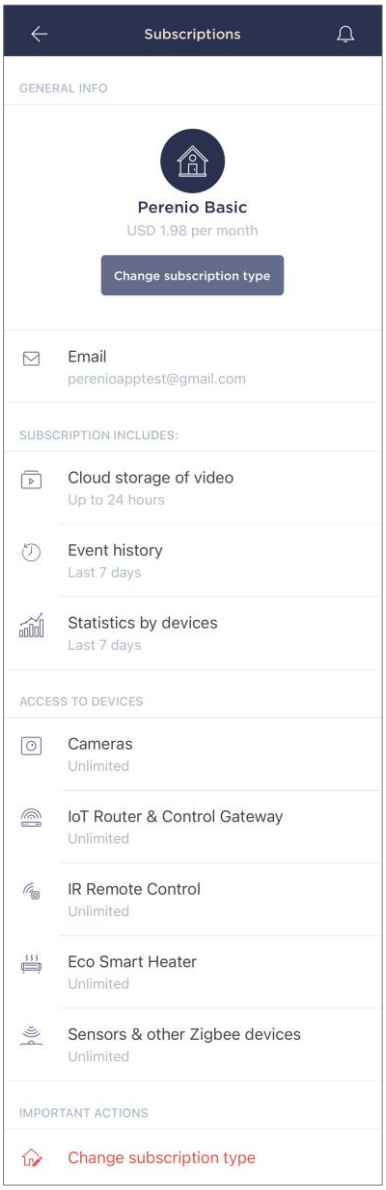

The following details for the current Subscription type will be displayed:

- Subscription name (Perenio Basic, Perenio Pro or Perenio Extra);
- Subscription (monthly) fee;
- Option to change the type of Subscription;
- Information about the Subscriber (Email address);
- Information about data storage in the Cloud;
- Information about the maximum number of devices that may be connected to the User Account.

To change the type of Subscription, the User shall click on a corresponding button and select the desired tariff plan from the list. Then, confirm the choice.

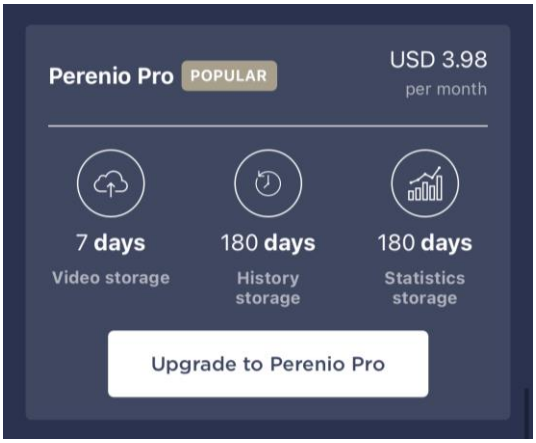

Table 4 – Available subscriptions

Storage	Perenio Basic	Perenio Pro	Perenio Extra
Video	24 hours	14 days	30 days
History	Last 7 days	Last 180 days	Last 365 days
Statistics	Last 7 days	Last 180 days	Last 365 days

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2.4.7 Changing the Room or Location for the Red Atom

When using the device, it may be necessary to change its installation area. The following options are possible:

1. **Change the room**:
    a. Disconnect the Red Atom device from the source of power and move it to another room;
    b. Plug it into the source of power;
    c. Make sure it is connected to the Wi-Fi Network;
    d. Change the Room in Red Atom settings in the User Account.
2. **Change the location**:
    a. Sign in to the Perenio Smart app and select the Location where the Red Atom device is activated;
    b. In the Devices tab, select the required Red Atom device from the list and click on the ⚙ icon (Settings);
    c. In the pop-up window, choose "Disconnect device";
    d. Disconnect the Red Atom device from the source of power and move it to another location/room;
    e. Plug it into the source of power in a new room;
    f. In the User Account, select the Location where you want to move the device;
    g. Initiate the Red Atom search through the Perenio Smart application.

2.4.8 History and Push Notifications

All notifications and other messages including changes in the status of **Perenio®** devices are displayed in the "History" tab. The most important messages can be viewed online in the "🔔" notification window in your account.

The following types of notifications are available:

- (Critical) alarms (They always come as push notifications to your smartphone, and are also displayed in the notification window, as well as in the "History" tab of the mobile app; The indication color is red);
- Important messages (They are always displayed in the notification window and the "History" tab; The indication color is yellow);
- Typical events (They are displayed in the "History" tab only; The indication color is not available).

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Alarms. These are the most important messages, which include notifications about the following events:

- IoT Router battery charging is low;
- The IoT Router runs on battery;
- Motion detection by the camera;
- There is not enough space on the SD card to continue recording video;
- Change of the camera status to "Offline";
- Sensor triggering in the armed mode, including all alarms fro smoke and leak sensors (even when the Location is in the disarmed mode);
- Disabling the sensor armed mode;
- Failure to perform the scenario;
- Connection of a dangerous device, and overloading the network (for the Power Link Wi-Fi Smart plug);
- Sudden changes or insufficient voltage, excessive power, temperature and/or consumption (for Power Link (ZigBee) Smart plug);
- Falls and/or overheats of the Eco Smart Heater, or sudden changes in voltage;
- Important updates.

Important messages. These are notifications on launches and completion of the camera and the Control Gateway firmware update, as well as notifications about low battery level of the sensor and changing the armed mode for the Location.

Typical Events. Various Perenio IoT newsletters, as well as messages about triggering Door & Window/Motion sensor in the disarmed mode.

2.5 Activation in the Perenio Lite App

To connect the device to the **Perenio Lite** app, the User shall perform the following steps:

1. Unpack the device and connect it to the power source.
2. Log in to the **Perenio Lite** mobile application on your smartphone (See par. **F** below).
3. Activate the device in the mobile app (See pars. **G** and **H** below).
4. Enter the desired device name and Room.
5. Connect IR compatible home appliances (See par. **J** below).

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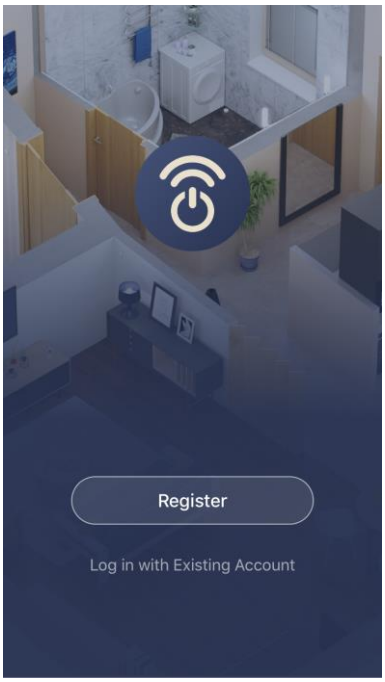
F. INSTALLATION OF THE PERENIO LITE MOBILE APP



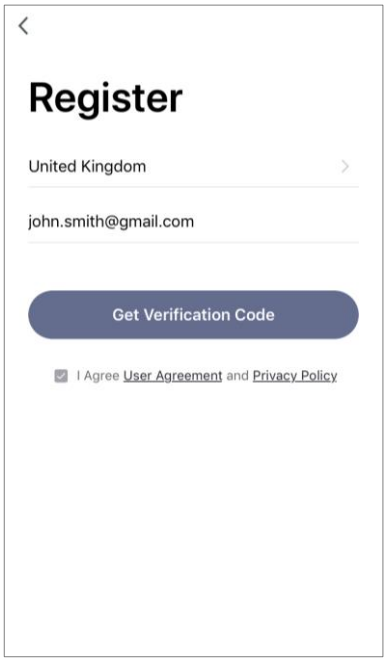
The device shall be managed via a free mobile application available for downloading in Google Play or App Store.

In order to log in to the User Account, follow the steps below:

a. Connect your smartphone to the Wi-Fi Network and download the **Perenio Lite** app from Google Play or App Store;
b. Register a new User Account (See par. **F.1.** below) or sign in to an existing User Account (See par. **F.2.** below).

F.1. NEW USER ACCOUNT REGISTRATION

a. Agree to General Terms and Conditions, Privacy Policy and provisions for personal data protection (accessible by the link);
b. Select the country of residence from the list;
c. Fill in your e-mail address and click on "Get Verification Code";
d. Enter the code received at the specified email box;
e. Set the password (6 to 20 symbols including at least one capital letter and one number);
f. Log in to the User Account.



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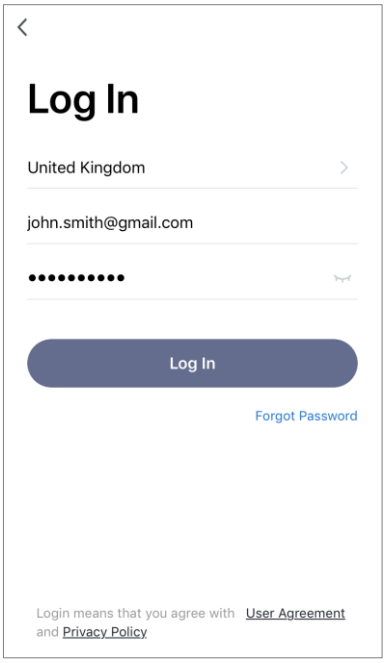
F.2. LOGGING IN TO THE EXISTING USER ACCOUNT



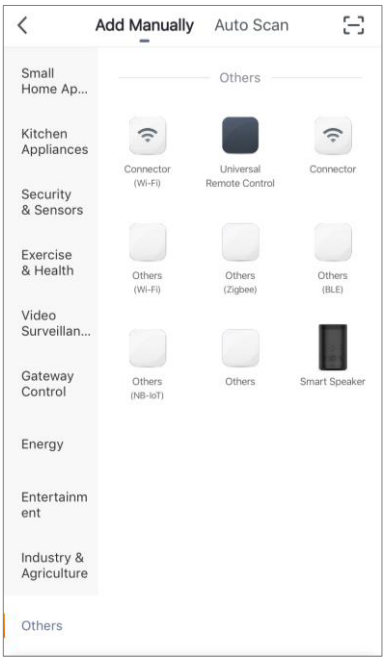
a. Enter your e-mail address and password in the login screen.
b. Click on the **LOG IN** button.

NOTE that if the password is lost, the User can restore it by clicking on a corresponding link on the screen.

To restore a forgotten password, use the e-mail address linked to your User Account, as instructions on changing the password will be sent thereto.

G. CONNECTION PROCESS

a. Click on the "+" icon in the "Home" tab;
b. Select Universal Remote Control in the "Other" Section (See Figure on the right);



NOTE that if the Red Atom is in the connection mode (the LED indicator is blinking), the User can start an automatic search for a device by clicking on the "Auto Scan" tab at the top of the screen (See Figure on the right).

c. Confirm the permission to access your camera in the pop-up window (It may not be available for certain smartphone models);

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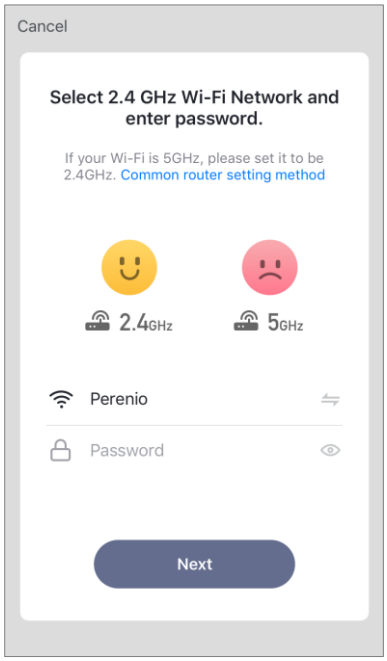
H. SENDING WI-FI NETWORK DATA TO THE DEVICE



Do as follows after the screen to connect the device to the Wi-Fi Network will be displayed:

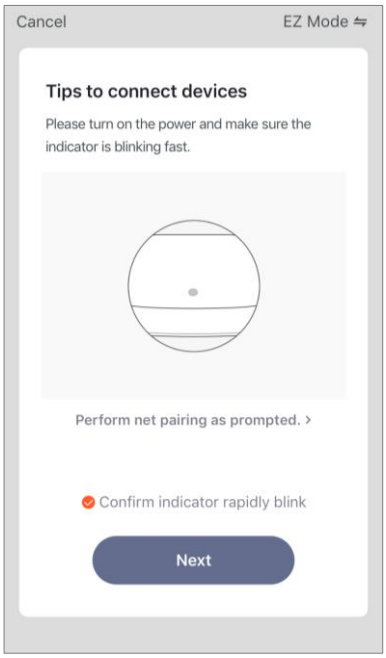
a. Enter the password from the Wi-Fi Network or select another network;

NOTE. The device may be connected to Wi-Fi Network of **2.4GHz** only.

b. Click on the **CONNECT** button;

NOTE. Before connecting, make sure that the Red Atom is powered on and that the smartphone is located at a distance of not more than 2 meters from it.

c. Press and hold the power button until the LED indicator starts blinking;
d. Confirm that the indicator is rapidly blinking by ticking the box, and press the "Next" button;
e. Wait for the connection process to complete and click on "Done".



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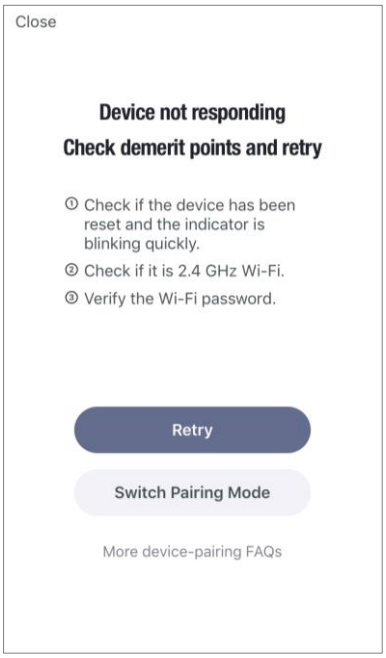
H.1. CONNECTION ERRORS



The connection failure of the device may occur due to one of the following reasons:

e. The device is switched off or at a too long distance from the smartphone;
f. The device was already activated in the current or some other User Account;
g. The device ID and/or password or Wi-Fi Network data was entered incorrectly;
h. Internet Provider failures.

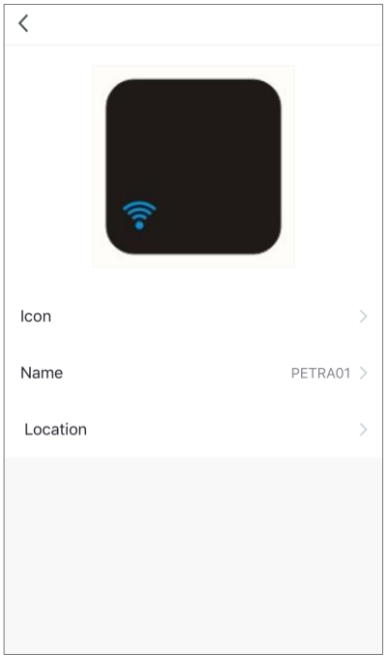
NOTE. To eliminate connection failures, follow instructions specified on corresponding screens of the smartphone.

I. LOCATION AND ROOM SETTING

After successful connection of the device, the User may specify the following:

a. Image;
b. Device name;
c. Device Location.

To do this, click on the image of the Red Atom in the "Home" tab, then click on the "edit" icon in the right upper corner of the device control panel. The setting screen will be displayed. After that, click on the "edit" icon in the right upper corner of the screen once again.



The Red Atom will be displayed in the "Home" tab.

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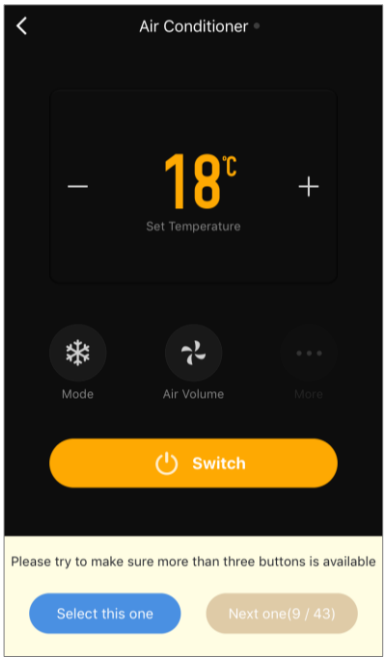
J. CONNECTION OF MANAGED APPLIANCES

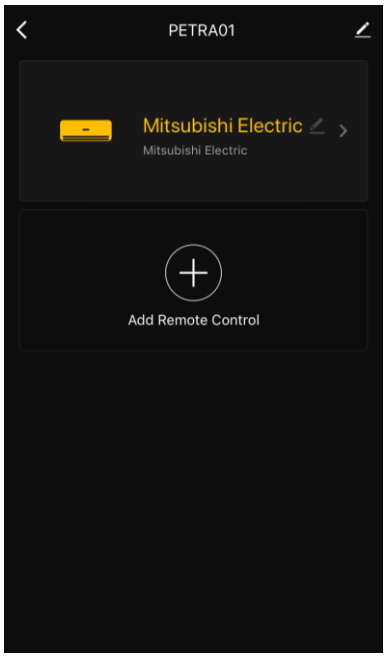
a. Click on the Red Atom device image in the "Home" tab;
b. Click on the "+" icon to add a new remote control;
c. Select the type of your managed appliance;
d. Select the manufacturer of your managed appliance.
e. Select the virtual remote control layout to be used for control of your appliance (See Figure on the right);



NOTE. To select an operating layout of the virtual remote control, and make sure that at least 3 (three) buttons on it are enabled and functioning.

Buttons are activated after the User switches the appliance to the ON mode on the smartphone screen. **In this case, the managed appliance must physically switch on!**

f. Enter the desired name for the selected virtual remote control and save settings.



After virtual remote controls were successfully set up for the managed appliances, the User will be able to see them in the control panel of a selected Red Atom device.

To view the list of managed appliances, click on the "View" button.

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The entire process of the IR Remote Control connection in the Mobile App is shown below.

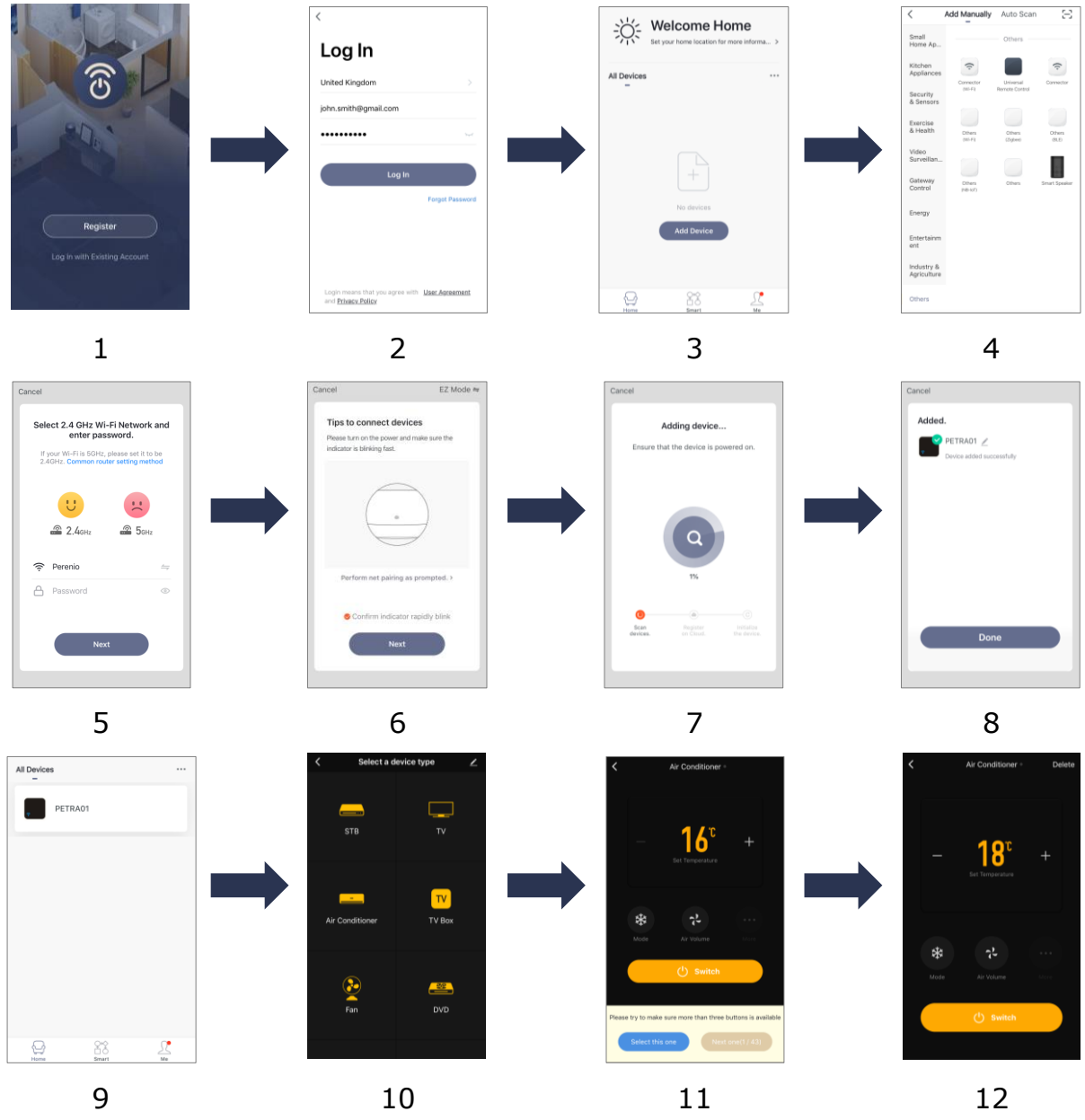

Figure 6 – Add new device procedure (Perenio Lite)

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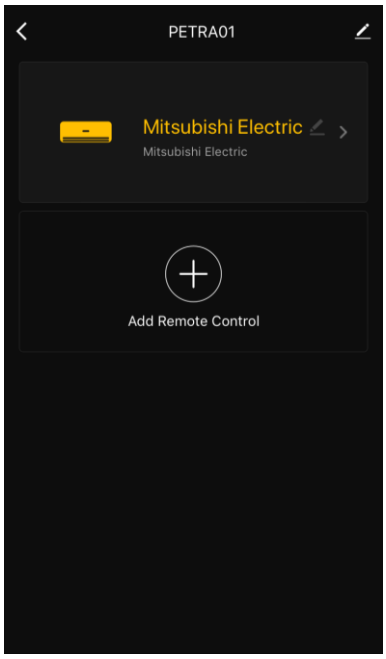
2.6 Management of Red Atom and Appliances (Perenio Lite)

2.6.1 Red Atom Control Panel



The Power Link Wi-Fi device control panel is displayed when you click on its image in the list of connected devices in the "Home" tab.

In this control panel, the User may perform the following actions:

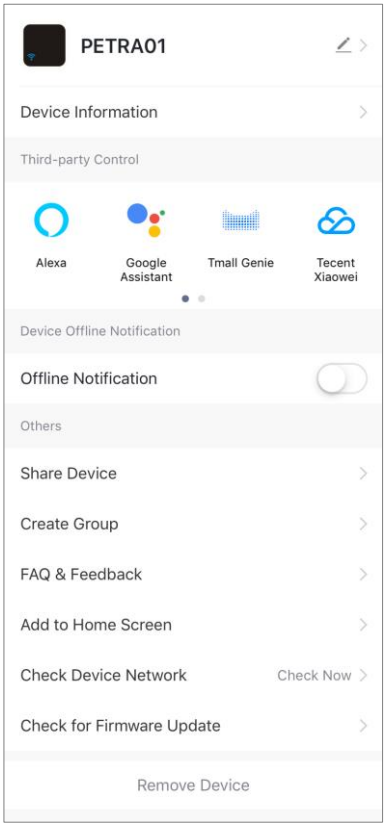
- Turn on and off the Red Atom remotely;
- View data on the current mains voltage and power online;
- Set timers.

2.6.2 Additional Settings of the Red Atom

After the Red Atom is activated in the **Perenio Lite** app, the User can make the following settings remotely:

- Change or upload the device image for easier identification of the device in the list of connected devices;
- Change the name of the device;
- Add the device to the Room;
- Add options for third-party apps control;
- Enable push-notifications;
- Share rights for management of the device;
- Create a group of several devices for easier management;
- Remove the device from the mobile application.

NOTE that the User can go to the settings screen by clicking on the "edit" icon in the right upper corner of the Red Atom control panel.



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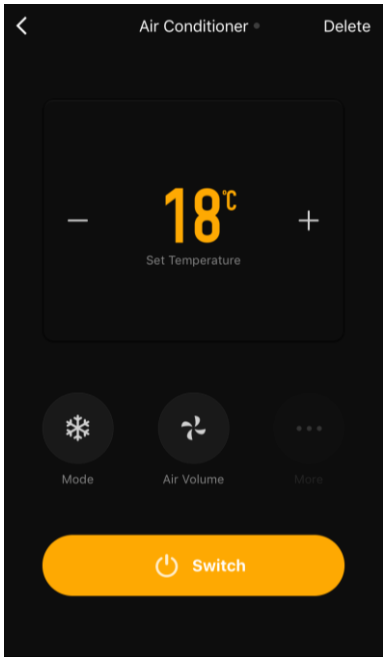
2.6.3 Control Panel for Home Appliances



The Home appliance control panel is displayed when you click on its image in the list of connected devices in the "Devices" tab.

In this control panel, the User may perform the following actions:

- Turn on and off the household appliance remotely;
- Make available settings (Change the temperature and operating mode of the air conditioner, change the TV volume, etc.).

NOTE. The list of available settings depends on the type of device connected and the version of the selected virtual remote control.

2.7 Management via Google and Amazon

To connect the IR Remote Control via the Google Home application and/or Amazon Alexa, the device must be previously activated in the **Perenio Smart** or **Perenio Lite** application.

> **NOTE.** When activating the Red Atom device in third-party applications, the User shall follow instructions therein.

Guides to connect the Red Atom device in third-party applications can also uploaded to the company's website at **perenio.com/faq**.

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3 Maintenance and Repair

The **Perenio® Red Atom** does not require special maintenance in the normal course of operation. However, in order to maintain the proper state and stable operation of devices it is recommended to perform the following actions from time to time:

- Comply with safety operation rules for the device;
- Clean the device casing from dirt and dust at least once every six months;
- Check for updates of the Perenio Smart app;
- Check for the power adapter condition and replace it in a timely manner;
- Repair mechanical damages to the device (in Service Centers).

The IR Remote Control repairs shall be carried out in Service Centers, because casings will have to be opened in the case of any element failure.

In the case of warranty repairs or replacement, the User shall provide the Seller with the sales receipt and the purchased device.

For details on the replacement and repairs of the IR Remote Control, please contact your local Company representative or the Tech Support Department at **perenio.com**.

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4 Warranty Obligations

The warranty period for the IR Remote Control shall be **Twenty-Four (24) months** from the date of sale to the End User.

The Warranty Card shall be deemed valid provided that it is correctly and completely filled in by the Seller. Upon the purchase, the Customer shall check that both the Serial Number and the Model name of the device correspond to those indicated in the Warranty Card.

Incomplete or illegible Warranty Card shall be deemed not valid. In this case, it is recommended to contact the Seller and ask for a duly filled in Warranty Card. It shall be also allowed to provide the original of the sales/cashier's receipt or such other documentary evidence of the fact and the date of sale of the device. The date of sale shall be the date indicated on the sales/cashier's receipt or other relevant document. If the date of sale is not possible to be determined, the start of the warranty period shall be the date of manufacture of the device.

The Manufacturer shall guarantee that all materials, components and assemblies of **Perenio®** devices are free from defects under normal operation within the warranty period. The limited warranty shall be applied to the first End Customer of **Perenio®** devices only and cannot be transferred to a subsequent customer.

For warranty replacement, the device must be returned to the Seller along with its receipt. Warranty obligations for **Perenio®** devices shall be provided in the country of their purchase only.

WARRANTY SERVICE PROCEDURE

In the case of any alleged defect or deficiency of the device detected, the Customer shall contact the Authorized Service Center before the warranty period expiration and provide the following:

1. The device with an alleged defect or deficiency.
2. The Warranty Card filled out in accordance with the applicable legal requirements, or the original of the document confirming the purchase of the device, including clear indication of the name and the address of the Seller, as well as the date when this device was sold.

LIMITATION OF LIABILITY

Perenio® devices SHALL NOT BE SUBJECT TO a free warranty service in the case of identification of at least one of the following damages or defects:

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- Any damage caused by force majeure, accidents, and willful or careless acts (omissions) of the Customer or third parties;
- Any damage caused by the impact of other objects including but not limited to exposure to moisture, dampness, extreme temperatures or environmental conditions (or jumps in such conditions), corrosion and oxidation, as well as penetration of food or liquid, and the effects of chemicals, animals, insects and byproducts thereof;
- In the event when the device (accessories and/or components) was unsealed (the seal integrity was violated), modified or repaired by any party other than the Authorized Service Center, including repair works using unauthorized spare parts;
- Any defects or damage caused by improper or unintended use of the device, including operation contrary to available manuals;
- Any defects caused by attempts to connect to incompatible software;
- Any defects caused by natural wear and tear of Products, including bags, casings, batteries or Installation and Operation Manuals;
- In the event when the Serial Number (Name Plates), the date of manufacture or the Model name on the device casing was in any way removed, erased, affected, altered or made illegible;
- In the case of violation of operating procedures and conditions, as well as the device installation instructions described in relevant Manuals;
- Cracks, scratches and other defects caused as a result of transportation and/or operation of the device by the Customer or acts of negligence on their part;
- Mechanical damages that occurred after transferal of the device to the Customer including damage caused by sharp objects, bending, squeezing, falling, etc.;
- Any damage caused by non-conformity with the standards of power supply, telecommunication and cable networks or similar external factors.

THE PRESENT LIMITED WARRANTY IS AN EXCLUSIVE AND THE ONLY PROVIDED GUARANTEE THAT SHALL REPLACE ANY OTHER EXPRESS AND IMPLIED GUARANTEES. THE MANUFACTURER SHALL PROVIDE NO GUARANTEES, WHETHER EXPRESS OR IMPLIED, BEYOND THE DESCRIPTION CONTAINED IN THE PRESENT DOCUMENT, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE CUSTOMER MAY USE DEFECTIVE OR INAPPLICABLE DEVICE AT HIS/HER OWN DISCRETION. THE MANUFACTURER SHALL NOT BE RESPONSIBLE FOR DAMAGE TO OTHER PROPERTY CAUSED BY DEVICE DEFECTS, THE LOSS OF USABILITY OR TIME OR FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGE OR LOSS INCLUDING BUT NOT LIMITED TO COMMERCIAL LOSS, LOSS OF PROFITS, LOSS OF CONFIDENTIAL OR OTHER INFORMATION, AS WELL AS DAMAGES CAUSED BY BREAKS IN COMMERCIAL OR PRODUCTION ACTIVITIES DUE TO THE FACT THAT THE DEVICE WAS RECOGNIZED AS FAULTY, DEFECTIVE OR NOT ALLOWED FOR USAGE.

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The present limited warranty shall provide the Customer with certain legal rights. The Customer may also have other rights in accordance with the local consumer protection laws that vary from country to country and may not coincide with this limited warranty. For full understanding of the Customer's rights, you shall read local acts.

NOTE. The Manufacturer does not produce equipment for *Vital Tasks*. Vital Task Products shall include life support systems, medical equipment, implantation-related medical devices, commercial transportation, nuclear equipment or systems, and any other fields of application where equipment failures may do harm to a humans' health or cause their deaths, as well as result in a property damage.

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5 Storage, Transportation and Disposal of Devices

The **Perenio® Red Atom** device may be shipped by any kind of covered vehicles (by rail, or road or in sealed heated airplane compartments, etc.) in accordance with the requirements of current regulatory documents applicable to fragile goods sensitive to moisture.

Similar conditions shall apply to the device storage at the Seller's warehouse.

In accordance with the Waste Electrical and Electronic Equipment (WEEE)* regulations, all electrical and electronic products must be collected separately at the end of their service life, and cannot be disposed of together with unsorted household waste.

Parts of worn out devices must be separated and sorted by the material type. In this way, every user can contribute to reuse, recycling and other forms of recovery of waste electrical and electronic equipment. Proper collection, recycling, and disposal of such devices will help avoid potential environmental and health impacts from the harmful substances they contain.

To dispose of the device, it must be returned to the point of sale, or to a local waste collection and recycling company recommended by the state or local authorities. Disposal is carried out in accordance with the applicable laws and regulations of the respective country.

For more details on how to properly dispose of your used device, please contact your device supplier, your waste disposal service or the local authorities responsible for waste disposal.

NOTE. The User must comply with the temperature and humidity conditions of storage and transportation specified in the Table of technical specifications of the present Installation and Operation Manual.

* Waste Electrical and Electronic Equipment, or WEEE, means used electrical or electronic equipment, including all components, assemblies, consumables that are part of the equipment at the time it is taken out of service (including supplied batteries (if any), components containing mercury, etc.).

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6 Other Information

Manufacturer

Name	*Perenio IoT spol s r.o.*
Address	Na Dlouhem 79, Ricany – Jazlovice 251 01, Czech Republic
Contact Info	perenio.com, info@perenio.com

Importing Company

Name	*ASBISc Enterprises PLC*
Address	Iapetou, 1, Agios Athanasios, 4101, Limassol, Cyprus
Contact Info	Tel.: +357-25-85-70-00, e-mail: info@asbis.com

Info on Certificates and Declarations

Certificates	Certificate of conformity #TB181020104 as of October 25, 2018
Declarations, reports	Report TB-RoHS162401; LVD Test report #TB181020104 as of October 26, 2018; EMC Test report #TB181020104 as of October 20, 2018;

Addresses of Service Centers are available at **perenio.com** in the "Support" Section.

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7 Troubleshooting

Table below shows typical errors and problems that may occur in the process of connection and configuration of the **Perenio® Red Atom** device.

Table 5 – Typical Errors and Troubleshooting Methods

Item No	Problem	Possible Reasons	Solution
1	The device does not activate in the mobile app	Incorrect Wi-Fi router settings	Add the Access Point of 2.4GHz
2	LED Indicator is off even when the button is pressed	No power is supplied to the device	Make sure that the device is plugged in and switched on, or contact the Tech Support Department
3	Remote control function does not work	Wrong virtual remote control layout was selected to manage an appliance	Select another remote control layout in the application, or check that the distance from the Red Atom device to the managed appliance corresponds to the declared IR range

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8 Glossary

Amazon Alexa	Virtual assistant that is able to listen to the User's voice commands and respond thereto with specific messages
Google Home	Wireless speaker for management of smart devices with the personal Google Assistant
IoT	The Internet of Things is a system of Internet-connected devices able to collect and exchange data coming from built-in services
Location	General designation of a building or premises where **Perenio®** devices are installed
Perenio Smart	Software developed by *Perenio IoT* for remote control of devices from smartphones

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