AV-03BD

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- Device description(see page 5)
- Technical parameters(see page 6)
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- Installation and connection(see page 21)
- Usage of the device(see page 25)

Device description

BAS-IP AV-03BD is a stylish panel that will surely fit perfectly into the interior of any office center. The panel is made of high quality plastic and can be used in almost any room.

Appearance

Technical parameters

GENERAL CHARACTERISTICS

Panel Type: Individual
Display: No
Camera: 1/4″
Viewing angle: horizontal 100°, vertical 52°
Camera resolution: 1 MP
Output video: 720p (1280x720), H.264 Main profile
Night lights: 6 LEDs
Minimum illumination: 0.01 LuX
Protection class: IP40
Temperature condition: -10 - + 40° C
Power consumption: 6.5 W, standby 2.5 W
Power supply: + 12 Volt, PoE
Body: ABS plastic
Color solution: Titanium gray, black
Size for installation: 25 × 60 × 40 mm
The size of the panel itself: 102 × 160 × 46 mm
Installation Type: Surface

FUNCTIONAL CAPABILITIES

Interface: Russian / English, WEB - interface
Opening the lock: From the monitor, from the BAS-IP Intercom application, via card, from the UKEY application

Access Control AV-03BD: Multi-format reader with UKEY technology support
ACS Integration: Wiegand 26 output
Shortcut buttons: 1 touch call button
Number of call melodies: 4 polyphonic ringtones
Authentication: Separate password for settings, WEB – interface
Talk mode: Duplex

Optional: SIP P2P, Built-in Relay

Configuration through WEB interface

- Login(see page 8)
- Main(see page 8)
- Network(see page 10)
- Device(see page 11)
- Access management(see page 13)
- Forward(see page 17)
- Advanced(see page 19)
- System(see page 19)

Login

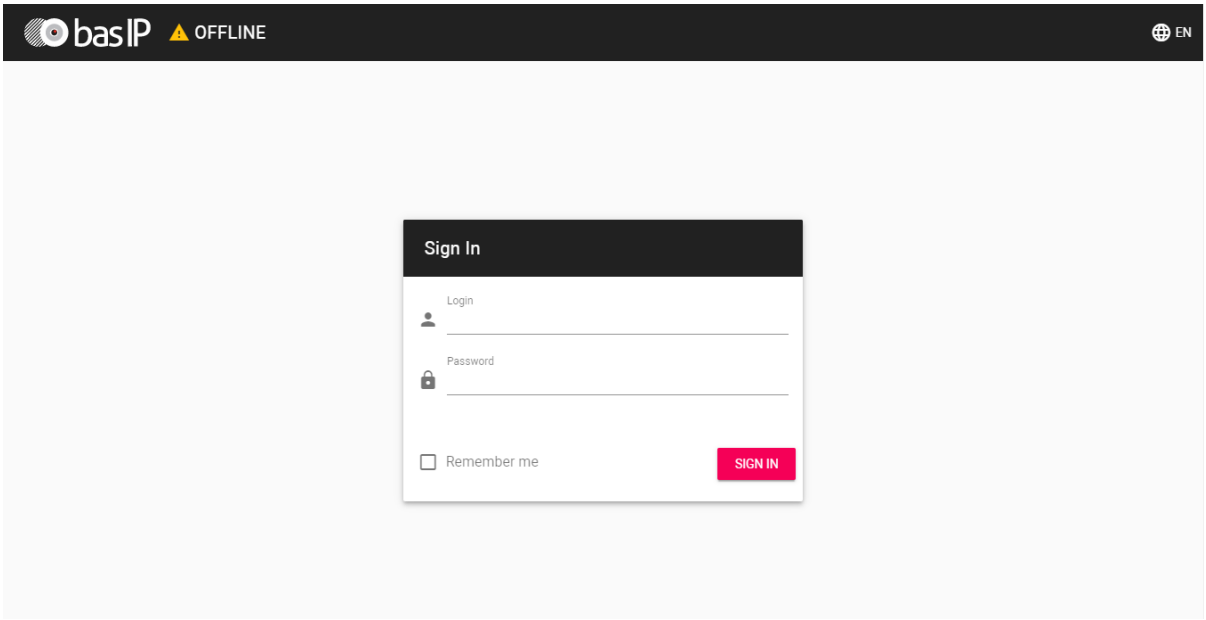
To configure the call panel remotely via the WEB interface, you need to connect to it with an Internet browser on your PC. The panel must be connected in the same network segment as the PC from which it is planned to perform the configuration.

To find the device in the LAN it is required to use Remote search and upgrade tool.

In the Internet browser, in the address entry box, you must enter the IP address of the panel, after which the user name and password entry window will appear.

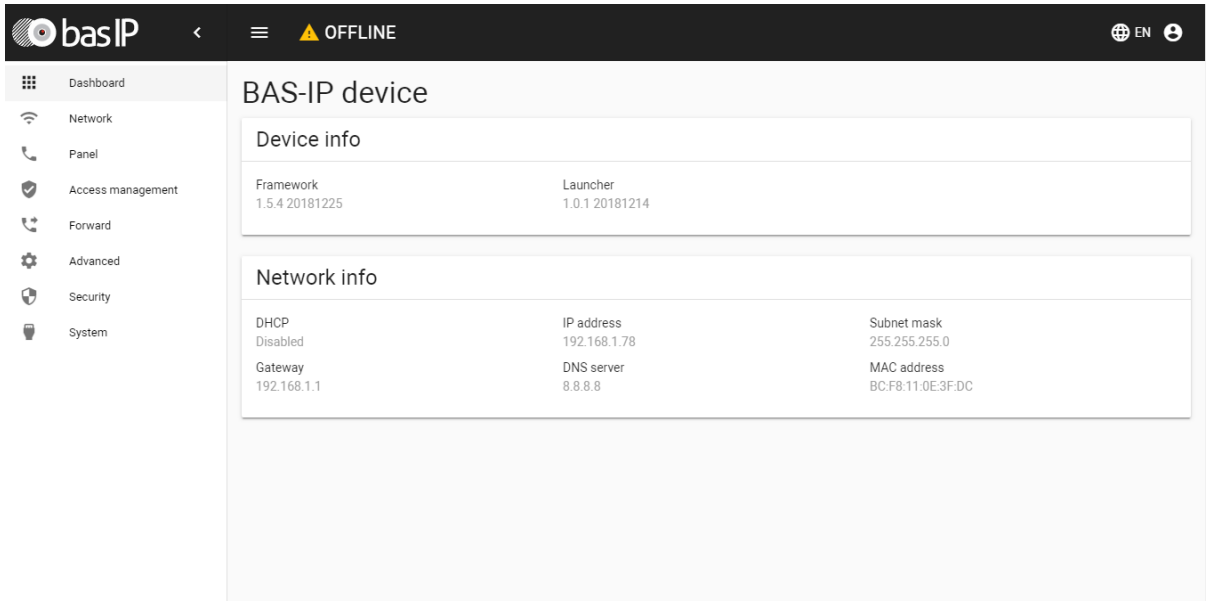
Username to enter the settings: **admin**.

The password required for entry corresponds to the password for access to the settings of the call panel and is the installer password (default password: **123456**).



Main

After successful authorization, the following interface will be displayed:



Device info

Framework: A version of the framework.

Launcher: A version of the launcher.

Network info

DHCP: Current DHCP status.

IP адрес: Current IP address of the device.

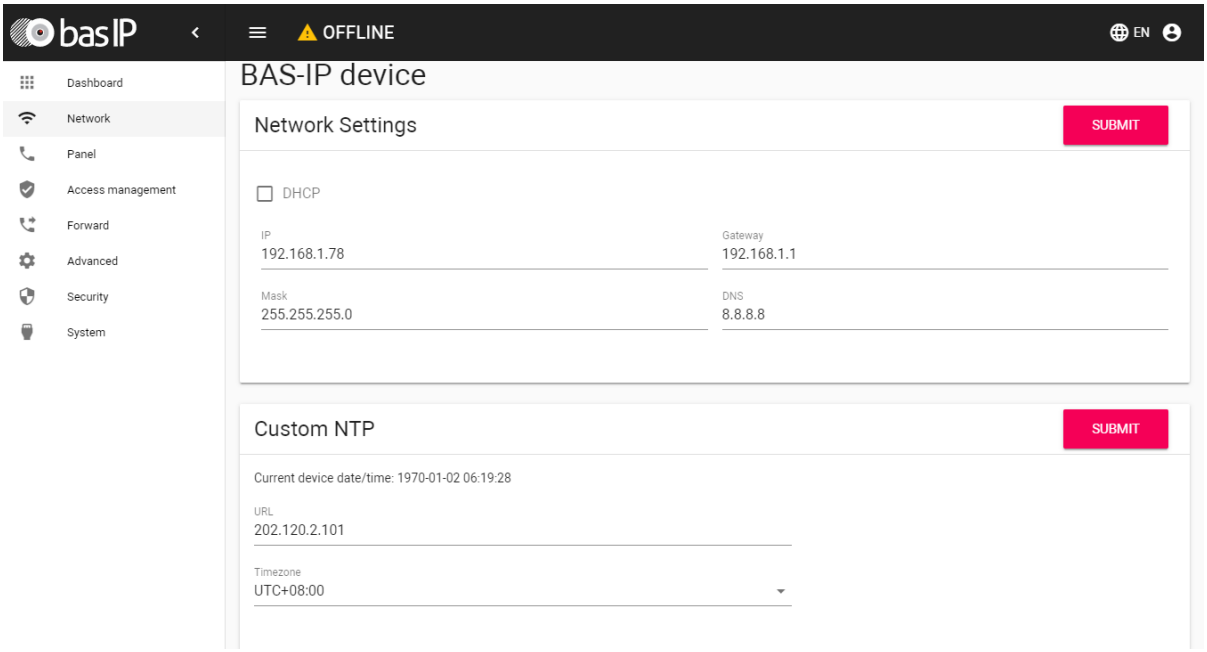
Subnet mask: Used subnet mask.

Gateway: Gateway address.

DNS server: DNS server address.

MAC address: Physical address of the device.

Network



DHCP: Enable/disable the automatic retrieval of network settings.

IP: Panel IP address.

> By default, the call panel can have a static IP address 192.168.1.90 or 192.168.1.91.

Mask: Subnet mask.

Gateway: The main gateway.

DNS: DNS server address.

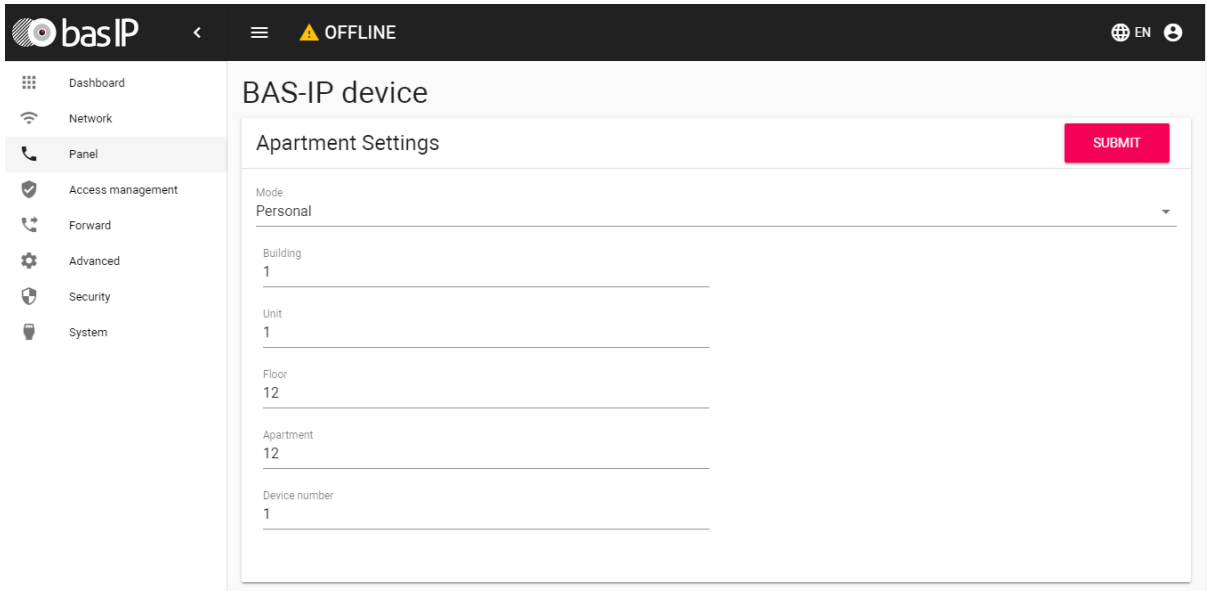
Custom NTP

Current device date/time: Shows the current device's date and time.

URL: Field to enter custom NTP server address.

Timezone: Choose used timezone.

Device



Apartment settings

Mode: Panel's operation mode.

Building: Building number.

Unit: Unit number.

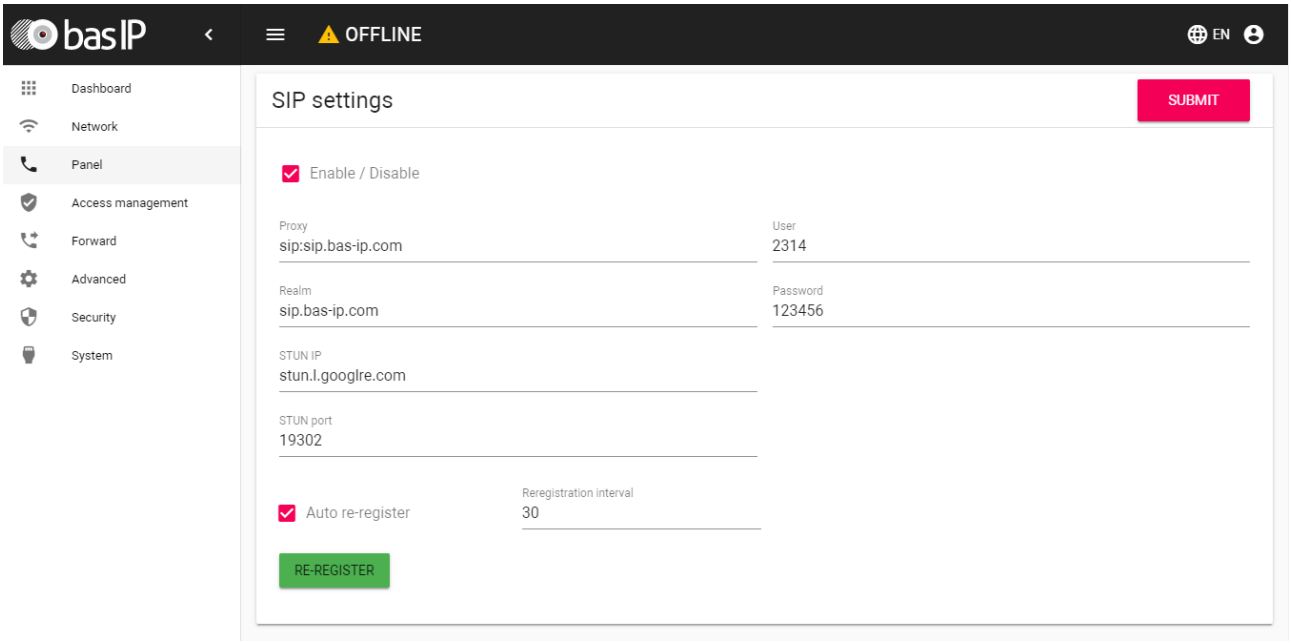
Flor: Floor number.

Apartment: Apartment number.

Device number: Device numeration number.

> **Numeration of the panels**
> If you have several call panels that have one logical address, then in the "No." field specify the value 2, 3, 4, 5, etc., up to 9.

SIP settings



Enable/Disable: Enable/disable SIP registration.

Proxy: A proxy SIP server that can be represented by both an IP address and a domain name.

> **Data format:**
> Before the proxy address, you must specify **"sip:"**.

Server: SIP server address.

> **Data format:**
> Can be represented by both an IP address and a domain name.

STUN IP: STUN server address.

> **Example:**
> stun.l.google.com.

STUN port: The port of the STUN server.

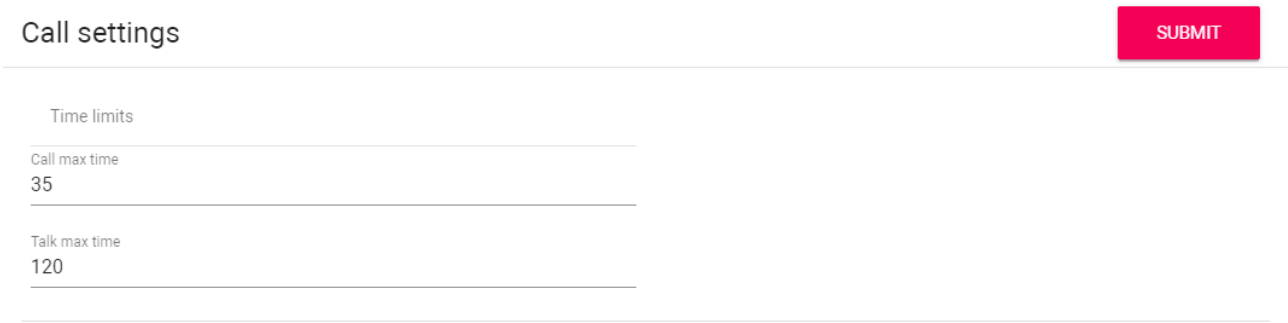
> **Example:**
> For google STUN server 19302 port is used.

Password: Password of SIP number.

Automatic re-registration: Re-register the device on the SIP server.

Re-registration interval: Input field for the time interval in seconds, after which the device will be re-registered on the SIP server.

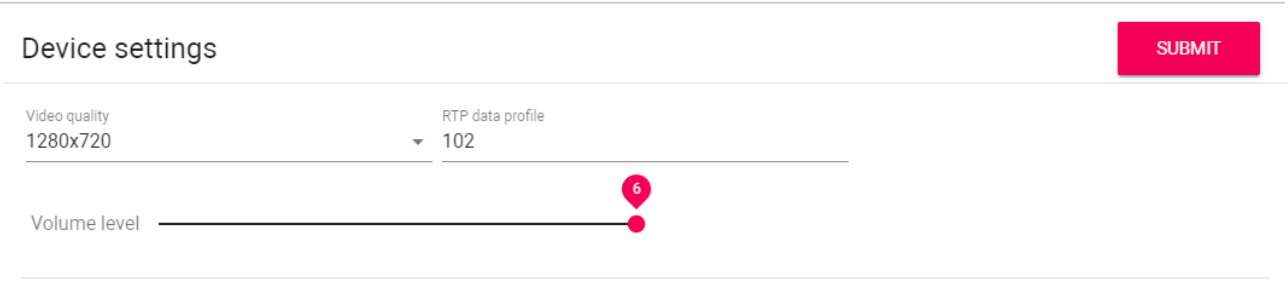
Call settings



The maximum time for calling: The time interval after which the panel automatically ends an outgoing call if there is no answer.

Maximum talk time: The time interval after which the panel automatically ends the outgoing conversation.

Device settings



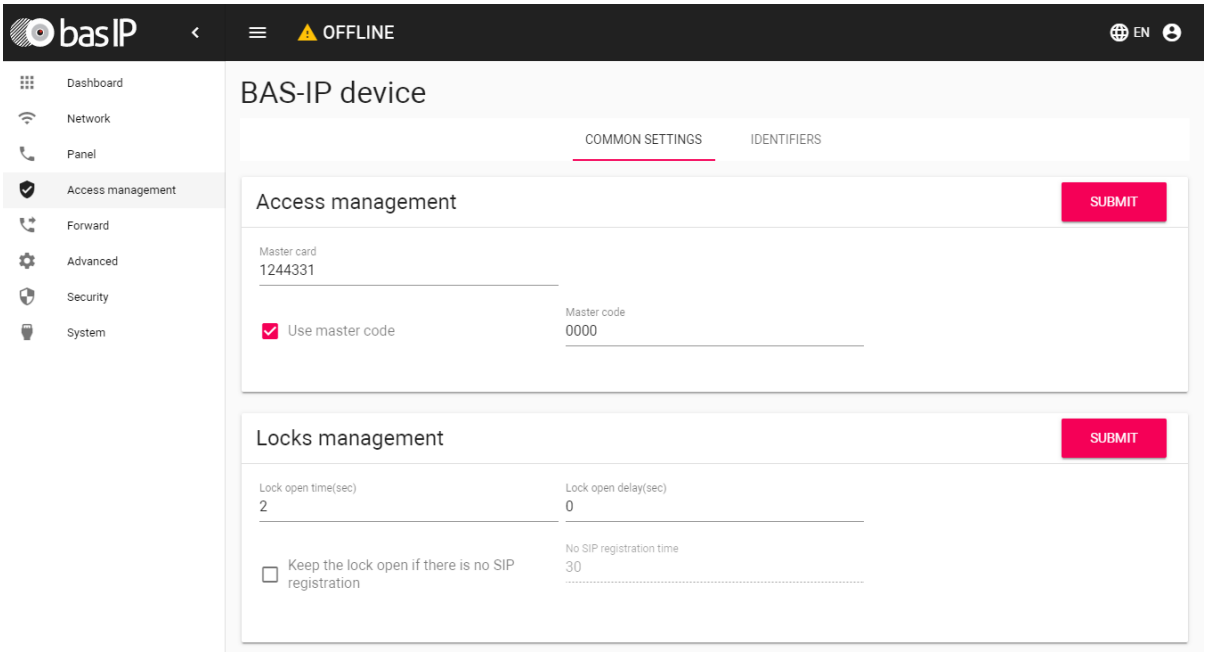
Video quality: Select your preferred video resolution.

RTP data profile: Select your preferred RTP data profile.

Volume Level: Adjusts the speaker volume of the panel.

Access management

In this menu, you can set general control parameters of the access control system, access rules, and identifiers.



Common settings

Master card: Master card number.

Use master code: Enable/disable using master code to open the lock.

Master code: The code entered on the keypad for opening the lock.

> When using the control module with two locks SH-42, when entering the master code on the panel, both locks will open.

> **Registering access cards via web interface**
> Enter 0 in the “Master card” field and click the “Apply” button.
> Next, bring the master card, necessary for the registration, to the panel reader area - the signal "BEEP" will sound, which means that the master card has been successfully registered. After that, you need to put this card **again** to enter the card-issuing mode. After that, in the area of the panel reader hold the user cards in turn. After each user card, the “BEEP” signal will sound, which means the successful registration of the raised card.
> **The time between adding cards should not exceed 10 seconds.**

Locks management

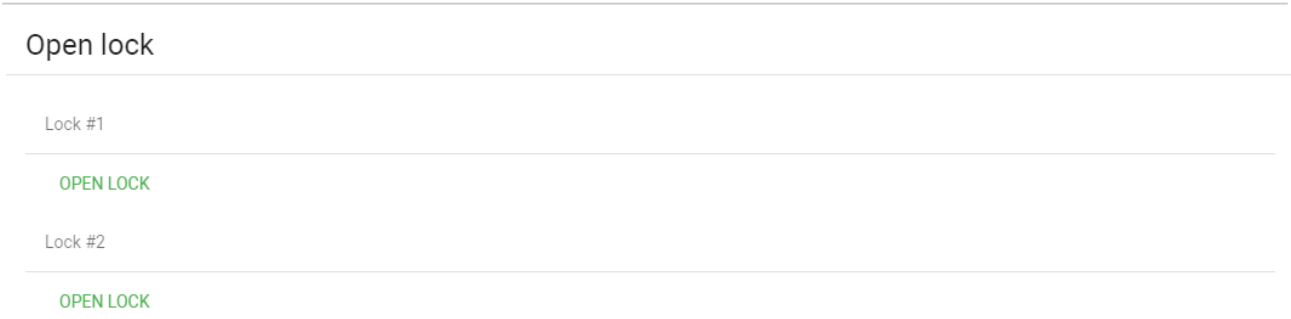
Lock open time (s): Time for which the panel relay contacts are closed or open.

Lock open delay: Time after which the contacts of the panel's relay will close or open.

Keep the lock open, if there is no SIP registration: Function to automatically open the lock if SIP registration on the panel is lost.

No Sip registration time: Time period after which the lock begins to open if SIP registration on the panel is lost.

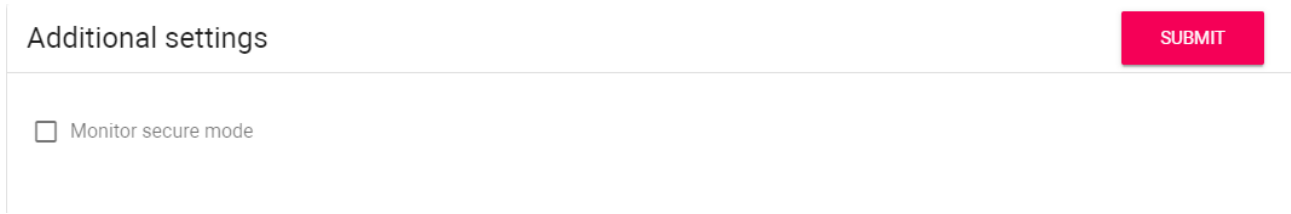
Open lock



Lock #1, Lock #2

Open lock: The function of opening the selected lock from the panel WEB interface.

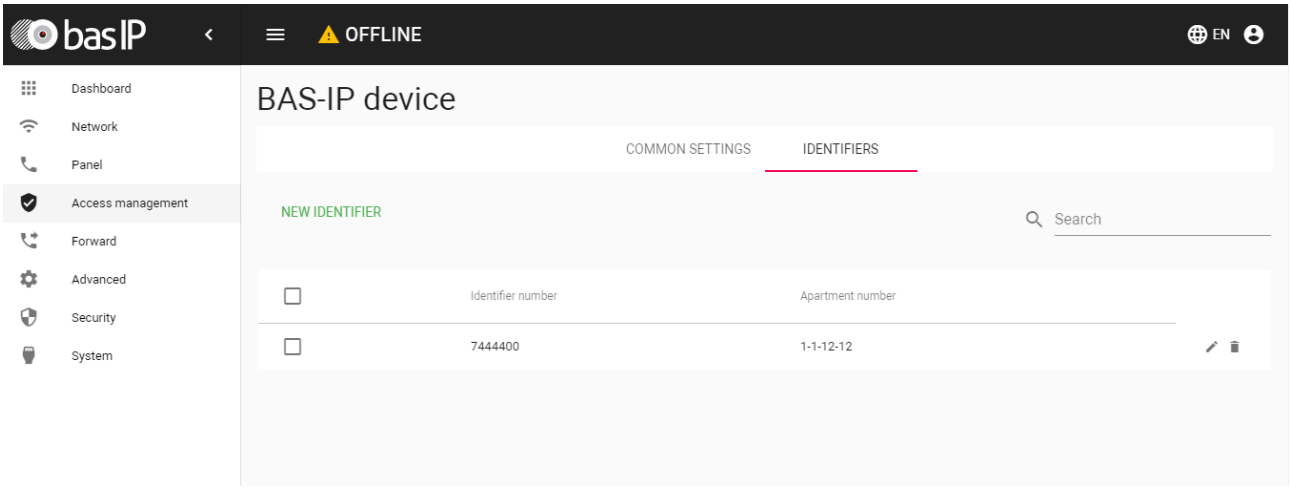
Additional settings



Monitor secure mode: Turns off the alarm on the internal monitor when you bring up a card that is connected to the logical address of this monitor.

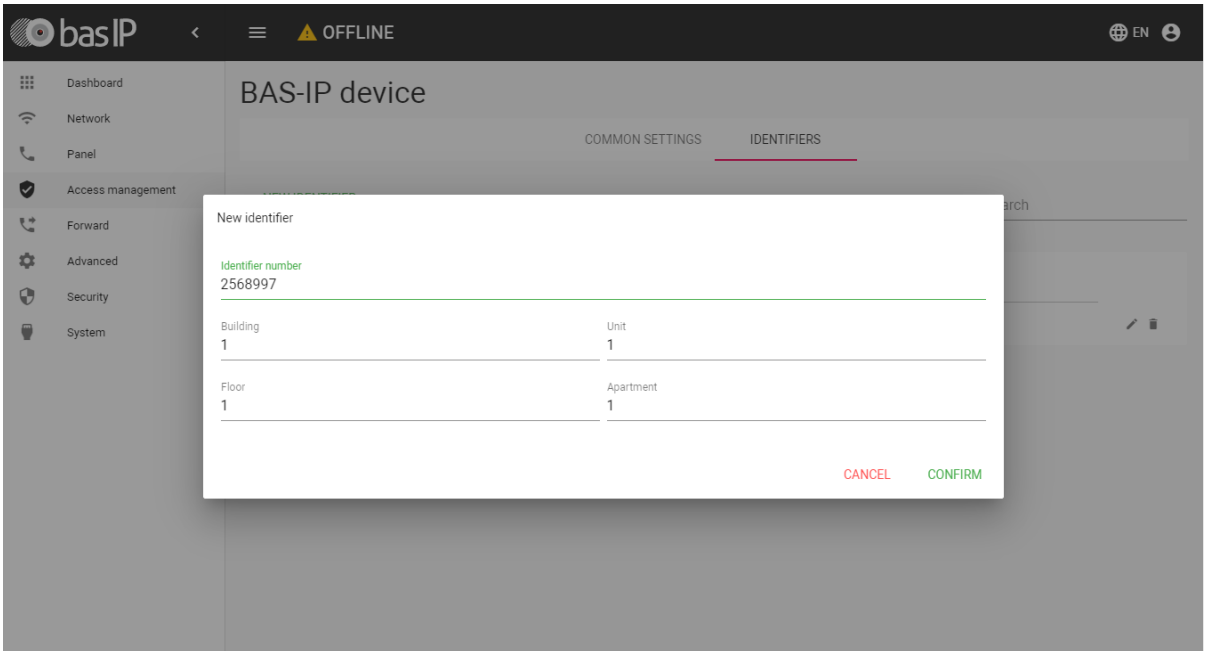
Identifiers

This menu displays a table of identifiers and access codes added to the panel memory.



New identifier

After clicking on the "New identifier" button, the following interface will appear:



Identifier number: Number of identifier in decimal format.

Building:

building number 0001-9999

Unit:

Unit number
00-99

Floor:

Floor number
00-99

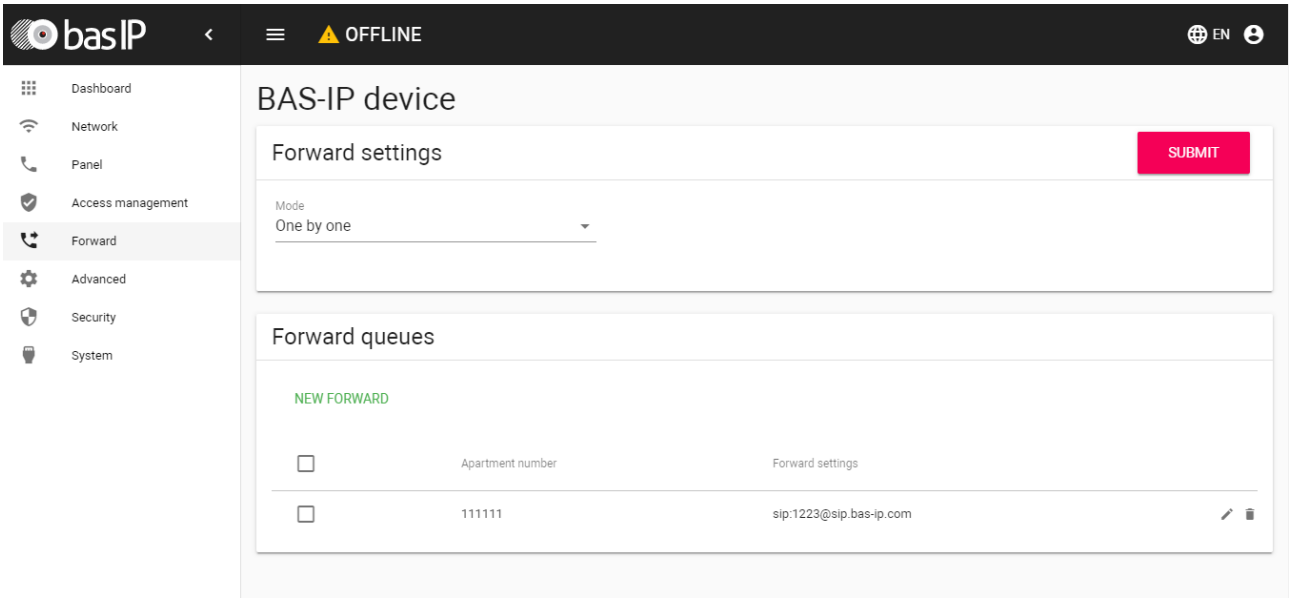
Room:

Room number
01-99

Forward

This section is used to substitute numbers by means of the panel when making calls to internal monitors when there is no monitor or it is turned off, or to any given SIP number.

Forward settings



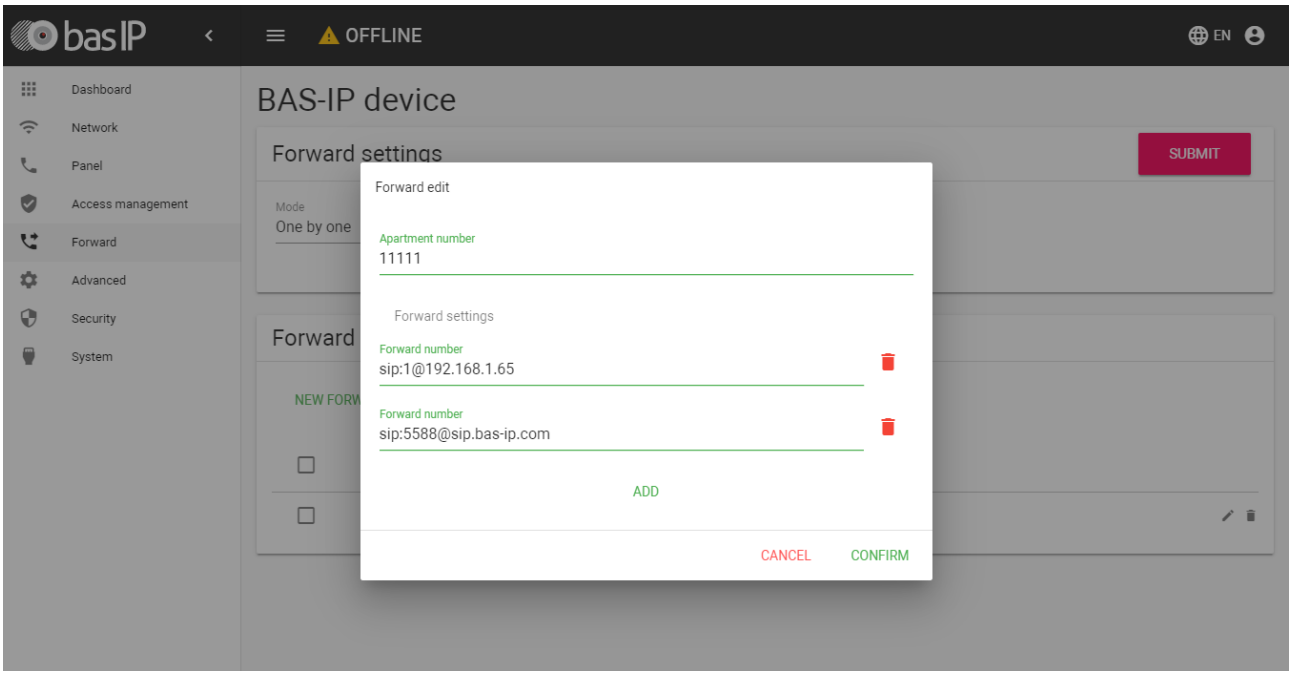
Mode: Mode of the forwarding.

All at once - the call is made to all numbers simultaneously.

One by one - the call is made to the numbers in turn with a delay of 20 seconds.

New forward queue

After clicking on the "New Forward" button, the following interface will be displayed:



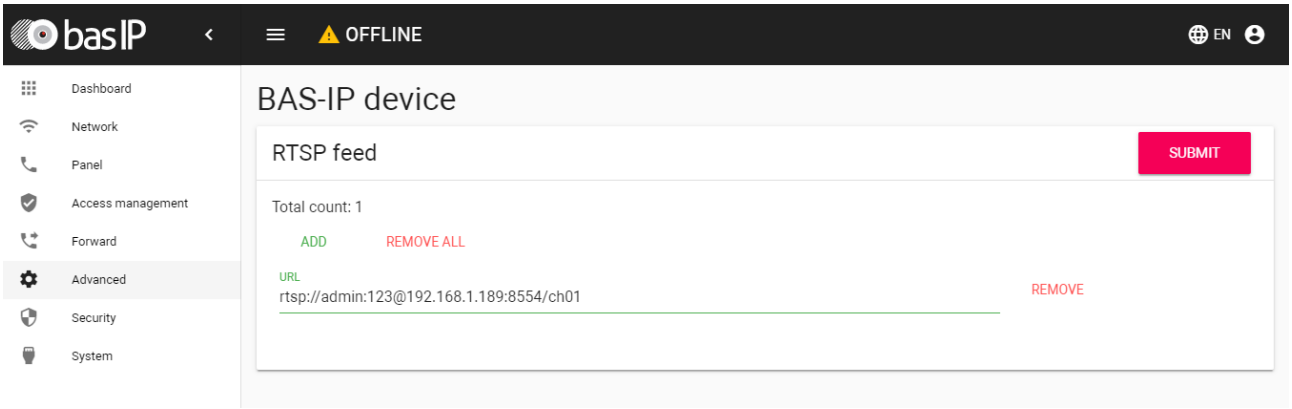
Apartment number: Number dialed on the panel's keypad.

Forward Number: The direction in which the call will be made when you enter the corresponding number on the keypad. It can be used both for calls within the LAN via P2P, and for SIP calls.

> **Input format for internal calls**
> **sip:1@192.168.1.65**, where **1** is the desired number to be displayed by the called party, **192.168.1.65** is the IP address of the called SIP client (in the case of using a softphone, the IP address of the device where the softphone is installed).
>
> Call to SP-02:
> **sip:192.168.1.99**, where **192.168.1.99** is the IP address of the called handset.

> **Input format for SIP calls**
> **sip:5588@sip.bas-ip.com**, where **5588** is the SIP number of the device being called, **sip.bas-ip.com** is the address of the SIP server, which can be specified either by the IP address or by the domain name.

Advanced



RTSP feed: Function to view additional IP cameras during a call (up to 4 streams). This feature is available for v4 monitors and any other SIP devices with a keyboard.

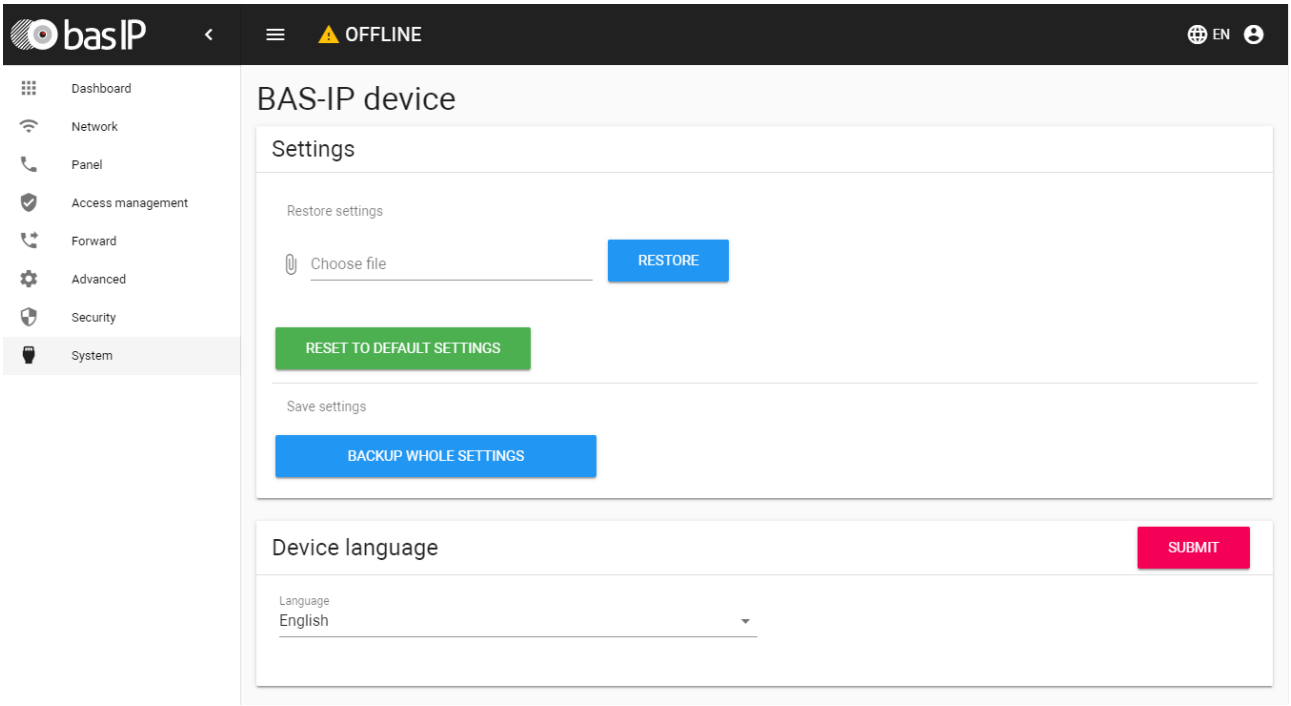
> During a call, it is possible to switch between streams by pressing keys 1 through 5. The key "1" corresponds to the stream of the camera of the call panel, the keys from "2" to "5" - to additionally added streams (transmission is done by DTMF RFC2833).

Url: Address of the RTSP stream displayed during the call.

> **Example**
> rtsp://admin:123@192.168.1.189:8554/ch01

System

In this section, backup and restoration of the panel settings, software update, language change, and software reboot are performed.



Settings

Choose file: Selecting the panel configuration file from the PC file system.

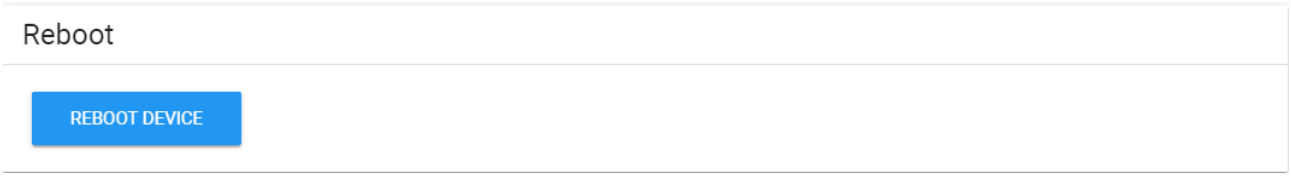
Set default settings: Reset all panel settings to factory defaults.

Backup all settings: Save and export configuration files.

Device language

Choosing the language of the device.

Reboot



Reboot: Soft reset of the panel.

Installation and connection

This page describes the process of installing and connecting the call panel.

- Completness check of the product(see page 21)
- Electrical connection(see page 21)
- Mechanical mounting(see page 23)
- Connection of additional modules(see page 24)

Completness check of the product

Before installation of the outdoor panel, it is necessary to check that it is complete and all components are available.

Outdoor panel kit includes:

Outdoor panel	1pc
Surface mounting bracket with a hood	1pc
Surface mounting bracket without hood	1pc
Installation manual	1pc
Set of wires with connectors for connection of power supply, lock, and additional modules	1pc
Set of end-caps for connections	1pc
Set screws with a wrench	1pc

Electrical connection

After verifying whether a device is complete, you can switch to the connection.

For connection you will need:

- An Ethernet UTP CAT5 or higher cable connected to a network switch/router.

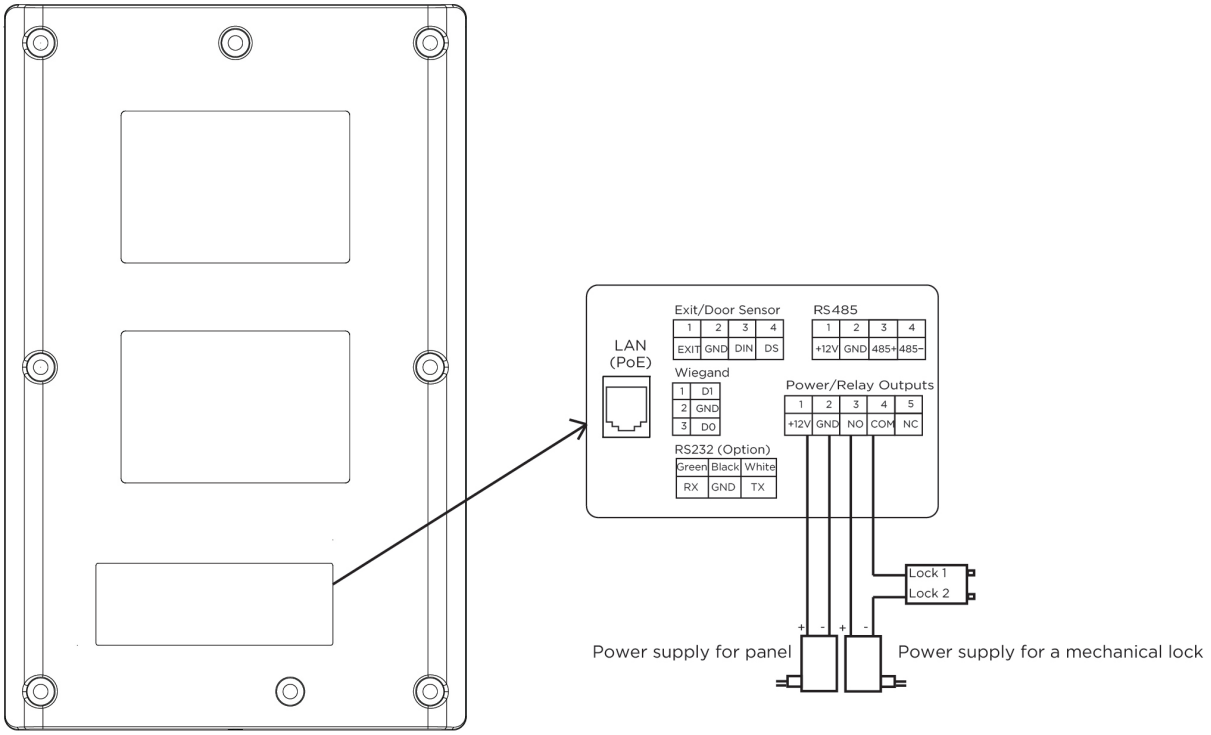
Cable length recommendations

The maximum length of the UTP CAT5 cable segment should not exceed 100 meters, according to the IEEE 802.3 standard.

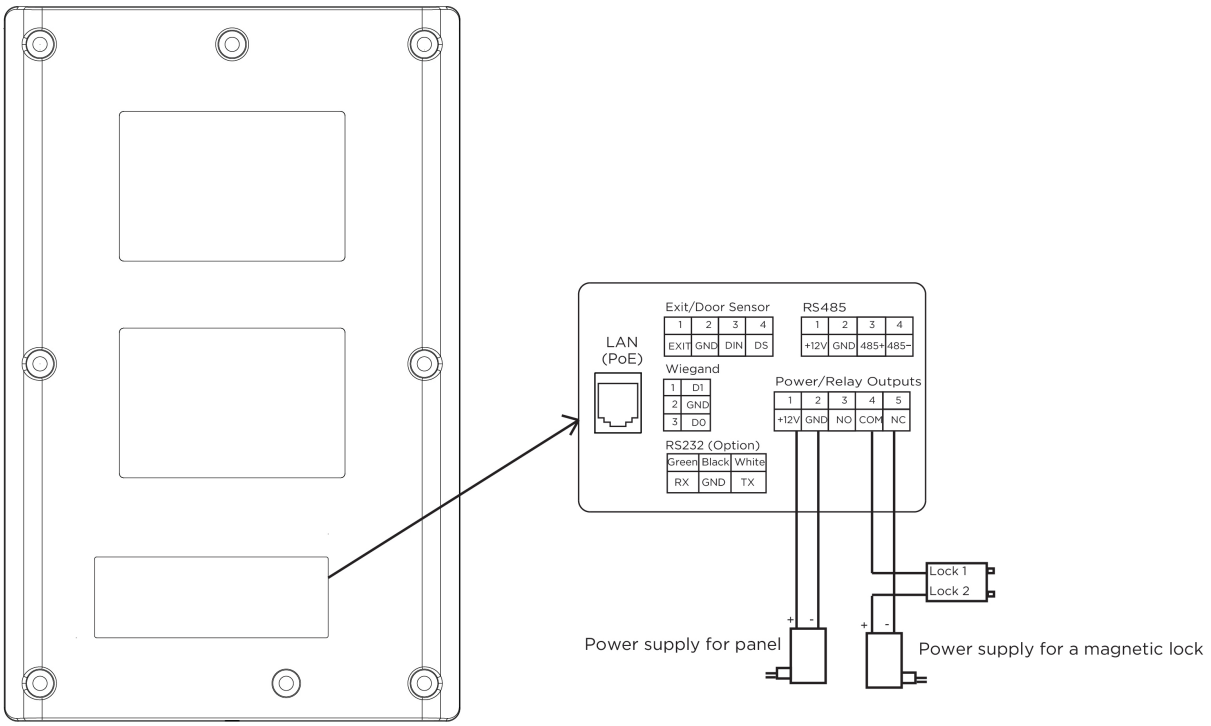
- Power supply at + 12V, 2 amps.
- Wires must be brought for connecting the lock and additional modules (optional).

> You can connect any type of electromechanical or electromagnetic lock for which the switched current does not exceed 5 Amps.

1. Connection scheme of electromechanical lock using external power supply for panel and the lock.

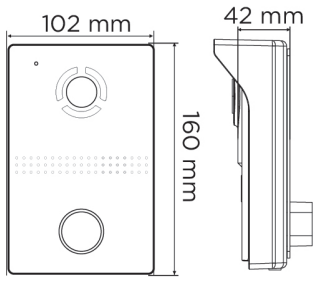
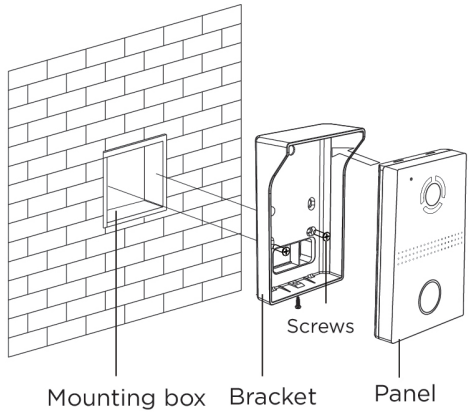


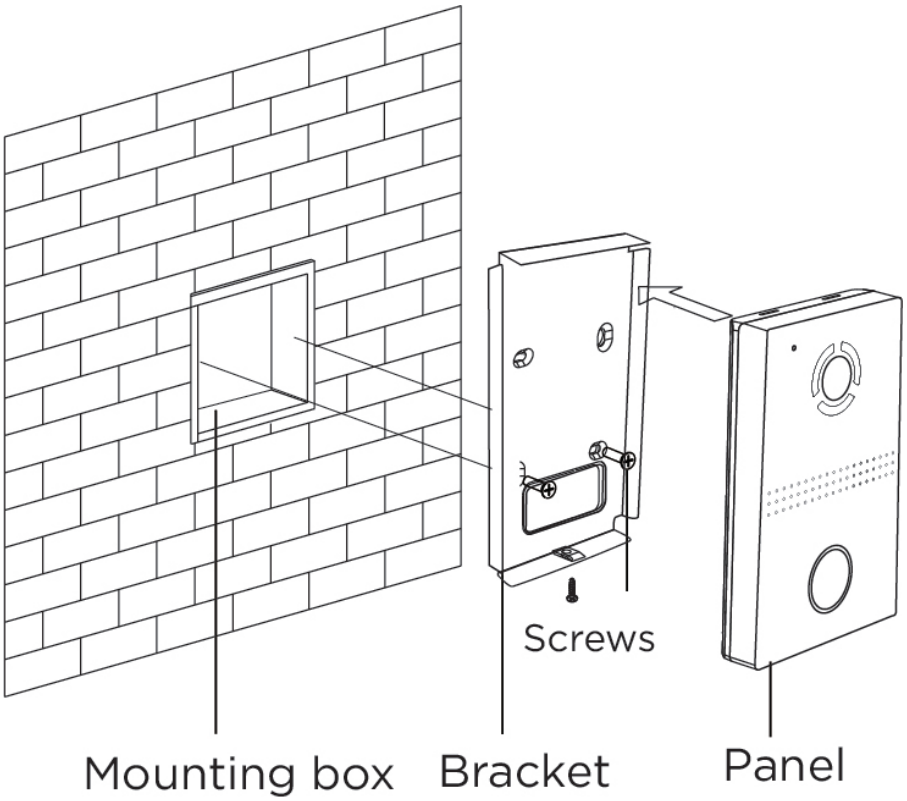
2. Connection scheme of electromagnetic lock using external power supply for panel and the lock.



Mechanical mounting

Before mounting the door panel, a hole or recess in the wall with dimensions of 20 × 50 × 60 mm (for flush mounting) must be provided. It is also necessary to provide for the supply of power cable, add. modules and local network.

Appearance dimension drawing	Installation diagram
	



Connection of additional modules

The following modules can be connected to the outdoor panel:

- Module to control two locks SH-42

Usage of the device

- UKEY mobile access(see page 25)
- Recieving the RTSP stream from the panel's camera(see page 29)

UKEY mobile access

Description

Ukey Mobile Access from BAS-IP is a universal technology for gaining access to the premises or to the territory of an object with the possibility to use in one reader simultaneously: EM-Marin cards and MIFARE/encrypted cards MIFARE Plus/MIFARE Classic, cell phone (Bluetooth and NFC).

Advantages of UKEY:

- Ability to use several standards of identification simultaneously: EM-Marin, MIFARE, Bluetooth and NFC
- Ability to use a cell phone as an identifier
- Adjustable range of mobile identifier (when using Bluetooth)
- Low power consumption
- Special encryption algorithm for mobile IDs and MIFARE Plus cards
- Ability to apply to any types of objects
- Ability to install UKEY Mobile access in previously aquired outdoor panels
- Convenience in use

Working principle

Identification and unlocking is possible due to the presence of the built-in module BME-03 in the panels, supporting UKEY Mobile Access.

Multi-format Module BME-03 which can be equipped with all the outdoor panels BAS-IP with a built-in reader, allows you to identify the user by the UKEY technology using different identifiers (cards, pendants, cell phone), and performs the role of universal reader of access control system.

Mobile access with UKEY application[1]

1 https://wiki.bas-ip.com/basipidapp

For users' ease of operation with BAS-IP outdoor panels equipped with multi-format readers, the company BAS-IP has released a new mobile Ukey application which, after receiving the mobile ID, is used to open the doors/gates/parking gate arms.

For each outdoor panel equipped with a reader module with support for UKEY Mobile access, a different range of the mobile ID can be configured, in the range of 2 centimeters to 10 meters. The response distance depends not only on the selected mode, but also on the thickness of the walls in the room, weather conditions (when placing the panel outside) and other factors.

Operation modes (operational range of mobile ID):

- Touch (working distance up to 2 cantimeters)
- Door (working distance up to 1 meter)
- Gate/barrier (adjustable distance from 0,5 meter to 10 meters)

Triple-clicking setup with UKEY Cfg[2] application

Application abilities:

- Adjusting operating mode of EM-Marin cards, MIFARE and BLE (Bluetooth Low energy) - enable/disable standards of reading
- Setting ecryption for UKEY identifier. This will enable you to link the encrypted ID key to the selected reader
- Enable/disable encrypting mode for MIFARE Classic and MIFARE Plus cards
- Enable diversification for MIFARE Classic and MIFARE Plus cards
- Adjusting sound confirmation when waving mobile identifiers near the reader in standby and reader mode
- Setting operating mode: door, touch, gate/barrier
- Adjusting range operating mode when select gate/barrier mode
- In connection with reader TR-03, configurator allows you to to record MIFARE Classic and MIFARE Plus encryption cards
- Storing a file with settings for defined reader
- Ability to download configuration file with settings for restoring reader parameters and copying settings to other readers

Ways to get mobile ID and access card

Scan QR-code with the UKEY Application

2 https://wiki.bas-ip.com/display/BASIPCONFIGID/UKEY+Cfg

The user submits an application to purchase the required number of QR-codes to the administrator of his service company, wherein one QR-code = one mobile device. Afterwards, the user gets the QR-code in the printed form or in electronic form (by e-mail, Viber, Telegram, etc.). Then the user scans the code received or imports it from the file system and thus gets the mobile ID.

Before the identifier is issued to the user as a QR-code, it is recorded by the administrator of the management company in the Management Software. The QR code cannot be reused on multiple cell phones, as it is linked to only one mobile device, providing a high level of reliability and security of mobile identifiers. You cannot copy or duplicate an identifier.

Using BAS-IP TR-03B reader

In order for the administrator of the management company to be able to use TR-03B to issue mobile identifiers or to record access cards, it is necessary to specify the master-card, which will be needed for the reader to work in the future. The Master- card is specified when the reader is first started.

Create a master card:

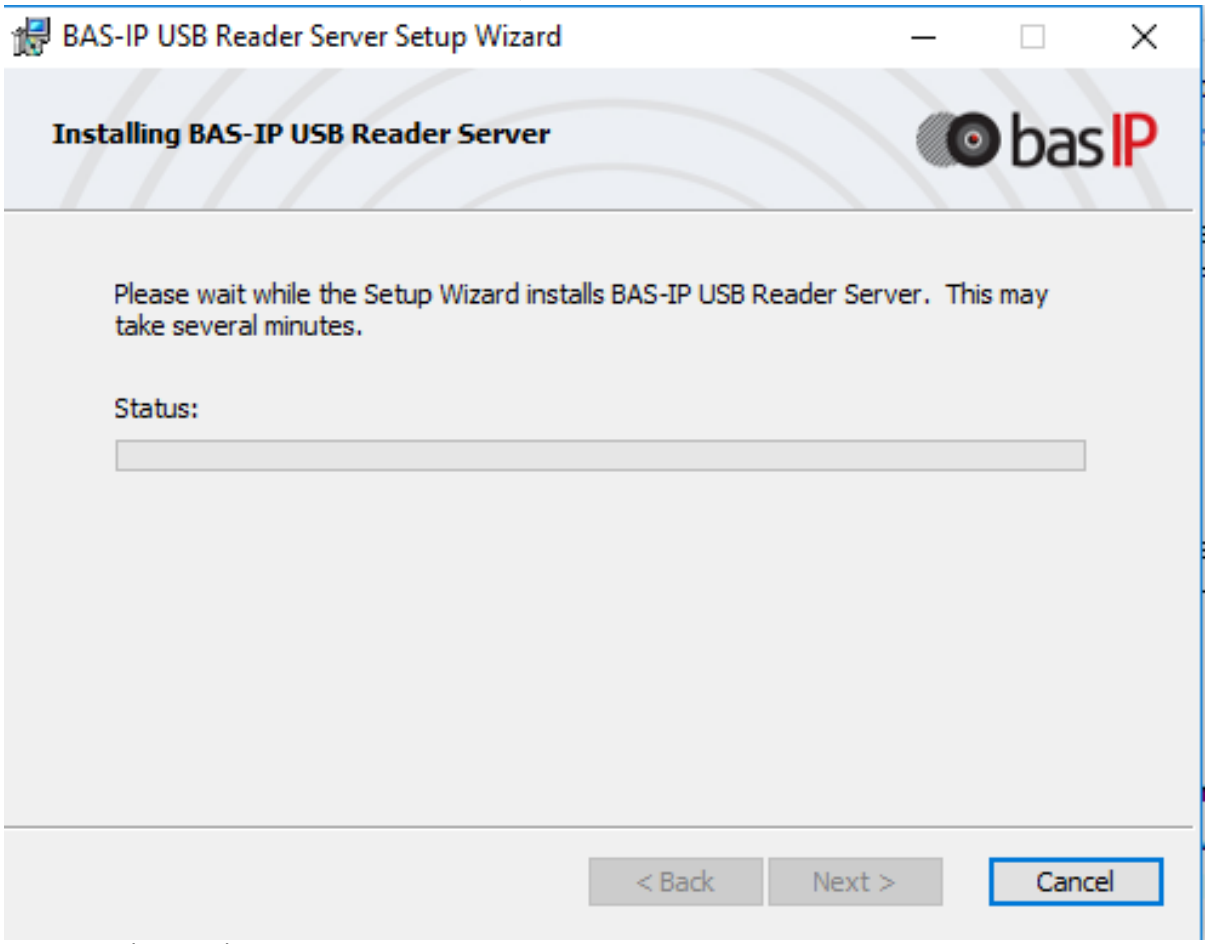
1. Download and install UKEY Cfg mobile application;
2. Connect TR-03B reader to the power source +5V (USB);
3. Launch UKEY Cfg app and press Search button;
4. The app will find the reader, it is necessary to enter the settings, More menu, then Change master-card tab;
5. Bring EM-Marin card or MIFARE to the reader;
6. Reader will make a record to the card with encryption, after that it becomes a master-card for this reader;
7. To keep on working with the reader, you should reconnect to it in the UKEY Cfg App.
8. For more details about features of the desktop reader, follow the link

Once the master-card has been created, the administrator can issue mobile ID's as well as add encrypted keys to MIFARE Plus cards.

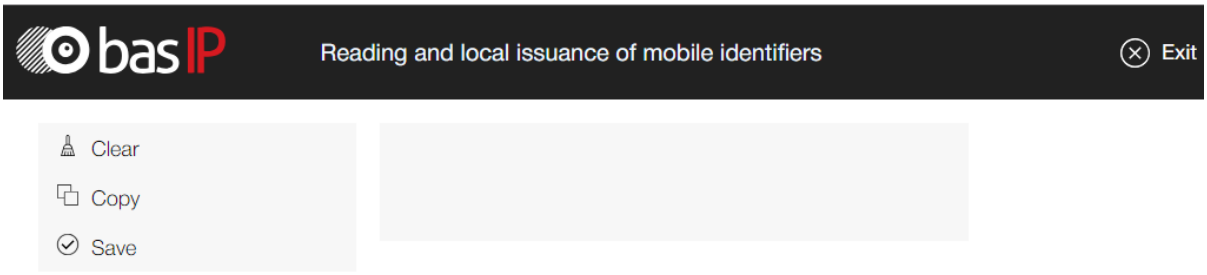
Obtain Mobile IDs using TR-03B

1. Download and install UKEY mobile application;

2. Install and launch the program on a PC with the Windows Family OS to write the identifiers "BAS-IP USB Reader Server";



3. Connect the reader to PC;
4. Bring a master-card to the reader;
5. Bring a cell phone to the reader (make sure Bluetooth is on) and enter UKEY App, then press Obtain button or select Obtain BAS-IP TR-03 key.
6. The reader will transmit a mobile ID to your cell phone, thus "Your key is ready" will appear in the app.



Recieving the RTSP stream from the panel's camera

To get the RTSP stream from the camera of the call panel to the video surveillance system, you need to put in the add line of the camera rtsp://admin:123456@192.168.1.16:8554/ch01, where **admin** is the login, **123456** is the password to access the WEB interface, **192.168.1.16** is the IP address of the panel, **8554** is the port of access to the camera, **ch01** is the channel number.

FCC Statement

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

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.