IP camera

SV-BA414-E

User manual

Contents

1 Notes and warnings

⚠️ Notes contain additional information on using and configuring the device.

✅ Tips contain important information, tips or recommendations on device operation and setup.

2 Product description

SV-BA414-E is a camera designed for real-time video surveillance. Due to the QuadHD resolution, the transmitted image is clear and detailed. PoE technology allows installing the camera everywhere, regardless of the location of the power supply. It also saves on the cost of power cables and makes the installation simple and not time-consuming.

Features and capabilities:
− Night vision provides clear images even in low-light conditions.
− Motion detection notifies you of events as they occur.
− Video archive provides options for saving recordings: to a memory card for local storage or to network storage[1]. If the local storage fails, all recordings will remain available on the network storage.
− PoE power supply.

> ⚠ [1] Support for the function of saving records to network storage is under development.

2.1 Technical specifications

Interfaces	
Ethernet	1 × 10/100BASE-T (RJ-45), support for PoE
Memory card	1 × MicroSD/SDHC/SDXC up to 128 GB
Operating system	
Linux SDK	
Sensor	
Type	1/3" progressive scan CMOS
Effective pixels	4 M
Lens and illumination	
Focal distance	2.8 mm
Aperture	F/2.0
Field of view (horizontal)	100°
Field of view (diagonal)	116°
Field of view (vertical)	52°
Angle adjustment (tilt)	from 0° to 105°
Angle adjustment (rotate)	from 0° to 360°

|	
IR illumination	yes
IR range	up to 30 m
Image	
Image	color
Maximum resolution	2560 × 1440
Maximum frame rate	25 fps
Bit rate	up to 40 Mbps
Video compression	H.264, H.265
Image quality improvement	BLC, DWDR, HLC, ANTI-FLICKER, DEFOG, ROI[1]
Signal-to-noise ratio	no less than 50 dB
Minimum illumination	color: 0,03 lx, bw: 0 lx with IR
Audio	
Built-in microphone	yes
Audio compression	PCM, AAC, MP2
Voice pickup distance	up to 5 m
Physical specifications	
Power supply	12 V DC, PoE 802.3af
RAM	128 MB
ROM	32 MB
Housing	metal, plastic
Form factor	dome camera
Mount options	indoor and outdoor
Dimensions (H × D)	90 × 110 mm
Weight	0.39 kg
Operating temperature	from -40 to +60°
Operating humidity	no more than 90 % (non-condensing)

Ingress protection	IP66
Lifetime	no less than 5 years

⚠ ¹ Under development.

2.2 Design

2.2.1 Top view

The top view of the camera (lens upwards) is shown in the figure below.
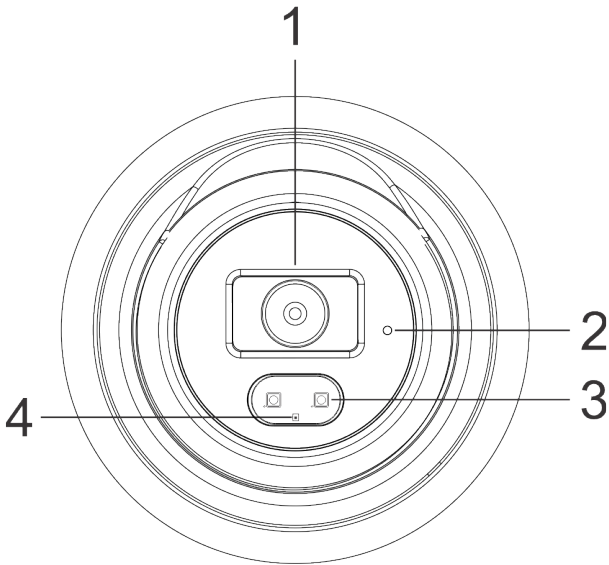
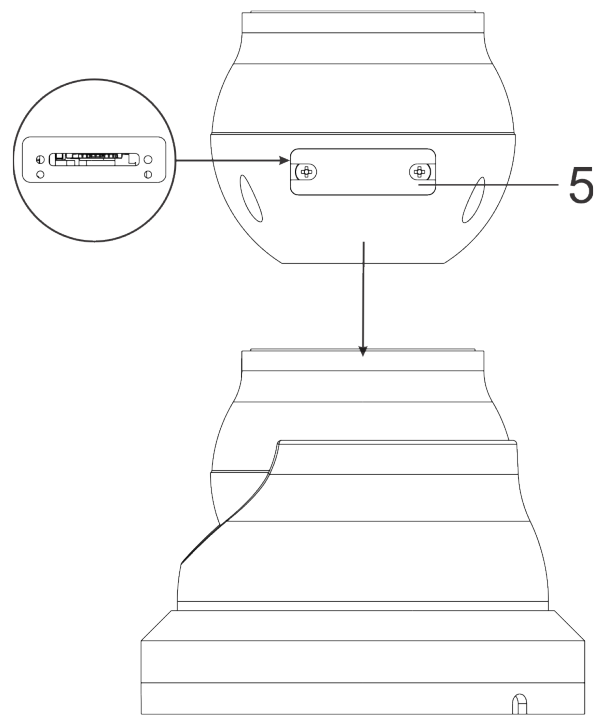| №	Description
1	Lens
2	Microphone
3	LED lighting
4	Light sensor

2.2.2 Front view

The front view of the camera is shown in the figure below.
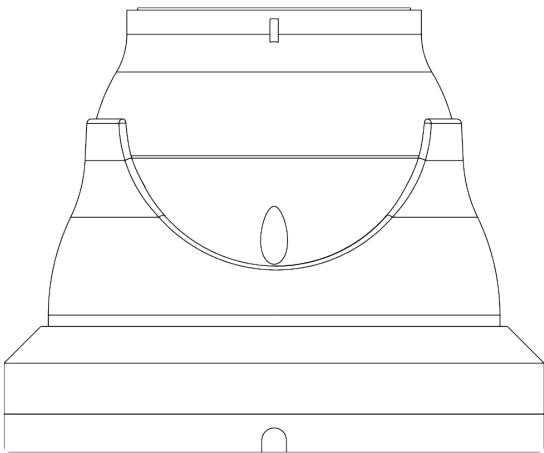
2.2.3 Side view

The side view of the camera is shown in the figure below.

№	Description
5	MicroSD card slot

2.2.4 Base view

The base view of the camera is shown in the figure below.
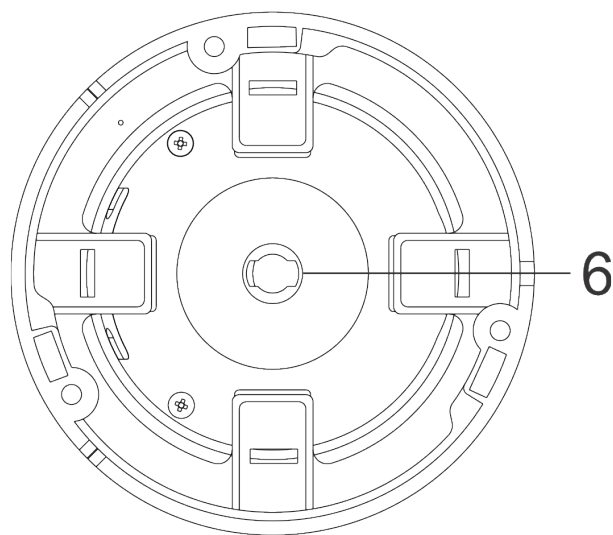
№	Description
6	Cable hole

2.2.5 Cable design
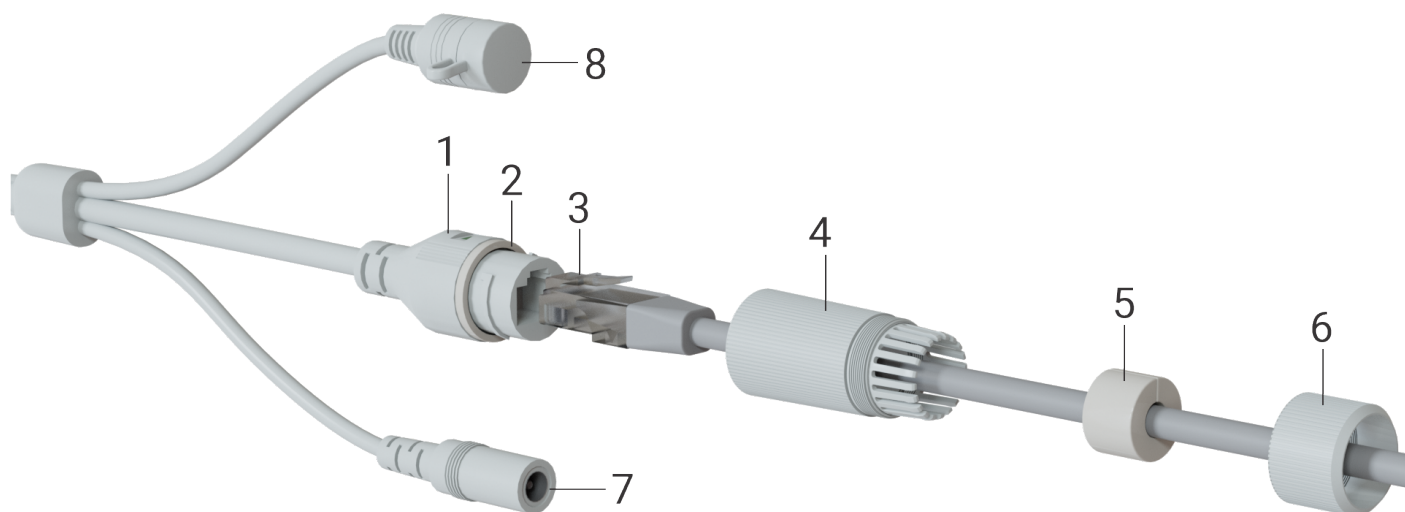
№	Description
1	Network interface
2	Sealing ring
3	Ethernet cable
4	Cable gland
5	Waterproof ring
6	Locking nut
7	Power adapter connector
8	Reset button

2.3   Delivery package

SV-BA414-E standard delivery package includes:

- SV-BA414-E IP camera;
- Mounting kit;
- Case mounting template;
- Installation and initial configuration guide.

2.4   Reset to factory settings

There are two ways to perform a factory reset:

- **Software reset.** In the device web interface, enter "System settings", select "Configuration" and click "Reset to Factory Default Settings".
- **Hardware reset**. The reset button is located on the cable. Remove the protective cap, then press and hold the reset button for three seconds. The camera will then reboot.

2.5   Operating conditions

- The camera is designed for indoor and outdoor usage.
- Do not install the device near heat sources.
- Do not expose the device to smoke, dust, water or other liquids. Do not mechanically damage the device.
- Do not open the device case. There are no user-serviceable elements inside the camera.
- At the end of its service life, do not dispose of the camera with normal household waste. Take it to an electronics recycling center.

3 Device installation

3.1 Selecting the camera location

1. Determine the areas that need to be monitored. Consider that entrance doors, windows, and various objects may obstruct the camera's field of view and reduce it.
2. Pay attention to the lighting where the camera is installed to ensure a clear image. Avoid direct sunlight and other bright light sources directed at the camera lens. Also consider light sources that may create shadows or glare in the image.
3. Consider the location of the power supply. The use of extension cords or additional cables is not recommended, as this may impair the quality of the power supply.

3.2 Mounting using a bracket

> ✅ The unit can be mounted on walls and ceiling.

1. Select a location for the camera based on the recommendations in the "Selecting a camera location" section.
2. On the selected surface, mark where the four holes for the bracket will be drilled. Use the supplied template for this purpose.

3. Separate the template from the backing and stick it to the wall.
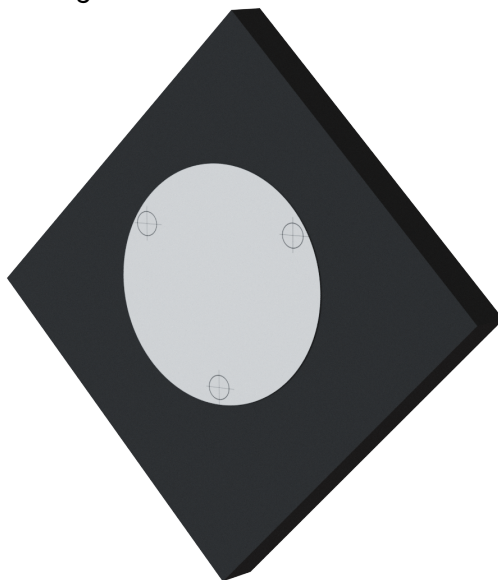
4. Drill four holes according to the template. Use dowels if necessary.
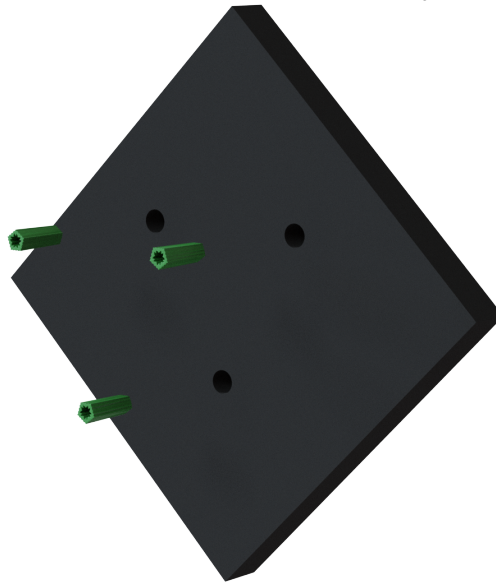
5. Align the holes on the wall with the holes on the bracket and fix the camera with screws. To adjust the rotation of the camera, loosen the screw at the base of the camera. Adjust the position, then secure the screw again.


6. Place the plastic ring over the camera, aligning the tabs with the slots on the camera housing. Twist the ring until it stops.

A view of the camera placed on the wall is shown in the figure below.

7. Connect the Ethernet cable in the order shown in the image below: slide the O-ring (2) over the sealing cap of the network interface (1). Place the locking nut (6) and the cable gland (4) on the Ethernet cable (3). Insert the Ethernet cable (3) into the network interface. Tighten the cable gland (4) and fix it to the sealing cap (1). Slide the waterproof ring (5) over the sealing ring (4). Make sure that the ring fits snugly over the connector. Tighten the locking nut (6) and fix it to the cable gland(4). Once the Ethernet cable is connected and insulated, connect the power cable to the power connector (7).
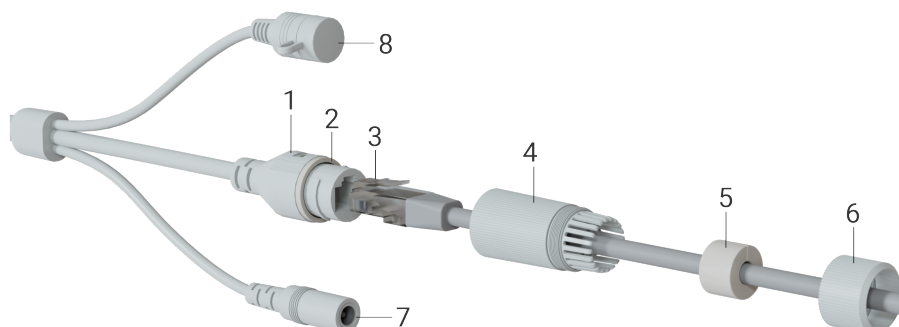

The assembled cable is shown in the figure below.
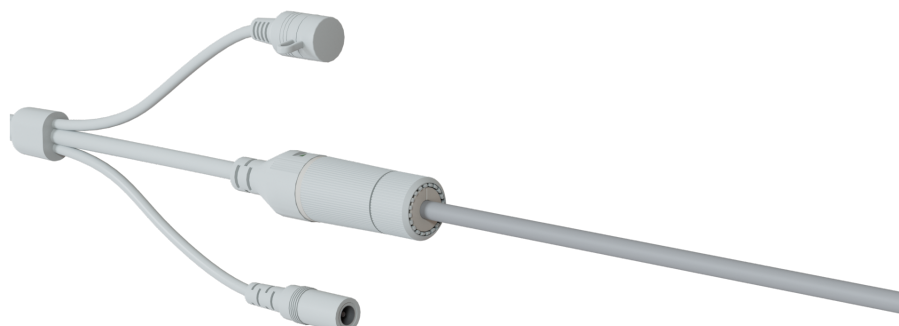
# 4 Managing the device via the web interface

4.1 Getting started

1. Connect the camera to your local network.

2. Open a web browser and enter the IP address of the device obtained from the DHCP server in the address bar.

3. The authorization page will be displayed in the browser window. Enter your username and password in the appropriate fields. (The default login name is **admin** and password is **password**).
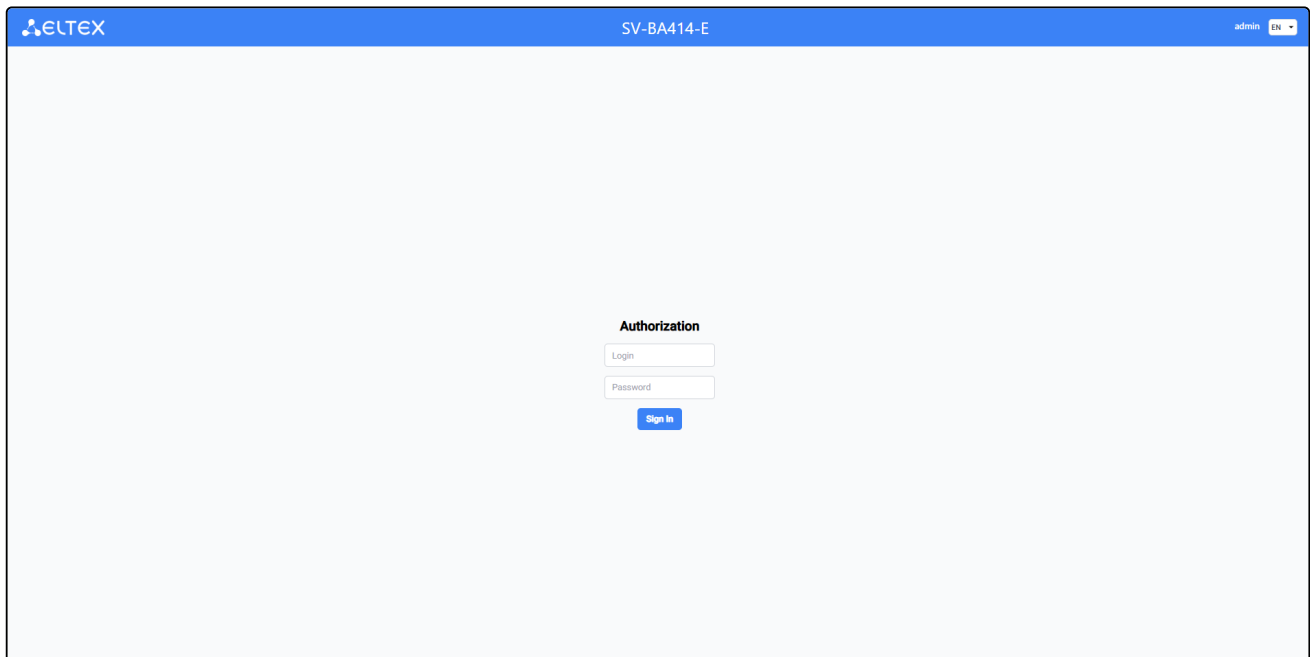
4. Click the "Sign In" button. The "Video Watching" page will open in the browser window.

4.2 "Video Watching" menu
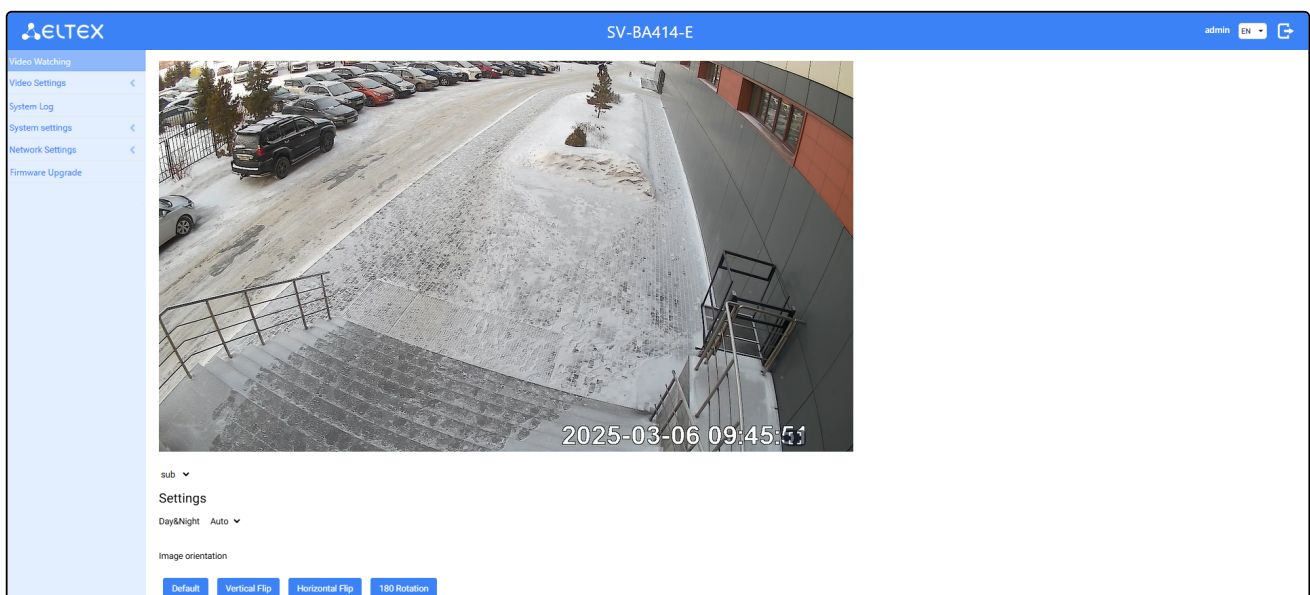
- *Day&Night* — IR illumination mode selection:
    - *Auto* — automatic switching between day and night mode based on light level;
    - *Day* — IR illumination is always off;

- *Night* — IR illumination is always on.
- *Image orientation control* — camera image control:
  - *Default* — camera renders the image as the user sees it with their eyes;
  - *Vertical Flip* — image is mirrored along the vertical axis;
  - *Horizontal Flip* — image is mirrored along the horizontal axis;
  - *180 Rotation* — image is mirrored vertically and horizontally, thus providing an image as in the "Standard" mode for a physically inverted camera.

4.3 "Video settings" menu

4.3.1 "Stream settings" submenu

- *Streams:*
  - *Main* — primary stream, the best broadcast quality;
  - *Secondary* — secondary stream, average broadcast quality;
  - *Mobile* — mobile stream, poor broadcast quality.
- *Stream parameters:*
  - Resolution — selection of resolution of the image broadcast from the camera. The maximum resolution is 2560 × 1440.
  - Codec — selection of video compression standard:
    - H.264;
    - H.265.
  - *Frame per second* — number of frames that will be transmitted in one second. Maximum frequency — 25 fps;
  - *Rate control mode* — mode of stream encoding:
    - *Constant bitrate* — mode where the stream has a constant bitrate set in the "Bitrate" field;
    - *Variable bitrate* — mode where the stream has a variable bitrate. Bitrate is varied by the complexity of the image, but does not exceed the "Maximum bitrate" value, and adheres to the "Bitrate" value.
  - *Bitrate* — amount of information transmitted by the camera. Increasing this parameter proportionally increases the quality of the transmitted image.

Click the "Apply" button to save the settings.

4.3.2 "RTSP" submenu

- *Stream params* — section for configuring RTSP broadcasting:
    - *Audio* — enable and disable audio in the stream;
    - *Enabled* — enable and disable the stream;
    - *Stream URL* — link to the selected stream considering the "Login", "Password" and "Port" fields of the "General parameters" section;
- *Common params:*
    - *Login* — user name up to 63 Latin alphabet characters and digits;
    - *Password* — user password up to 63 Latin alphabet characters and digits;
    - *Port* — port to receive stream from RTSP server.
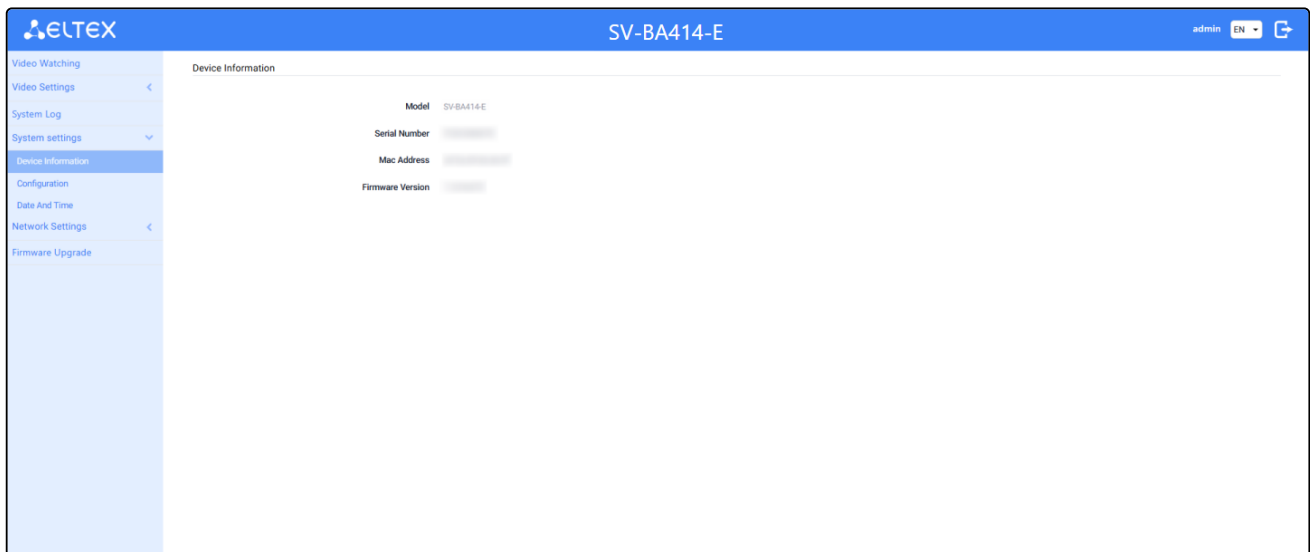
Click the "Apply" button to save the settings.

4.4 "System Log" menu

- *Download log* — download system log;
- *Remote logging* — section for configuring logs to a remote server:
    - *Syslog server* — address of the remote syslog server.

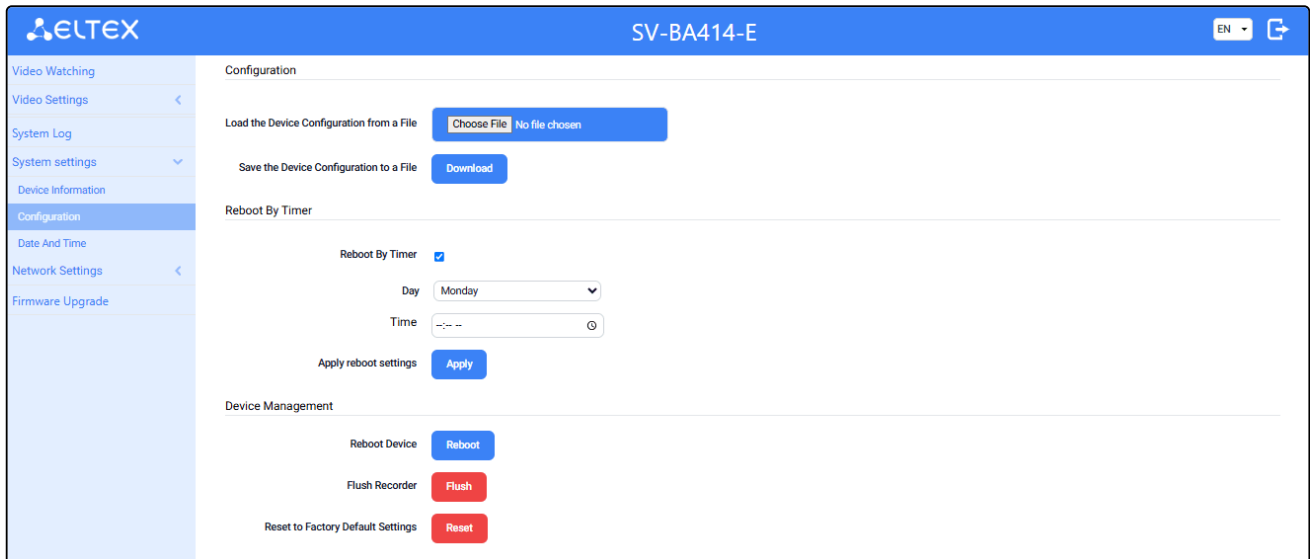Click the "Apply" button to save the settings.

4.5 "System settings" menu

4.5.1 "Device Information" submenu

- *Model* — name of the device model;
- *Serial Number* — serial number of the device;
- *MAC Address* — MAC address of the device;
- *Firmware Version* — current firmware version of the device.

4.5.2 "Configuration" submenu

- *Configuration* — section for working with the device configuration:
    - *Load the Device Configuration from a File* — select a file from which the camera will load its configuration;
    - *Save the Device Configuration to a File* — download device configuration for further use.
- Reboot By Timer — section to configure an automatic weekly reboot:
    - *Day* — day of the week when the reboot is performed;
    - *Time* — exact time when the reboot is performed.
- *Device Management*:
    - *Reboot Device;*

• *Flush Recorder;*
• *Reset to Factory Default Settings.*

Click the "Apply" button to save the settings.

4.5.3 "Date And Time" submenu

• *Time* — time on the camera. It can be edited if synchronization is not enabled;
• *Timezone* — time zone on the camera;
• *NTP Server Synchronization* — enable synchronization by NTP.
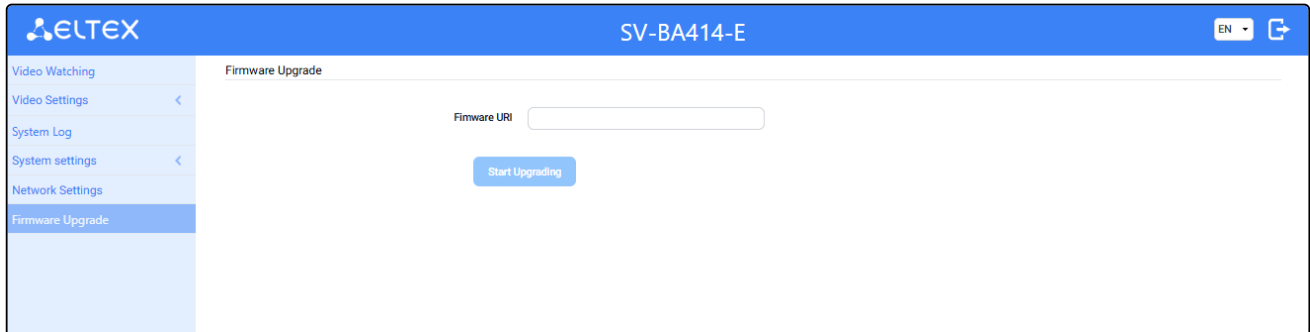
Click the "Apply" button to save the settings.

4.6 "Network Settings" menu

• Mode:
   • *Auto* — receiving all settings via DHCP;
   • *Manual* — setting all network settings manually:
      • *IP Address*;

- *Network Mask*;
- *Dns List* — *DNS servers addresses;*
- *+* — adding a backup DNS server;
- *Default Gateway.*

Click the "Apply" button to save the settings.

4.7 "Firmware Upgrade" menu

- *Firmware URI* — URI link that allows the camera to download the firmware for upgrading.

Click the "Start Upgrading" button to start the upgrade.

TECHNICAL SUPPORT

For technical assistance in issues related to handling Eltex Ltd. equipment, please, address to Service Center of the company: http://www.eltex-co.com/support/

You are welcome to visit Eltex official website to get the relevant technical documentation and software.

Official website: http://www.eltex-co.com/

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