

## TVAC19100A



### User guide

You can find important information and FAQs about this and other products on the website

[www.abus.com/plug-and-play](http://www.abus.com/plug-and-play)

Version 10/2014



*English translation of the original German user guide.  
Keep for future use.*

## Introduction

Dear Customer,

Thank you for purchasing this product.

This device complies with the requirements of the applicable EU directives. The declaration of conformity can be ordered from:

**ABUS Security-Center GmbH & Co. KG**  
**Linker Kreuthweg 5**  
**86444 Affing**  
**GERMANY**

To maintain this condition and to ensure risk-free operation, you as the user must observe these operation instructions!

Before initial start-up, read through the complete operating instructions observing operating and safety instructions.

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**All rights reserved.**

**If you have any questions, please contact your installer or your local dealer!**



### Disclaimer

This user manual was prepared with greatest care. If you should notice omissions or inaccuracies, please inform us about these on the back of this manual given address.

The ABUS Security-Center GmbH assumes no liability for technical and typographical faults and reserves the right to make at any time modifications to the product or user manual without a previous announcement.

The company is not liable or responsible for direct and indirect subsequent damages which are caused in connection with the equipment, the performance and the use of this product.

No guarantee for the content of this document is taken.

## Icon explanation

	A flash in the triangle is used if there is danger for the health, e.g. by an electric shock.
	An exclamation mark in the triangle points to an important note in this user manual which must be minded.
	This symbol can be found when you are to be given tips and information on operation.

## Important safety advice

	<b>The warranty will expire for damage due to non-compliance with these operating instructions. ABUS will not be liable for any consequential loss!</b>
	<b>ABUS will not accept liability for damage to property or personal injury caused by incorrect handling or non-compliance with the safety-instructions. In such cases the warranty will expire.</b>

The device has been manufactured in compliance with international safety standards. Please read these safety advices carefully.

## Safety advice

1. Mains supply  
100–240 V AC, 50–60 Hz (via power adapter plug to 5 V DC)  
Operate this product only from the type of power supply indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your local power company. Disconnect the product from the mains before you start any maintenance or installation procedures.
2. Overloading  
Do not overload a wall outlet, extension cord or adapter as this may result in electric fire or shock.
3. Liquids  
Protect the device from any kind of liquids entering.
4. Cleaning  
Disconnect the product from the wall outlet before cleaning. Use a light damp cloth (no solvents) to dust the product.
5. Accessories  
Do not use any unsupported accessories as these may be hazardous or cause damage the product.
6. Location
  - This device can be used in inside as well as outside.
  - The product will be damaged even it falls from a low height.
  - During the installation of the camera please take care that direct sunlight cannot fall onto the image sensor of the device. Please follow the installation instructions in the corresponding chapter of this user manual.
  - Do not place the device near a radiator or heat register.
  - Setup the device only in areas with the advised operating temperatures of -10 °C ~ 50 °C.

## 7. Wireless transmission

The range of wireless transmission depends on various environmental factors. The local conditions at the installation location can have a negative impact on the range. For this reason, if there is a clear line of sight between the receiver and the transmitter, the range can be as much as 200 m, but in buildings it is significantly less.

The following environmental factors impair both the range and the frame rate:

Mobile phone masts, high-tension electricity pylons, power lines, ceiling and walls, devices with the same or similar radio frequency.

## Warnings

Follow all safety and operating advises before starting-up the device!

1. Follow these directions in order to avoid damage of the power cord or plug:
  - Do not modify or process the power cord or plug arbitrarily.
  - Make sure to disconnect the power cord holding the plug.
  - Keep heating appliances as far as possible from the power cord in order to prevent the cover vinyl from melting.
  - The outdoor camera's power supply unit must be protected against humidity and damp.
2. Follow these directions. Failure to follow any of them may cause electrical shock:
  - Do not open the main body or the power supply.
  - Do not insert metal or inflammable objects inside the product.
  - In order to avoid any damage during lighting use a surge protection.
3. Do not use the product when it is out of order. If you continue to use the product when defective, serious damage can be caused to it. Make sure to contact your local product distributor if the product is out of order.

	During the installation into an existing video surveillance system make sure that all devices are disconnected from the low and supply voltage circuit.
	If in doubt allow a professional electrician to mount, install and wire-up your device. Improper electrical connection to the mains does not only represent a threat to you but also to other persons. Wire-up the entire system making sure that the mains and low voltage circuit remain separated and cannot come into contact with each other in normal use or due to any malfunctioning.

Avoid using the device under the following unfavorable ambient conditions:

- wetness or excessive air humidity
- extreme cold or heat
- direct sunlight
- dust or combustible gases, vapors or solvents
- strong vibration
- strong magnetic fields, such as those found in the vicinity of machinery or loudspeakers
- the camera must not be directed into the sun as this can destroy the sensor.
- the camera may not be installed on unstable surfaces

## Unpacking

While you are unpacking the device please handle it with utmost care.

	If you notice any damage of the original packaging, please check at first the device. If the device shows damages, please contact your local dealer.
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## 1. Intended use

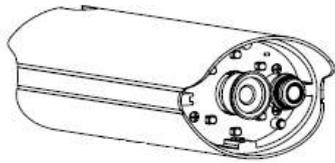
The day/night PnP IP camera enables high quality surveillance. This camera is designed for indoor and outdoor installation. The integrated infrared LEDs enable day and night surveillance for objects up to a maximum distance of 5 metres.

Thanks to its protection class IP66 it can be used both inside and outside.

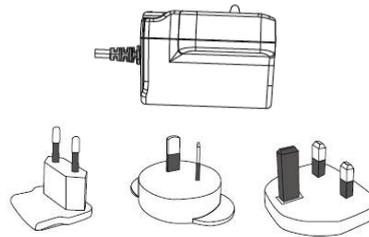
The easy configuration and operation via app enable access to the camera from all over the world.

For a detailed description of functions, refer to Section 3, "Features and functions".

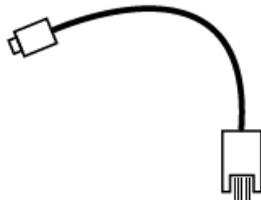
## 2. Scope of delivery



Wi-Fi outdoor camera & app



Power supply unit including EU, Australian and UK adapters  
5 V DC/1.5 A



LAN adapter cable



Camera mount including mounting material



Antenna

## 3. Features and functions

- Compact IP66 outdoor camera with infrared night vision function
- 720p resolution, 3.6 mm fixed lens
- Recording on micro SD card

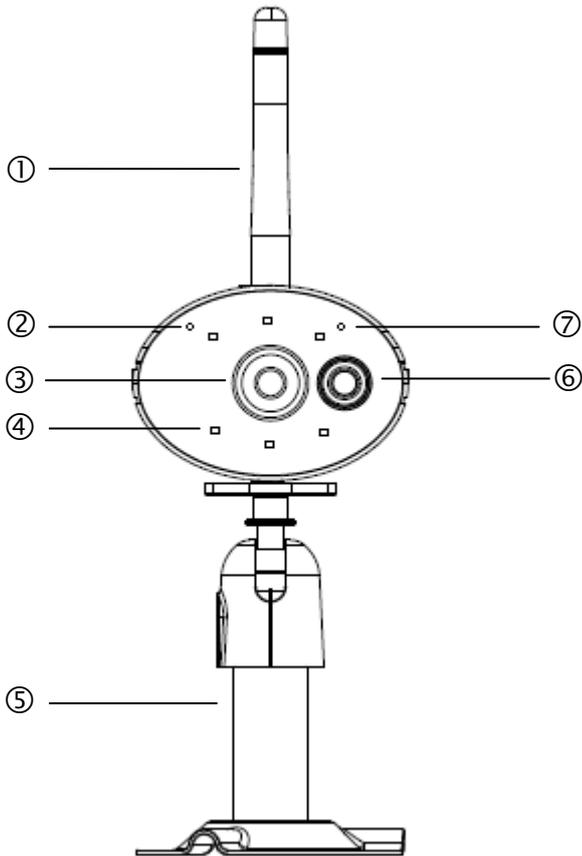
## 4. Device description

### 4.1 Overview

Item number	TVAC19100A
Resolution	720p
IR LEDs	✓
IR swivel filter (ICR)	✓
Operating voltage	5 V DC

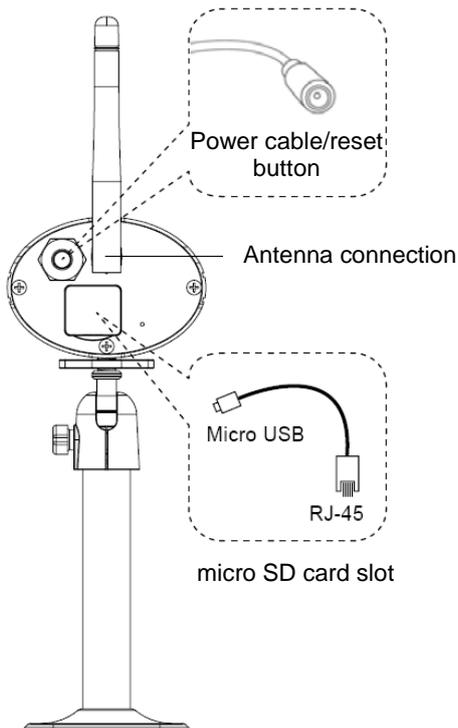
### 4.2 Camera description

#### Front:



①	Antenna
②	Status LED
③	Fixed lens
④	IR LED
⑤	Camera mount
⑥	PIR sensor
⑦	Power LED

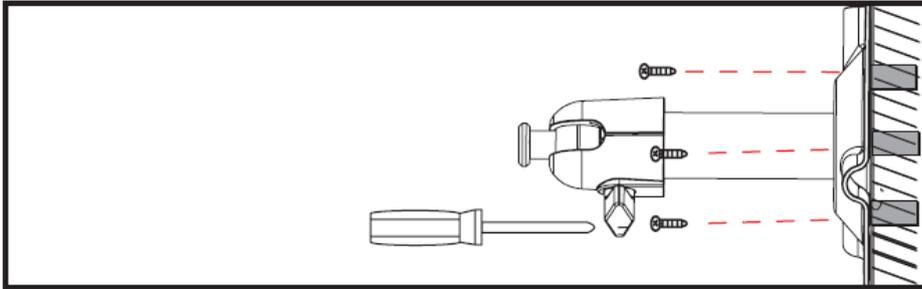
#### Rear:



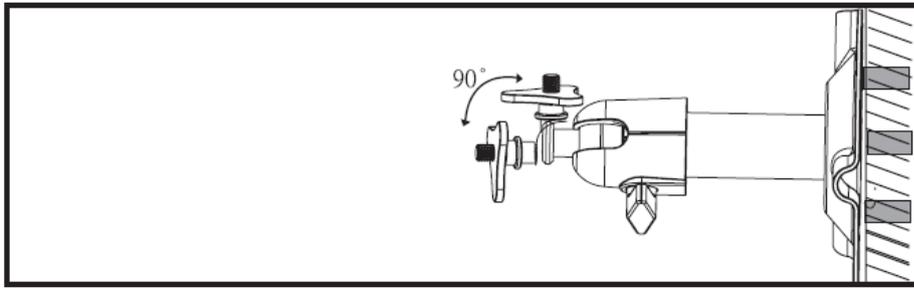
## 5. Installation

### 5.1 Camera mounting

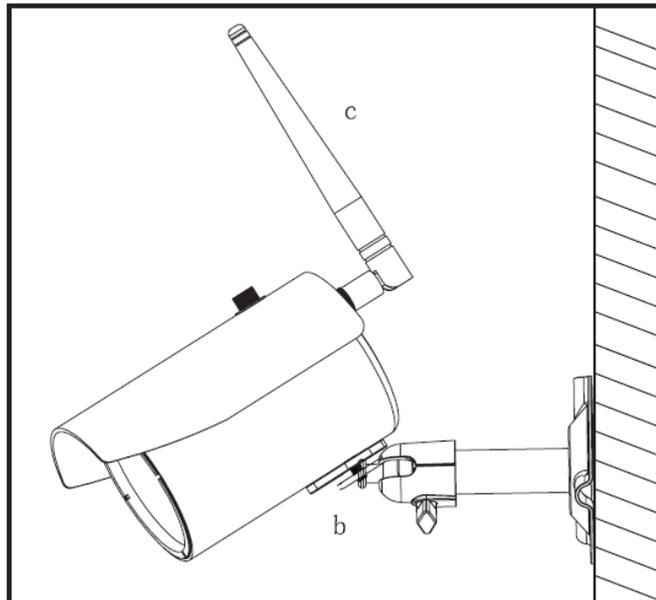
Use the camera mount to help you find a suitable place for installation. Mark the drill holes on the surface and drill the holes. Insert the wall plugs supplied before you attach the bracket with the screws.



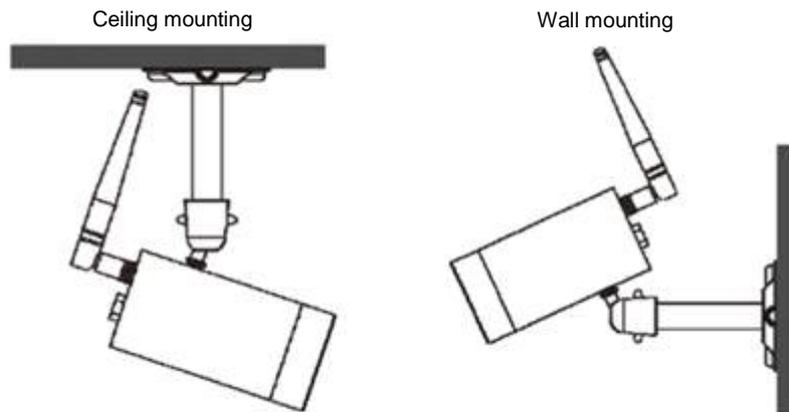
You can also swivel the mount by 90° into a particular position. First loosen the screw on the side and set the required angle. Then tighten the screw to secure the required position.



Finally, screw the camera onto the mount and connect the power supply unit with the camera.



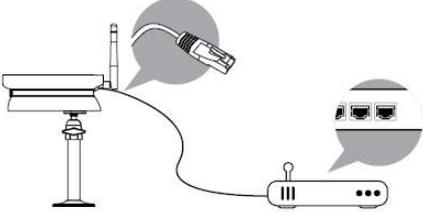
## Mounting options

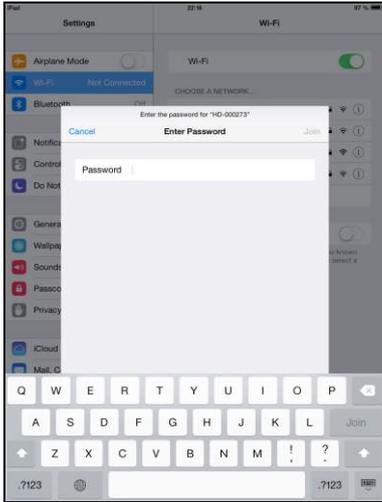


## 6. Operating and configuring via app

The TVAC19100 Wi-Fi outdoor camera & app gives you the option of switching to live on the cameras and to configure the recorder. The app for this device can be found in the App Store under the name of “App2Cam”.

To configure access to the camera, proceed as follows:

①	<p><b>“TVAC19000” app</b></p>  	<p>Download the “App2Cam” app and install it on your smartphone. Make sure that your smartphone or tablet has internet access.</p> <p>You have two options to connect the camera to the network:</p> <p><u>Option 1:</u></p> <p>Connect the LAN adapter cable provided to the camera. Connect the cable to your router in the next step. Then connect the power supply unit provided. While the camera is starting up, the two LEDs on the camera flash.</p> <p> Begin setting up the camera once the two LEDs are lit up permanently. This can take about 60 seconds.</p> <p>Following this you can proceed with the setup at point ②.</p>
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### Option 2: No adapter cable necessary

Connect the camera with the power supply unit and wait approx. 1 minute until the red and green LEDs light up. Look in the network settings on your mobile end device in the “Wireless” menu for available Wi-Fi networks. For initial setup, the camera presents its own SSID named: XXXXXXXXX

Connect your mobile end device to this Wi-Fi. The Wi-Fi is secured with the 12345678 security code.



Begin setting up the camera once the two LEDs are lit up permanently. This can take about 60 seconds.

Following this you can proceed with the setup at point ②.

②

### **Adding the system**



Open the app on your mobile phone and click on “Press to add new system”.

When starting the app for the first time, you are asked whether you want to activate or refuse push notifications for motion detection.



Please note that false alarms can occur for video surveillance in outdoor areas.

## ③ Entering system information

1. Enter a name for your camera at “System Name” which should then be displayed on your mobile phone.
2. To enter the DID automatically, click on “Search” to display all the cameras which are connected to your network or directly to your mobile end device. Select the required camera and click on “Add”. You can also enter the 20-digit DID number manually. You can find this on the product sticker on the product. .
3. Then enter your password.  
The standard security code is: 123456. When you logon successfully, you receive a warning to inform you that you are using the standard security code and that you should change it for your own security.
4. Save the settings by pressing “Save”.
5. To change the camera settings, press the settings button. Menu options then appear for every camera. Select the settings icon to edit the system settings.
6. To obtain the live view, click on the required camera.

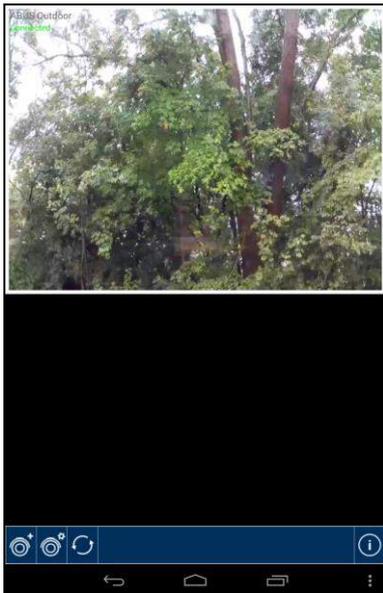


The camera can now be reached locally in your network. To connect the camera to the internet, go to menu item 8. “Advanced Settings” at “Wi-Fi” settings.



Once you have changed the camera password, it must also be changed in the app. To do so, open the camera settings.

## ④ Connection status



If you have added you system successfully, the name of your system and the current connection status appear. The picture shown is the last video image of the previous session. You can add up to 8 cameras in the app. Press the required camera to go to the live view.

**System name**

e.g. Test

**Connection status**

**Connected** = you are connected with your system

**Disconnected** = there is no connection to the system

**Press to add new system**

Here you can add an additional system

**System configuration**

Go to the system configuration here.

Press  to go to the live view again.

**Updating the connection**

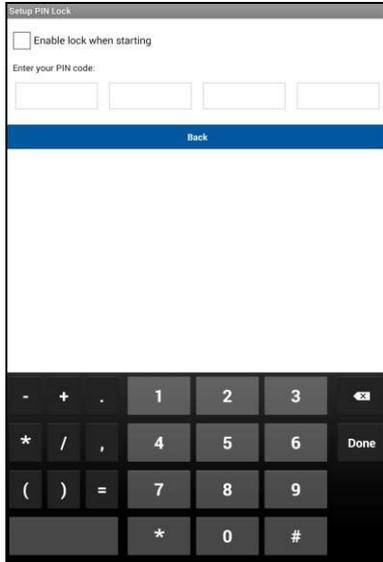
The connection is updated.



### Firmware information / PIN code / Notify setting

Here you can see the current firmware version of the system and save a PIN code. You can find out how to enter a PIN code at ⑦.

### ⑤ Saving the PIN code



If you want to save a PIN code for this app, proceed as follows:

1. Open the “Setup PIN Lock” at 
2. Enter a 4-digit PIN code and repeat it.
3. Put a tick at “Enable lock when starting”.



When you have saved a PIN code, it will be requested when you want to open the app.

### ⑥ Live view



Select the required camera from the selection list. Now you see the live view of the camera. The picture is shown in the 4:3 mode. To view a 16:9 format, turn your mobile end device 90°.



#### Snapshot

Here you have the option of making a screenshot of your live image. The image is then saved in your photos on your mobile device.

The pictures saved are stamped with the date and time and saved in the photo gallery.



#### Audio

You have the option of activating or deactivating the audio here.



#### Starting the recording

Here you can start a manual recording; the recording time is one minute. The recording is saved locally on the SD card and the following icon  appears in the live view. The recording runs for 1 minute automatically and cannot be interrupted.



#### Back

You can return to the camera overview here. The last screenshot is always shown.

⑦ **Camera configuration**



**Camera configuration**

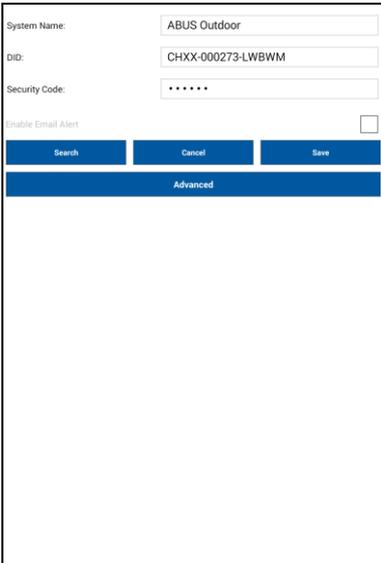
You go to camera configuration here. You can choose one of the following options:



- Configure the camera
- Remove camera
- Access to recordings on the SD card

Press  to go to the live view again.

⑧ **Settings**



Click on  to go to the settings.

You can change the camera settings here. You can also activate or deactivate the e-mail messages here.

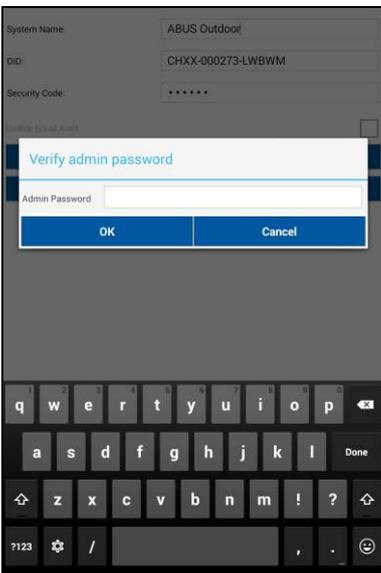
Click on “Advanced settings” to start the configuration.

**E-mail alert**

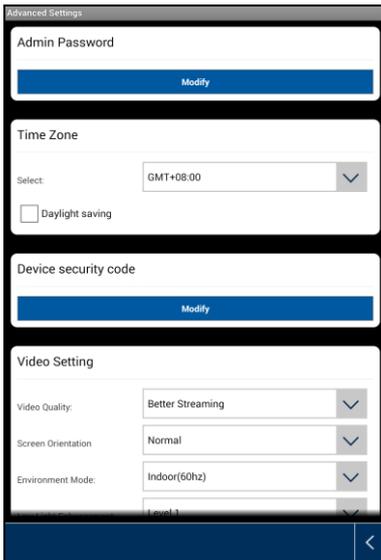
E-mail notifications are activated by motion.



Please note that false alarms can occur for video surveillance in outdoor areas.



Enter your password to go to the settings. The standard password is “123456”.



You can configure the camera at settings.

### Admin password

The Admin password must be entered to add the camera and to go to the settings. The standard password is “123456”.

Change this at the initial installation to protect your camera from unauthorised access.



If you have forgotten your password you can reset the camera to the factory settings by pressing the reset button for 5 seconds. The red LED starts to flash.

The camera must then be reinstalled.

### Time zone

The world time zones are shown in the selection list.

Select the time zone in which the camera is installed.

Activate daylight saving if summertime applies to the world time zone.

### Daylight saving

Activate/deactivate daylight saving time.

### Device security code

The standard security code is: 12345678

For reasons of security, change this code and enter a new one (max. 8 digits).

Enter the code again to confirm.

Then confirm with “OK”.

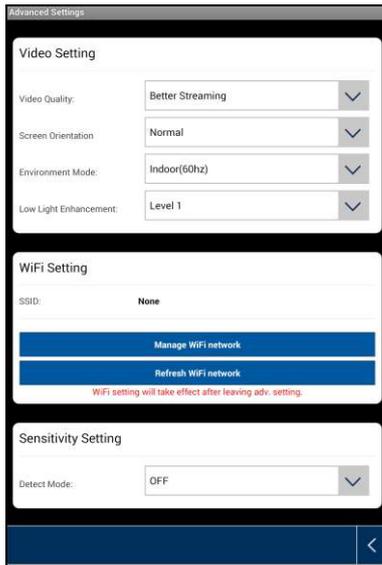
You will need the security code later if you want to access the cameras via the app.



If you have forgotten your security code, you can reset the camera to the factory settings by pressing the reset button for 5 seconds.

The camera must then be reinstalled.

## ⑨ Video setting



The video settings allow you to adjust the video quality and ambient conditions for the camera.

### Video quality

The video quality setting allows you to select the quality for video streaming.

#### Better streaming:

The video display is smoother.

#### Better picture:

The video picture is displayed with a higher resolution.

#### HD video:

The video picture is transmitted in HD resolution. The picture can still be shown delayed due to the large data volume.



Only use the setting for improved picture with sufficient bandwidth (1 Mbps) and adequate system requirements.



Please note that, due to the different forms of transmission technology that audio and video use, different network load levels may be present and transmission may take place asynchronously as a result.

### Environment mode

You can make the settings for the network frequency and the ambient conditions here.

Standard value for Germany: 50 Hz

You can choose between indoors (50 Hz), indoors (60 Hz) and outdoors.

#### Indoor:

Settings for the light conditions indoors

#### Outdoors:

Settings for the light conditions outdoors

### Low light enhancement

Adjusting the video picture for poor light conditions in night mode. You can choose between 5 levels, whereby level 5 brightens the picture the most.

### Image orientation

Here you have the option to rotate the image or display it in mirror reverse.

#### Flip:

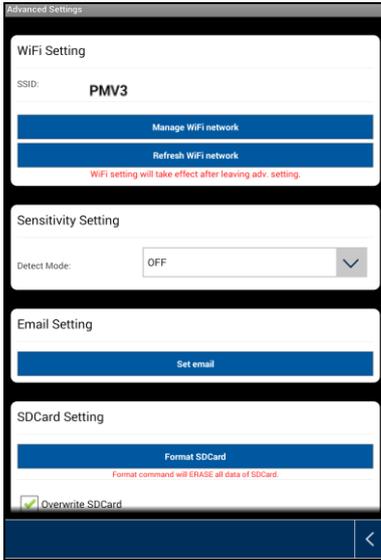
The image is rotated 180 degrees.

#### Reverse:

The image is displayed in mirror reverse.

**Flip & reverse:**

The image is rotated 180 degrees and displayed in mirror reverse.

**WiFi Setting**

In the Wi-Fi settings you can select the network to be used for the internet access by the camera.

When selecting the menu item, all the networks located in the area are shown. Select your network and enter your own Wi-Fi password.



To prevent access by unauthorised persons, protect your network by encryption with WPA/WPA2/WPA2-PSK.



Once the settings are saved, the camera starts up again. Do not forget to disconnect the Ethernet adapter cable (if used during the initial setup).



If the connection was not successful or incorrect Wi-Fi information was entered, press the reset button for 5 seconds to restore the camera to the factory settings.



## Motion detection

The settings for motion detection are required for e-mail notification or push notification as well as for motion-controlled recording.

### Detect mode

Here you can select which mode should be used for the notifications.

You can choose between Off, PIR or Software.

#### Off:

No notifications are sent or recordings made if motion is detected.

#### PIR:

The motion detection occurs via the PIR sensor.

#### Software:

The motion detection occurs via the camera software.

### Motion detection

You can make the settings for the motion sensitivity here. You can choose between "Low" and "High".

#### Off:

No notifications are sent or recordings made if motion is detected.

#### Low:

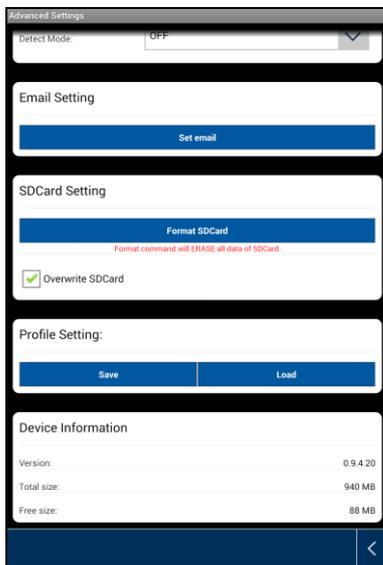
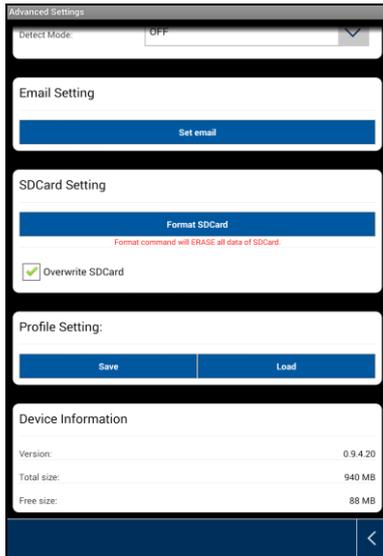
Motion detection with low sensitivity.

#### High:

Motion detection with high sensitivity.



The setting for sensitivity is only used in the Software mode.



### E-mail setting

The e-mail settings are required for sending a notification.

#### Use SSL:

Tick the box to transfer the e-mail as encrypted. You receive the required settings from your e-mail provider.

#### SMTP server:

Enter the SMTP server address here.  
e.g. smtp.test.com

#### SMTP port:

Enter the SMTP port here.  
e.g. 465

#### Username:

Enter the sender's e-mail address here.  
e.g. [xxx@test.com](mailto:xxx@test.com)

#### Password:

Enter the password for the sender's e-mail address here.

#### Receiver:

Enter the recipient's e-mail address here.  
e.g. [xxx123@test.com](mailto:xxx123@test.com)



We recommend using "googlemail" for sending e-mails.

### Format SDCard

Format the SD card. For the permanent use of an SD card, please use a Class 10 SD card.



All the data is deleted when the SD card is formatted. Please make sure you save the data before formatting.

### Overwrite SDCard

This function offers an overwrite function when the SD card is full. As soon as the SD card is full, the system begins to overwrite the oldest data.

This ensures that all the current data is recorded.



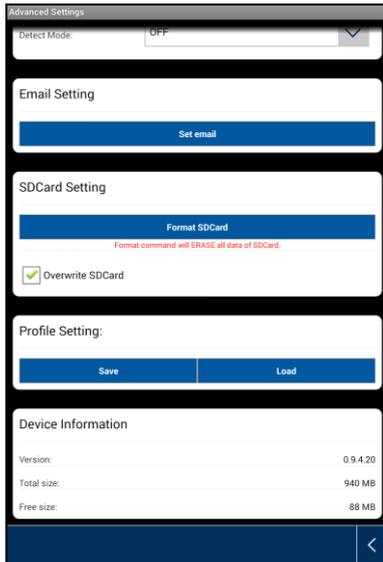
Format the SD card from time to time to avoid the card from damage.

### Profile setting

This function enables you to transfer settings you have already made to other cameras. You can choose between "Load" and "Save".

For a new IP camera, you only need to load the profile settings here.

The following settings are saved:  
time zone, video settings, motion detection settings, e-mail settings, cyclical storage settings



### Device information

Here you can find information about your camera.

#### Version:

Camera firmware.

#### Total size:

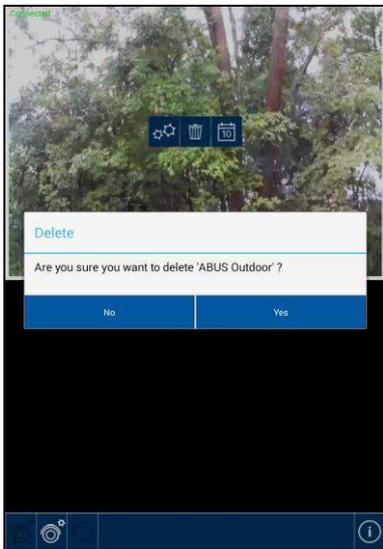
Displays the overall size of the SD card

#### Free space:

Displays the available storage space.



## Removing the system



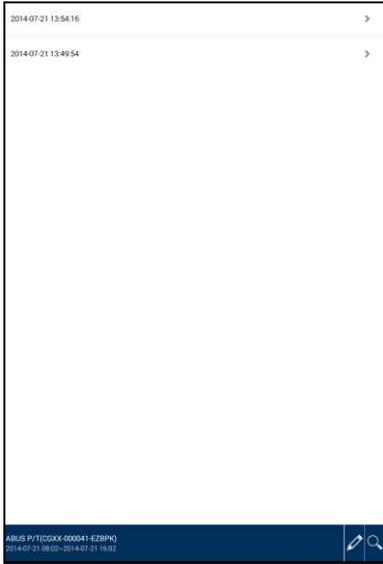
### Removing the system

After pressing the icon, a new window appears to ask you whether you really want to delete the system.

If you want to remove the system, press “Yes” to confirm or “No” to cancel.

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## Access to the recordings



### Access to the recordings

Here you can view the recordings for the required camera on your smartphone. Select the recording you want and it starts immediately.

Press  to pause the recording and press the  button to go back to the event list.

You can activate or deactivate the audio with .

To save a file on your smartphone, press on the recording until a window appears to confirm.

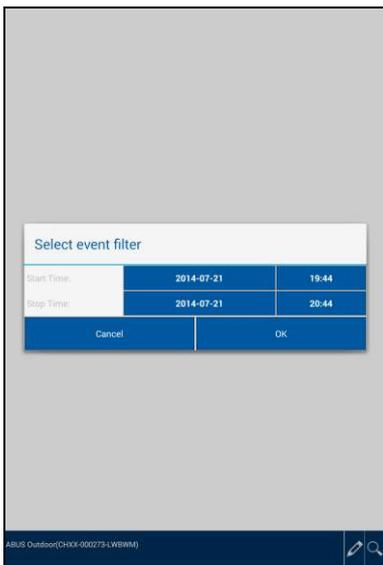


While it is downloading, the live view and recording function are not possible. Other users will be refused access if they try to access the camera.

### Deleting recordings

Select "Delete All" to delete the complete event list. A new window appears to ask you whether you really want to delete all the events. If you want to delete the events, press "Yes" to confirm or "No" to cancel.

To delete an individual file, select "Delete One" and then click on the particular file. Confirm the process.



### Filtering the event list

You have the option of filtering the recordings according to certain preferences. To do this, press the  symbol or "Search".

A window appears with various search options. You can search using the start and end dates and times. Click "Search" to see the required events.

## 7. Maintenance and cleaning

### 7.1 Maintenance

Regularly check the product's physical state, e.g. check for damage of the housing.

If you suspect that safe operation cannot be guaranteed anymore, disconnect the product and ensure that it cannot be used by mistake.

You can assume that safe operation is not possible anymore when

- the device shows visible damage,
- the device does not function anymore



**Please note:**

The product is maintenance free for you. Inside the product are no parts that can be checked or repaired, so do not ever open it.

### 7.2 Cleaning

Wipe the product with a clean, dry cloth. If the device is very dirty, you can moisten the cloth with lukewarm water.



Make sure that no liquids can enter the equipment as the device can be destroyed. Never use chemical detergents as they could attack the surface of the device

## 8. Disposal



Important: The EU Directive 2002/96/EC regulates the proper return, treatment and recycling of used electronic devices. This symbol means that in the interest of environmental protection the device must be disposed of separately from household or industrial waste at the end of its service life in accordance with applicable local legal guidelines. Disposing of used devices can be done at official recycling centers in your country. Obey local regulations when disposing of material. Further details on returns (also for non-European countries) can be obtained at your local authority. Separate collection and recycling saves natural resources and ensures that all the provisions for protecting health and environment are observed when recycling the product.

## 9. Tips for troubleshooting

No.	Questions	Answers
1	The camera has not been found.	<p>Check the following points:</p> <ol style="list-style-type: none"> <li>1. Make sure that your network supports DHCP.</li> <li>2. Are the mobile device and the camera in the same network? Make sure that both devices are in the same network at the initial configuration.</li> <li>3. The router has no power supply.</li> <li>4. The camera has no power supply.</li> <li>5. Try to add the camera by entering the data manually.</li> </ol>
2	Your Wi-Fi is not shown in the selection list in the camera app.	<p>If your personal Wi-Fi is not shown in the selection list, check the following:</p> <ol style="list-style-type: none"> <li>1. Make sure that the SSID of your router is visible.</li> <li>2. Change the encryption type of your router to WPA/WPA2/WPA2-PSK.</li> </ol>
3	No picture is displayed.	<p>Check the following points:</p> <ol style="list-style-type: none"> <li>1. Is the camera plugged in and switched on? Make sure that the power supply unit is not defective and that the power supply is connected.</li> <li>2. Is the camera installed in the surrounding area of the the network?</li> <li>3. Make sure that the camera is correctly configured.</li> <li>4. Make sure that your mobile end device is in the network or in the 3G network.</li> </ol>
4	Low network signal or poor picture quality	<p>Possible reasons are:</p> <ol style="list-style-type: none"> <li>1. Wi-Fi network devices can impair the signal transmission. Make sure there is enough distance between the camera and other Wi-Fi devices.</li> <li>2. Remove any dirt from the camera. This can badly affect the picture quality.</li> </ol>
5	What could be the reasons why the device does not record when there is movement?	<p>Possible reasons are:</p> <ol style="list-style-type: none"> <li>1. Is the SD card inserted properly?</li> <li>2. Is the motion detection activated?</li> <li>3. Format the SD card before using for the first time.</li> <li>4. Make sure that you use a Class 10 SD card.</li> </ol>
6	The camera picture is obscured (white patches on the image).	<p>The camera is equipped with IR LEDs for the night mode. The IR light is reflected on surfaces, such as glass. Do not position the camera in front of glass surfaces and ensure that it is installed in protected outdoor areas.</p>
7	What could be the reasons for an SD card fault?	<p>Please check the following:</p> <ol style="list-style-type: none"> <li>1. Make sure that the SD card was inserted and formatted correctly. Save important data before the formatting, as afterwards it will be no longer available.</li> <li>2. Make sure that you only use one Class 10 SD card.</li> </ol>
8	The display for the time and date is not correct.	<p>Possible reasons are:</p> <ol style="list-style-type: none"> <li>1. Are the date and time settings on your mobile end device correct?</li> <li>2. Is the correct time zone selected?</li> <li>3. The system takes the time from the internet as soon as it is connected. Make sure that the camera is connected to the internet.</li> </ol>

## 10. Technical data

<b>Model number</b>	<b>TVAC19100A</b>
Wireless standard	IEEE 802.11 b/g/n
Network connection	Ethernet (10/100 Base-T/Base-TX); Wi-Fi
Network protocols	TVP/IP, UDP, SMTP, NTP, DHCP, ARP
Simultaneous users	3 simultaneous accesses
Security	WPA/WPA2/WPA2-PSK (TKIP, 128 bit AES)
Image sensor	MP CMOS
Focal length	2,8 mm
Angle of view	H: 50°±3° / V: 30°±3°
Antenna	3 dBi Dipol
Housing material	Waterproof metal
Protection class	IP66
Lighting conditions adjustment	Indoor (50 Hz), indoor (60 Hz), outdoor
Minimum Illumination	1–8 Lux
Number of IR LEDs	6 IR Power LEDs
Range of night vision function	approx. 5 m
Image compression	H.264
Resolution	HD 1280 x 720 incl. audio
Frame rate	VGA @ 20 fps / VGA @ 25 fps / 720p @ 5 fps / 720p @ 10 fps
Recording	720p @ 5/ 10/ 20 fps (max.) incl. audio
Power supply	5 V DC / 1.5 A
Operating temperature	-10 °C – 50 °C
Dimensions (H x W x L)	134 mm x 67 mm x 48 mm (without mount)
Weight	300 g

### Storage capacity

Storage capacity	HD / Improved picture	Improved streaming
4 GB	150 events	180 events
8 GB	300 events	360 events
16 GB	600 events	720 events
32 GB	1,200 events	1,440 events