SAMSUNG SMARTCAM

User Manual

SNH-V6110BN

CE 0678

SAMSUNG

Samsung SmartCam
User Manual

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SPECIFY SERVICE INSTRUCTIONS AND WARRANTY TERMS

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.

FCC NOTE:

THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT.
SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

Operational Description

The operational description shall fulfil the requirements of Rule Part 2.1033(b)(4). The rule part requires, "A brief description of the circuit functions of the device along with a statement describing how the device operates. This statement should contain a description of the ground system and antenna, if any, used with the device".

The above requirement has been further interpreted by the FCC to mean that the description shall:

a. be an operational or technical description of how the device operates, is modulated and meets requirements;

b. describe the EUT completely. What is it (in plain English as well as technical terms)? Give a clear, concise functional description of device operation.

c. always describe the signal, such as modulation type, pulse repetition rate, signal type and information being sent. Describe all modulation types and all data rates.

Instructions & Warranty

The manufacturer is not responsible for any loss or radio/TV interference caused by unauthorized modification of the product.

Such modification will void the warranty of the product as well as the user's right of use.

WARNING

- The product must be assembled and installed by an adult.
- Before using, read all instructions on this manual thoroughly and follow operational instructions, warnings on this manual and printed on the product.
- To avoid entangled power cord, do not place it around the baby bed or other infant furniture. Keep this product and its power cord out of children's reach.

- Especially, the power cord should be installed carefully while keeping it out of children's reach.
- Never use the product near bath tub, sink, washing machine and in wet basement to avoid moisture.
- The product is designed for indoor use.
- The product is not designed for medical monitoring, and requires a grown-up's protective supervision on its use.
- To avoid overheating of the product, do not expose the product to direct sunlight; do not install or use near a heat source such as heater, radiator, cooking devices (ex: electric stove or oven) and other warming devices (ex: audio amplifier, TV, etc.).
- Make sure to keep ventilated while using the product.
  Avoid pillar or furniture that may block ventilation, when installing the product.
- Make sure to use the power adaptor provided. If used with unidentified adaptor, it may damage the product. The power adaptor must be used with regular household electric supply.
- Avoid sharp, pointed objects around the adaptor's cable, not to damage the cable.
- Be warned and never hold the cable's stripped part when connecting / disconnecting the adaptor to/from the wall outlet.
- To avoid entangled cable lines, avoid using cable extension for adaptor's power cord.
- The product's servicing is allowed only to authorized Samsung service personnel.
- When using the product for children's care, be careful to keep the product out of children's reach.
- The product partially contains component which might cause respiration difficulty. Accessories and small parts of the product should be stored keeping out of children's reach.
- The product is not designed to replace responsibility of human supervision on children.
- The product is not equipped with device of immediate notification to adult with accidental/sudden children's move; it requires periodic checks and human supervision.
- This appliance and its antenna must not be collocated or operation in conjunction with any other antenna or transmitter. A minimum separation distance of 20 cm must be maintained between the antenna and the person for this appliance to satisfy the RF exposure requirements.

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01 Getting Started

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Features

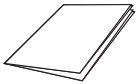
- **Dedicated Wi-Fi Product**
  - The camera is registered through the Wi-Fi connection.
- **Easy to install**
  - The Wi-Fi Direct button allows easy connection to a wireless router.
  - Simply visit the home page (www.samsungsmartcam.com) and download and install the program without a separate installer program.
- **Remote monitoring**
  - Whenever and wherever if you are in the Internet enabled environment, remote monitoring is ready for you.
  - PC, laptop or smart phone can be used for monitoring.
- **Real-time alarm**
  - When a motion and sound are detected, your smartphone will generate real time alarms.
- **Two-way Audio**
  - With the built-in speakers and microphone, you can make Two-way communications.
    However, it is available only with the smart phone. (Not applicable to the PC or laptop computer.)

What's Included

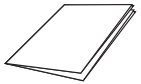
Check for components when opening the product package.

Camera

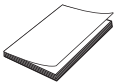
Power Adaptor



Quick Start Guide



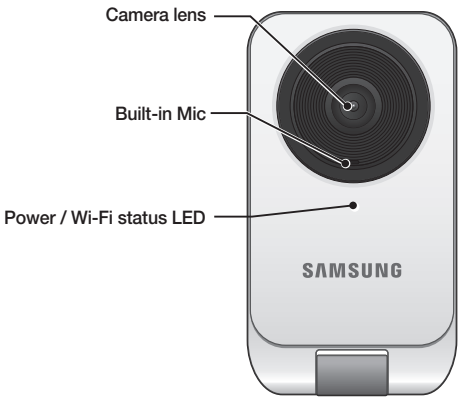
Warranty Card

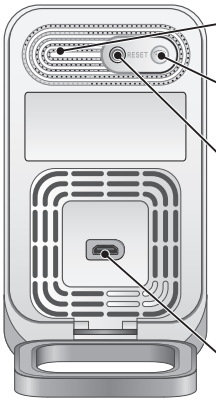


GPL Lisence

■ Keep the packing container. You will need the serial number later to register the camera.

Part names and functions





Speakers
Generate audio output from your smart phone.

Wi-Fi Direct button
Wi-Fi is used for wireless communication between camera and smartphone.

Reset button
Resets the camera settings to the default.
The system restarts if you press the button for 10 seconds using a pointed object such as a needle.

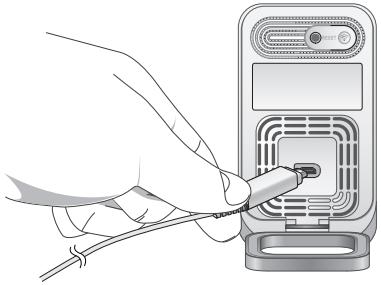
- If you press too strongly, the button can break.

Power Connection Button
It connects with a power adapter.

Power Supply

Plug-in the camera power adapter to the wall outlet and connect the camera as shown.

- Make sure to use the provided power adaptor. If you use an adaptor other than the power supply adaptor provided in our package, the product may not operate properly.
- It will take about 1min for the camera to boot-up completely.
- When the camera is turned on, the LED blinks red.



❖ LED status

LED indicator shows operational status with colors.

Refer to table below for detailed meaning of the LED indicator.

Color	Status
Red	Booting up
Red Blinking	Booting completed / Establishing network connection
Blue Blinking	Connecting to the network.
Blue	Local connection established
Green	Connection to server completed / Normal operation
Yellow/Light Green	Waiting to connect with a wireless router
Purple	Updating firmware

02 Installation & Network Connection

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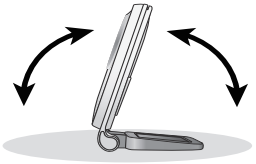
Installation

Precautions

1. Install the camera in a place where the Wi-Fi signal can be reached and without interference.
2. Keep it away from humidity such as around the humidifier.
3. Keep it away from direct sunlight, strong light or dust; install it in a place with clear view.
4. Do not install it in a place where there are a lot of obstacles.
5. Keep the lens clean at all times.
   Wipe off the dust with a soft cloth.

Adjusting the camera angle

1. Place the hook for the camera stand on a flat surface.
2. Adjust the camera's shooting angle as appropriate.



Network Connection and Settings

Precautions

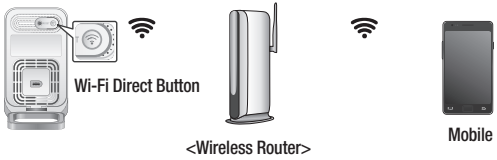
- The wireless network access may fail, depending on the communications environment.
- For details about the network settings and password, contact your network administrator or service provider.
- For a specific Internet service requiring user authentication, you may not access the service. If this is the case, contact the service provider.
- Do not access the unauthorized network.
- The farther the distance from the Wireless Access Point, the longer time the network connection may take.
- If you fail to access the selected wireless network, try a different Wireless Access Point to make access.
- For more information about the router or the wireless connection, refer to the documentation of the router or contact the router manufacturer.
- If the camera is connected to a multiple-Wireless Access Point network environment, some video packets may be lost, depending on the network traffic load.
- According to the network policy (blocking UDP) of the service provider, the video transmission can be limited to 7 minutes.
  For more details, refer to the descriptions on page 15, <**Relay Mode**>.
- In addition to the above two situations, you may encounter a network delay or interruption due to the network conditions.
- Some hubs can have compatibility issues.

Connection using the Wi-Fi Direct function

What is Wi-Fi Direct?

Using Wi-Fi Direct, you can easily connect your camera to a router without a cable.

1. When the power is connected, the power status LED lights up in red and starts blinking when boot-up is complete.
2. When you press the Wi-Fi Direct button on the rear side of the camera, the LED color changes to yellow/light green.



3. Register and select a camera, referring to the instructions in the mobile guide.
4. While the camera is connected to the server, status LED remains green.
5. Set up the wireless network environment in accordance with the <**Network**> guidance on page. 18.

- The camera can only be registered via mobile.
- You can connect in relay mode if the router doesn't have UPnP.
  Configuration may differ depending on the router model. Please refer to the router manual.
- Please contact the service provider if you have difficulty connecting to the Internet.

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Registration

This product allows camera registration via a smartphone only.
Please refer to the mobile guide for a detailed description of camera registration.

Web browser requirements

Windows	Mac
Windows 7 or higher is supported - Internet Explorer 9 or higher (The 64-bit is not supported.) - Firefox	Mac OSX 10.7 Lion or higher is supported - Firefox - Safari

Starting SmartCam

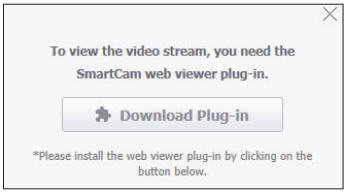
1. From your PC, launch your web browser.
2. Go to http://www.samsungsmartcam.com.
3. Select preferred language.
4. Click <**Sign up**> or <**Starting SmartCam**>.

❖ Plug in installation

You can only see the camera image after installing a plug-in.

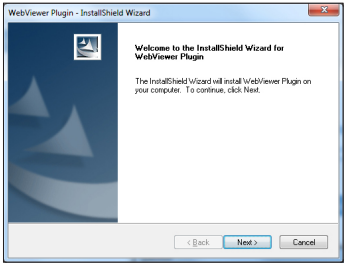
- If you login or click <**Starting SmartCam**> in a PC where the plug in is not installed, the installation message window will pop up.
- When you install the plug in, the web browser will be terminated and you need to launch it again.

1) Click <**Download Plug-in**>, run the setup file.

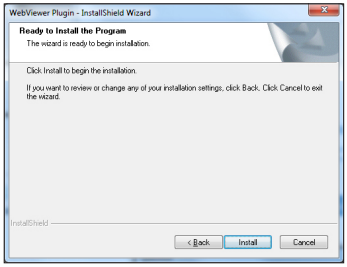


For Windows

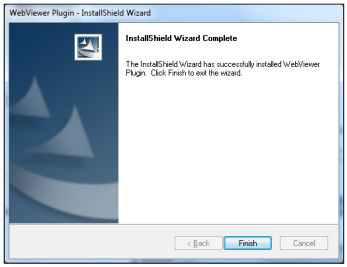
2) Click <**Next**>.



3) Click <**Install**> to begin the installation.

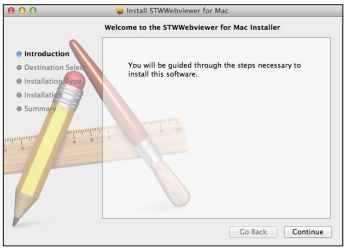


4) Installation has completed.

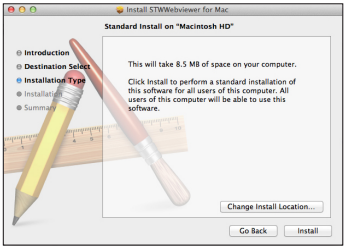


For Mac

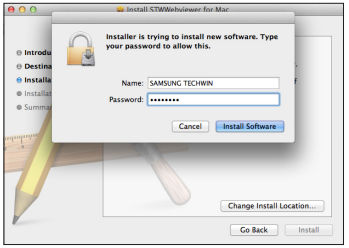
2) Click <**Continue**>.



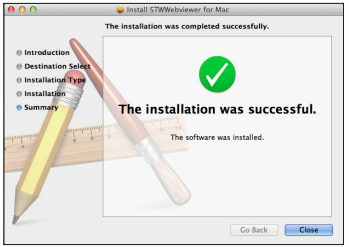
3) Click <**Install**>.



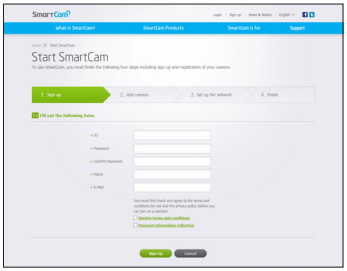
4) Enter MAC PC password and click <**Install Software**>.



5) Installation has completed.



5. Enter the requested information, and click <**Sign Up**>.



- ID : Using alphabetical characters and numbers, make a combination using 8 to 14 letters.
- Password : To strengthen security, create a password with a combination of special characters, numerals and English letters.

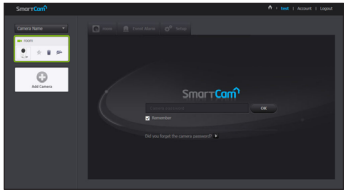
■ Length and other restrictions of password.

- A combination of English letters/numerals: 10 digits or more
- The password must not be identical to your ID.
- No simple repetitive pattern must be used.
  e.g., 1212abab,azxsazxs
- You cannot use 4 or more consecutive letters.
  e.g., 1234, abcd
- You cannot use 4 or more consecutive qwerty keyboard letters.
  e.g., asdf, 7890
- You cannot use any letter 4 consecutive times.
  e.g., !!!!, 1111, aaaa

- Confirm Password : Please enter the password again for confirmation.
- Name : Enter the user name.
- E-mail : Please make sure you enter correct email address as you will have to use the email address to receive temporary ID/password when you lost your user ID or password.

Live Video

1. Select a camera from the camera list at the upper left hand of the screen.



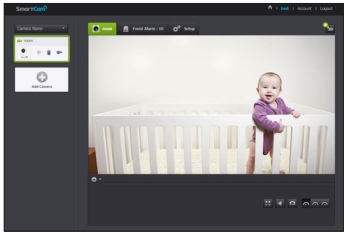
■ The gray icon indicates the camera is inactive so you cannot monitor it right now.

2. Enter the camera password and click <**OK**>.

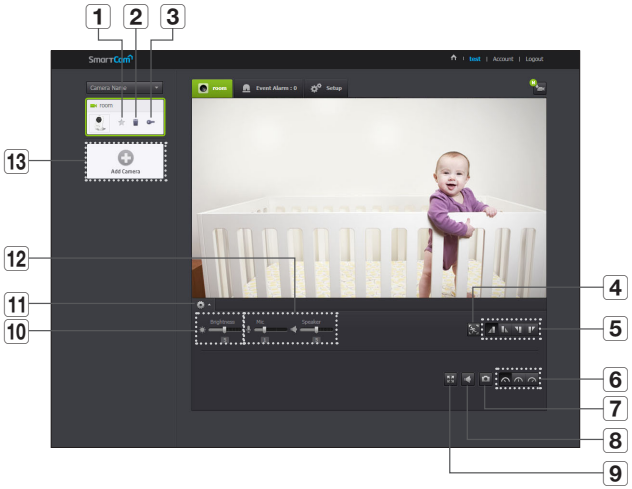
■ Check on <**Remember**> to access your camera without entering the password next time.

■ If you want to change the Camera password, please refer to <**Basic Info**> on page 16.

3. Live video will be displayed on the screen.



Monitoring options



Item		Description
1	Default Camera	Set the default camera to monitor in the camera list.
2	Delete Camera	Delete the registered camera.
3	Cancel remembering camera password	Cancel remembering the camera password.
4	Motion zone setting	It detects motion within the range set by a user.

Item		Description
5	Flip/Mirror	You can flip/mirror the video image.
6	Network Speed	You can change the display resolution and frame size by selecting a network speed (Low/Intermediate/High). ■ If the wireless bandwidth available is lower than recommended images may become distorted, the signal may be temporarily cut off, and the video may not play smoothly.
7	Capture Image	Live video is saved as one image.
8	Sound	When enabled, you can hear what's happening around the camera. ■ Some internet service providers do not support audio outputs in relay mode.
9	Full screen	Converts the current image to full screen size. ■ Supported only in Internet Explorer.
10	Brightness	You can adjust the brightness of the screen image.
11	Hide/unhide detailed menu	Click on the [ ] icon to unhide or hide detailed setting menu.
12	Audio	Adjusts the internal microphone sensitivity and speaker volume of the camera. The live video sound is muted when the microphone is set to '0'. Please note that bidirectional audio transmission is available only in the smartphone application.
13	Add a camera	Click the [ ] icon to register an additional camera.

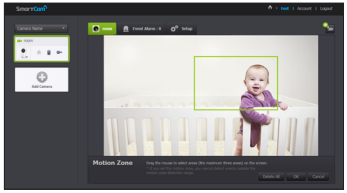
❖ Wireless Network Speed

Profile Name	Resolution	Frame rate	Recommended bandwidth
Low Speed Network	VGA	20 fps	0.7Mbps
Mid Speed Network	HD(720P)	15 fps	1Mbps
High Speed Network	Full HD(1080P)	20 fps	2.8Mbps

- What is relay mode?
  If the network condition is unstable, the camera cannot make a normal connection (P2P), so it will set up a connection in relay mode. In this case, you will see the video for the first seven minutes only.
- Relay mode is added feature where the video from the camera is transmitted to Samsung server then retransmitted to the user's computer.
- If you have trouble connection to the camera, visit "http://www.samsungsmartcam.com", go to support page, and refer to "Troubleshooting" on it.
- It is recommended to use one browser at one time.
- The Night Vision video produces a different visibility according to the distance between camera and subject.
- The number of available concurrent users for a single camera may vary depending on the speed of your Wi-Fi router.

❖ Motion Zone Setting

1) Click the < > icon.
2) Drag it to the screen to set the detection area.

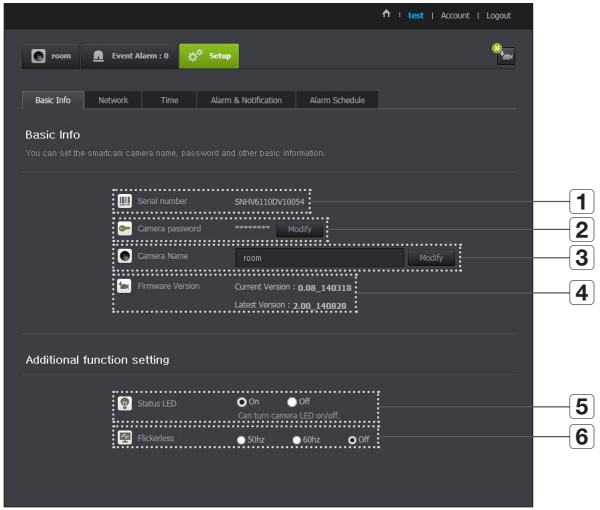


3) Click on <**OK**>.
   If you want to delete the set area, click on <**Delete All**>.

- The <**Motion Detection**> function needs to be activated in order to use the motion zone function.
- You can set up to 3 motion zones.

Setup

Basic Info



Item		Description
1	Serial number	You can confirm the serial number.
2	Camera password	Click the <**Modify**>, you can change the Camera password. Enter the current camera password, and type a new Camera password.
3	Camera Name	Click the <**Modify**>, you can change the camera name.
4	Firmware Version	You can check the current version and the latest version of your camera S/W.
5	Status LED	You can turn on/off the LED in your camera. ■ The LED will illuminate when the power supply is reconnected.
6	Flickerless	You can reduce the occurrence of screen shaking due to the frequency mismatches with the neighboring lighting. ■ If you use the flickerless function outdoors (in a bright environment), image saturation may occur.

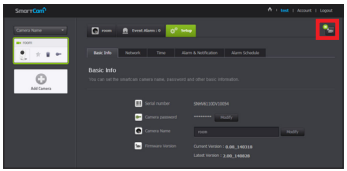
■ If you change the camera password, you will be logged out and return to the camera password input page.

■ Keep the camera password in a safe place as it is used for viewing the live screen of the camera or for changing the display settings.

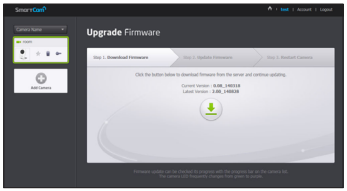
❖ Firmware update

If the currently used S/W is not of the latest version, update it.
If you are using the latest version, then the firmware will not be activated.

1) Click <**Firmware**>.



2) Click the < > icon to update the firmware.



3) When the firmware update is finished, the camera will reboot.

- The duration of the firmware update depends on the size of the firmware file and the network connection speed.
- When executing the firmware update, the camera LED turns purple.

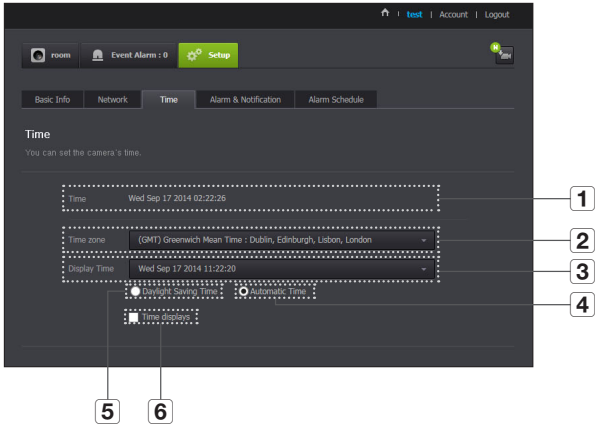
- Please do not cut off the camera power or Internet connection during a firmware update. The system may be damaged.

Network

Item		Description
1	AP (Access Point) list	You will see a list of APs (Access Point) available. Select a desired one from the list of APs (Access Point).
2	AP (Access Point) password	You can access the network by entering the password set for the wireless router. For the password, contact your network administrator.
3	Hidden SSID	Select a different WiFi network, entering its SSID, the type of security that it uses, and the wireless password configured in the router's settings.

- If you select a non-secured AP (Access Point), you just can access the network without providing a specific password.
- If you cannot connect to the wireless network, check that you entered the wireless router password correctly.
- Please refer to the router manual or contact the router manufacturer if you need more information concerning the router or wireless connection.

Time

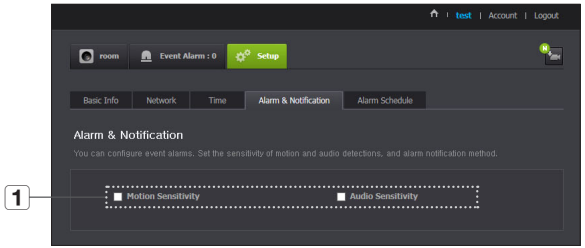


Item		Description
1	Time	Confirm the camera's time.
2	Time Zone	Select your region.
3	Display Time	Select the time format displayed in time setting.
4	Automatic Time	It sets camera's time automatically.
5	Daylight Saving Time	Check this option if you live in a country or region where DST(Daylight Saving Time) is applied.
6	Time to show	Live screen displays the time.

- The time will synchronize with the NTP(Network Time Protocol) server automatically. For this, Internet connection is required.
- You need to set the timezone correctly to obtain the exact time setting.
- The time displayed without Internet connection may not be accurate.

Alarm & Notification

Camera has ability to send event notifications when motion or audio is detected.



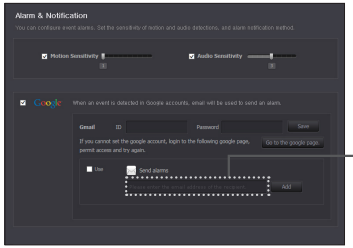
Item	Description
1 Alarm notification	You can set motion or audio alerts. Sensitivity level can also be set. The higher the sensitivity, the more accurate motion and audio events can be detected. ■ When an event occurs, if you want to send alerts to Gmail, first log into your google account.

■ In the following case, it may fail to derive the proper results for basic events and motion detection.
- The object color or brightness is similar to the background.
- Multiple movements continue occurring at random due to a scene change or other reasons.
- A fixed object continues moving in the same position.
- An object hides other objects behind.
- Two or more objects overlap or one object divides in multiple portions.
- A moving object comes close to the camera.

<Gmail> Notification

The event alarm is sent through Gmail.

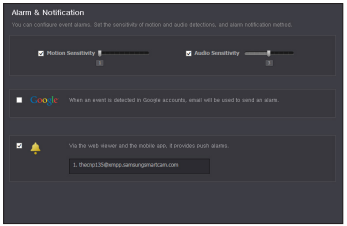
1. Select the Google.
2. Enter your Gmail address and password.
3. Select <**Use**> of “Send alarms”.
4. Enter your email address to receive the notification e-mail and click <**Add**>. Now, the receiver full email address will be shown in the List Box. If you want to register more than one email address, you can just repeat the same procedure.
5. Click <**Save**>.



■ If your Google email ID/password are saved, only check “Send alarms”.
■ If the email address for the recipient entered is incorrect, event alerts will not be sent.
■ Even if you entered a correct google account ID, if the ID/password confirmation pop up window appears, click on <**Go to the google page.**> and check the google account.

Push alarm Notification

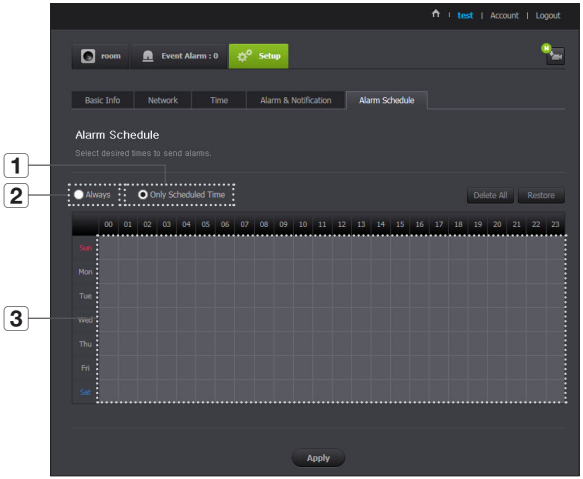
For users whose cameras are registered, a push alarm is provided via the Web app and the mobile app.



- Push alert list shows the list of IDs of users who registered cameras.
  When an alarm occurs, the web site will send push alerts to each smart phone.

Alarm Schedule

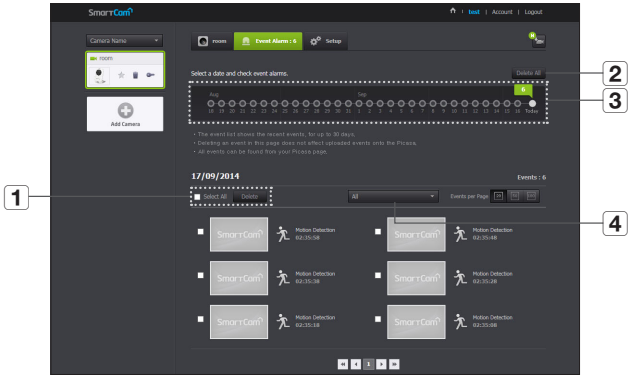
When the user designates a desired day and time, the alarm works only at the designated time.



Item		Description
1	Only Scheduled Time	Alarm function will only operate for the time/day designated by the user.
2	Always	Alarm function always operates.
3	Motion time settings	You can click and drag to set the motion time in hours. Example) When you select 00, an event will occur and remain from 00 to 00:59

Event Alarm

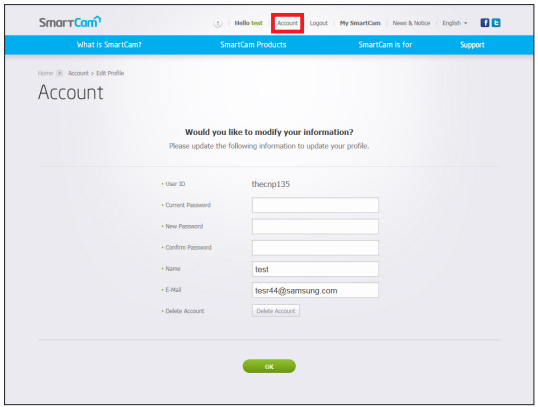
You can check the event alarm that occurred.



Item		Description
1	**Delete by dates**	Delete all the event alarms on the date.
2	**Delete All**	Delete all the event alarms for thirty days.
3	**Display Events**	Displays the number of events occurred in the 30 day list.
4	**Arrange by types**	Arrange the event list by event types.

Information

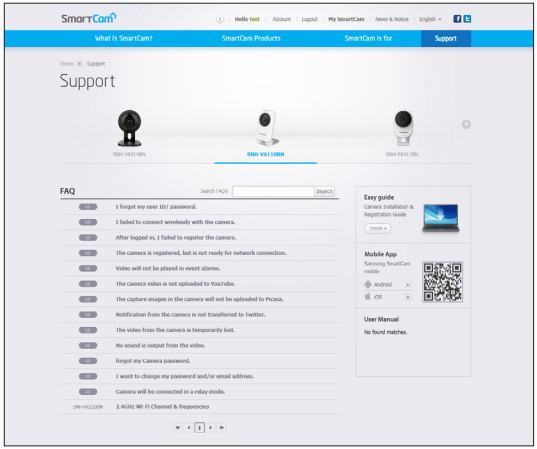
My Account



■ If you want to change the member information, click on <**Account**>. Select the item (password, or email address) and enter your information.

Support

You can download the Samsung SmartCam mobile app and user guide.



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Specifications

Specifications

Item	Description
Video	
Imaging Device	1/6" 2M CMOS
Effective Pixels	1936 x 1096
Scanning System	Progressive
Synchronization	Internal
Low Light Performance	15Lux(Color)
Lens	
Focal Length (Zoom Ratio)	1.87mm
Angular Field of View (D/V/H)	D : 77.4˚ / V : 42.7˚ / H : 69.7˚
Min. Object Distance	200mm
Focus Cotrol	Fixed
Lens Type	module type

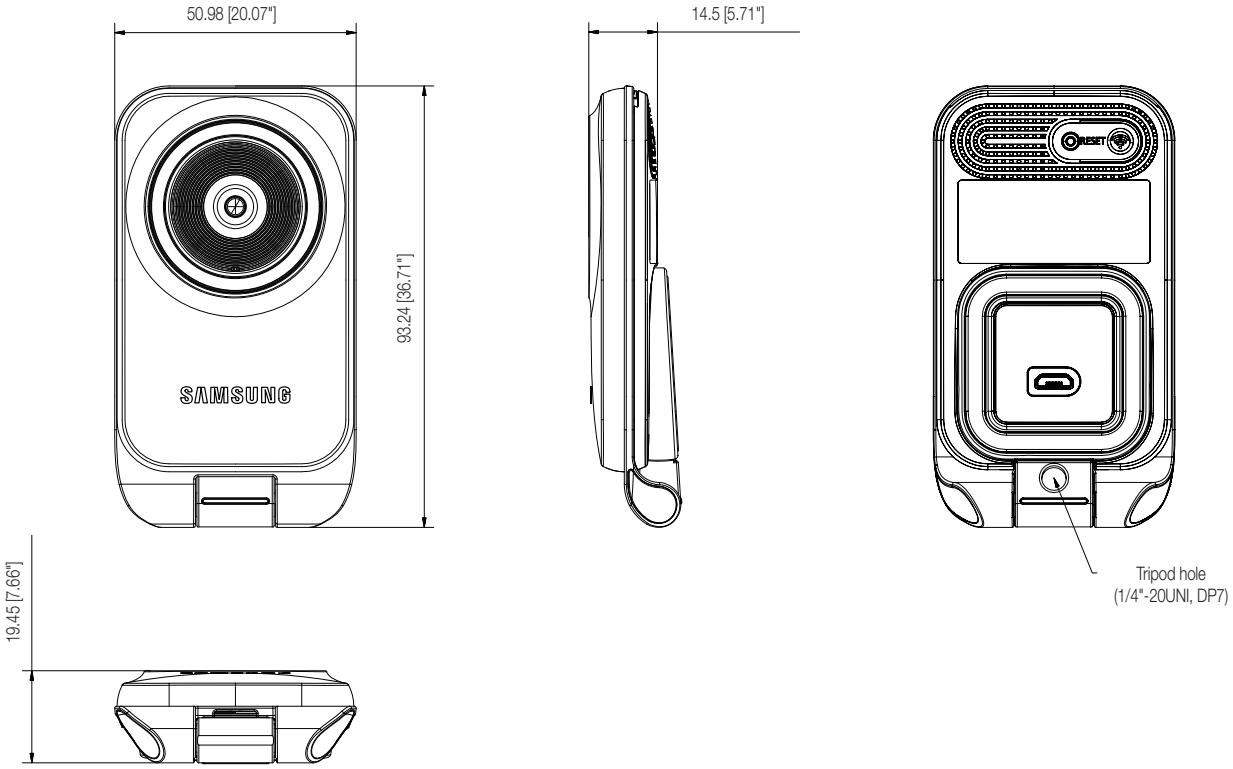
Item	Description
Video Analytics	
WDR	Not Support
Motion Detection	Support (Motion zone : 3ea)
Audio Detection	Support
Operational	
Install	Easy Set-up
On Screen Display (Web Browser)	Support
Day & Night	Not Support
Night vision	Not Support
OS	Linux
White Balance	Auto
Digital Zoom (viewer support)	4X (Mobile), 10X (Web)
Digital Pan/Tilt (viewer support)	Support
Flip / Mirror	Support
Network	
Ethernet	Not Support
Wireless	Wi-Fi 802.11 b/g/n (Single-band)
WPS (Wi-Fi Protected Setup)	Not Support
Wi-Fi Direct	Support (mobile)
Video Compression Format	H.264, MJPEG
Resolution	1920x1080, 1280x720, 640x360

Item	Description
Max. Framerate	H.264, 1920x1080 20FPS
Video Quality Adjustment	H.264: Compression Level MJPEG : Quality Level Control
Bitrate Control Method	H.264 : VBR with CAP MJPEG : CBR with CAP
Streaming Capability	Multiple Streaming (Up to 4 Profiles)
Audio I/O	Support(Audio output, Mono jack)
Audio Compression Format	G.711 u-law, G.726
Audio Communication	Two-way Audio (mobile) Half Duplex with AEC
Protocol	TCP/IP, DHCP, SMTP, DNS, RTSP, RTCP, RTP, HTTP, TCP, UDP, STUN, TURN, XMPP, SIP, uPNP, SNTP, IPv4, ICMP, Bonjour
Security	SSL (AES 256bit)
Streaming Method	Unicast
Max. User Access	5 users at Unicast Mode

Item	Description
Fun	
Audio recording	User selected music record play - 3 Lullaby songs saved - User voice recording feature support
Environmental	
Operating Temperature / Humidity	DC5V, 0°C ~ 40°C(+32°F ~ +104°F) / Less than 90% RH
Ingress Protection	Not Support
Electrical	
Input Voltage / Current	5V/1A
Power Consumption	Max. 4W
Indication	1 LED (Power, Status, Link)
Mechanical	
Color / Material	White
Dimension (WxHxD)	51×93.2×19.5
Weight	85g

Product Appearance

unit: mm (inch)



Troubleshooting

If you encounter a problem with your system, see the table below to solve the problem as quickly and easily as possible. Please follow the instruction below:

Problem	Action
I forgot my user ID/ password.	- Move to “Log-in page ➞ Forgot your ID/Password?”, and enter the registered e-mail address to which we will send you the user ID and/or a new password. It can be spammed out depending on the policy of the email server. After logged in, it is advisable to change the temporary password provided.
Camera is not connected to the wireless hub.	- If the camera's wireless internet indication LED goes off too often, then it means that the camera installation location is not optimal for the wireless internet environment, so in this case, locate the camera close to the wireless hub and try to connect again. - Check the password for the wireless hub and try again.
After logged in, I failed to register the camera.	- Check that the serial number entered matches the label on the back of the camera. - Enter the correct password for the camera registered again and try to register the camera again. - Check the camera LED to see if it is yellow or light green. - If you are still unable to register the camera after this, then reset the camera to factory settings and begin again. (If you want to reset to factory settings, press and hold the initialize button on the back for 10 sec. Once initialized to factory settings, the camera will be restarted.)
The video from the camera is temporarily lost.	- The video from the camera can be delayed according to a network delay. Please check if the camera is installed in a place of proper wireless Internet communications.
No sound is output from the video.	- Click the Voice icon in the video playback page, or check if the voice is turned On in your smart phone app. - Some internet service providers do not support audio outputs in relay mode.
I forgot my Camera password.	- You must create a new camera password. - Press the initialization button on the back of the product for more than 10 seconds to reset to factory settings. - After factory initialization, when you access the camera, you can reset the password for the camera.
I want to change my password and/or email address.	- After logging in, click on the <**Account**>. Select the item (password, or email address) and enter your information.
Camera will be connected in a relay mode.	- Check the UPnP setting of the router. - Using a network upload speed of 500Kbps or higher is recommended. - Depending on the policy of your service provider, you can access in relay mode.

Samsung cares for the environment at all product manufacturing stages, and is taking measures to provide customers with more environmentally friendly products.
The Eco mark represents Samsung devotion to creating environmentally friendly products, and indicates that the product satisfies the EU RoHS Directive.

Correct Disposal of This Product

(Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

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