

**SVBONY**



**SC311**  
**User Manual**

## To customers

Hello, friends! You can download SC311 User Manual pdf file or print this file. SVBONY has the rights to modify this document without prior notice. Please download the latest version from our official website.

Thanks for purchasing your new SVBONY astronomy camera! This manual will give you a brief introduction of the SC311 camera. Please read this manual completely before using it. If you have any questions, please feel free to contact us:

Facebook: [www.facebook.com/svbony](http://www.facebook.com/svbony)

For software installation instructions and other technical support, please email [info@svbony.com](mailto:info@svbony.com)

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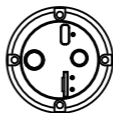
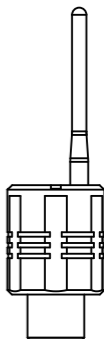
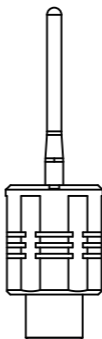
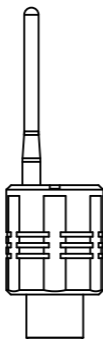
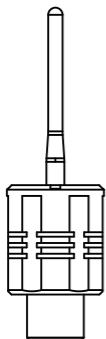
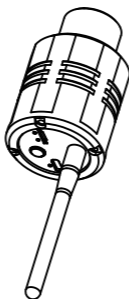
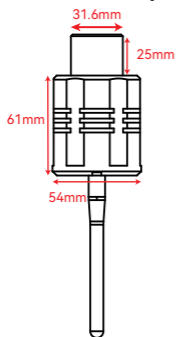
## Appearance Introduction



- ① TF card slot
- ② Blue light
- ③ Red light
- ④ Power button
- ⑤ Reset button
- ⑥ Type-C interface
- ⑦ Antenna
- ⑧ CS-C Adapter



## Dimensions Display



# Camera Specification

## Product parameters

Model	SC311
Sensor Model	Sensor Model
Total Pixels	2.1 Mega Pixels
Diagonal	6.44mm
Max Resolution	1920×1080
Pixel Size	2.9μm X 2.9μm
Chip Size	5.6mm×3.2mm
Exposure Range	0.02ms-5s
QE Peak	≈91%
ADC	12 bit
Adapter	1.25"/CS/C
Protective Window	UV/IR CUT
Back Focal Length	12.5mm
Wifi module	2.4G
Storage	TF Card, Max support 256G, come with 32 G
USB Type	Type-C
Build-In Battery	2400 mAh
Video	support
Photograph	support
Plan to take pictures	support
Working Humidity	20%RH-80%RH
Storage Humidity	20%RH-95%RH
Operating Temperature	-10°C~50°C
Storage Temperature	-10°C~45°C

## Feature

1	Using the IMX662 high-sensitivity sensor, it offers low readout noise, high well capacity, and no blooming.
2	With WiFi wireless connectivity, you can free yourself from the limitation of wires and enjoy the freedom in usage. It can simultaneously connect up to 4 smartphones or tablets for sharing the joy of astronomy.
3	It allows for both short and long exposures and adjustable gain, making it suitable for capturing various celestial objects.
4	The built-in 2400mAh lithium battery provides approximately 4 hours of continuous operation on a full charge
5	It comes with a 32GB TF card and supports expansion up to 256GB

## Package details

Number	Package content	Quantity
1	Camera	1
2	USB data cable	1
3	1.25'' extension tube	1
4	CS-C adapter ring	1
5	TF card	1
6	Dust-free cloth	1
7	Dust cover	1
8	User manual	1

# How to Use Astronomy Camera

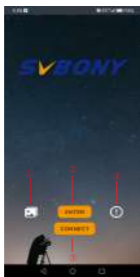
## Download APP and usage introduction

-iOSsystem: Enter app store to search SvbonyaAstro and click download, Install it according to default steps.

-Android/Harmony OS system: Enter app store to search SvbonyaAstro and click download, Install it according to default steps (Or download the svbony Android/HarmonyOS installation package from the official website <https://www.svbony.com/Support/SoftWare-Driver/>)

## Introduction to APP interface connection

Open APP“ SvbonyaAstro”: the interface is as follows



- ① Local album: View captured video or photo
- ② Enter : Enter the APP operation interface
- ③ Connect : Choose WIFI internet setting
- ④ Software information: Software version

## Mobile devicesand WIFI connection

After take out the device, connect the accessories and remove the lens cover. You should install the TF card firstly, then connect and fix the telescope or other device correctly.

-Connect this device using Android mobile phone: Long press power button to turn on the device, Open the installed App, Enter the main interface of the APP, Click“Connect” to enter Wi-Fi selection list, Choose SC311\_XXXXXX(X indicates a different serial number for each device), Enter the password“12345678”, Click“Enter”, When it displays SC311\_XXXXXX in the connected Wifi list (There maybe will display “no Internet access” which is normal)the device connect successfully.

-When connecting this device to an Apple iPhone, follow these steps: Press and hold the power button to turn on the device. Open the installed app on your iPhone. On the app's main interface, tap on "Connect" to access the permission settings. Tap the back arrow in the top left corner to enter the Wi-Fi selection list. Select "SC311\_XXXXXX" (X represents the unique serial number

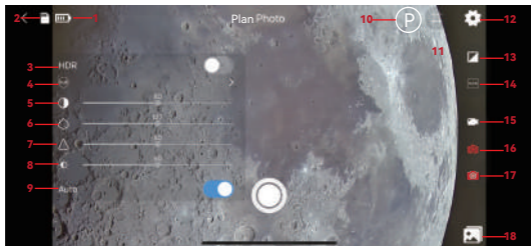


of each device) in the Wi-Fi list.

When prompted, enter the password "12345678" and click "Enter".

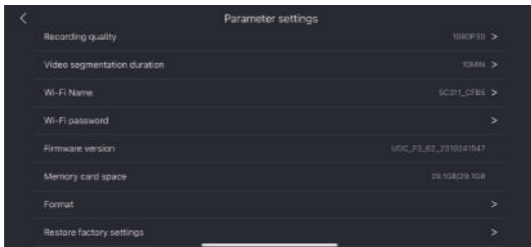
Once your iPhone shows that it is connected to the SC311\_XXXXXX network (it may display "no Internet access" which is normal), it means that the device has been successfully connected.

## Software Interface & Parameter Settings Introduction



- |                        |                       |
|------------------------|-----------------------|
| 1 Battery prompt       | 10 Plan photo         |
| 2 TF card prompt       | 11 Shooting auxiliary |
| 3 HDR                  | 12 Setting            |
| 4 White balance        | 13 Exposure           |
| 5 Contrast             | 14 Gain               |
| 6 Saturation           | 15 Video              |
| 7 Sharpening           | 16 Photo              |
| 8 Brightness           | 17 Plan photo         |
| 9 Automatic adjustment | 18 Local album        |

## Parameter Settings



## Precautions for use

When using a mobile device to connect with this product and operate the APP, please note the following:

- If you are using an purchased TF card with this product SC311 for the first time, please enter the settings option to format the TF card firstly (The TF card provided with this product has been formatted before leaving the factory) to prepare for later video shooting or photo storage.。
- Please allow the APP to access the local photo album on your phone. The program will automatically create a new "SvbonyAstro" photo album in your local photo album to store the images you downloaded from the device photo album to the local photo album on your phone.
- If the image is not clear, please adjust the focus of the external device until the image is clear;
- If the exposure time exceeds 100ms for video shooting, it is recommended that the video shooting time be more than 10 minutes. If the time is too short, it may not be stored.
- There will be a certain delay when adjusting different exposure times. Please wait for the last exposure time to complete, or switch and refresh again.

## UVC mode usage

- Take out the equipment, connect the accessories, remove the lens cover, install the TF card, and connect your telescope or other external equipment;
- Use the supplied data cable to connect the Type-C end to the device and the USB end to the PC;
- Open the UVC software on the PC (Sharpcap software can be selected), select "UVC Camera" to enter the image interface;
- Note: During use in WIFI mode, after switching to UVC mode, the device will automatically default to UVC mode. If you want to return to WIFI mode, you need to turn off UVC mode and reconnect the device to return to WIFI mode.

## Guidelines for planning photos

- Press the scheduled photo button on the main interface to switch to scheduled photo mode.
- Click the icon in the upper right corner of the interface to select the number of planned photos (50, 100, 200 optional)
- Click the icon to select the time interval for each photo taken (1s, 3s, 5s, 10s optional)
- After making the above selections, return to the main interface and press the photo button. The device will automatically take photos at fixed intervals according to the selected time and number of photos until the selected number of photos is taken;
- Export the captured pictures and use video synthesis software to create time-lapse videos.

## Indicator lights and working status

Working status	Light indicator
Power on (Long press power button for 5s)	Blue light stays on
Power off (Long press power button for 5s)	Blue light off
External power supply (via mobile power supply or PC, etc.)	Red light stays on
Battery is full charging	Red light off
Preview, Photo shooting (Plan photo shooting)	Blue light stays on
Video shooting	Blue light flickers

## Camera Cleaning

Svbony SC311 camera comes with an optical protection window-UV/IR CUT glass, which could protect the sensor from dust and humidity. And the inside of the image sensor is dry and sealed.

We don't recommend customer to disassemble the camera and clean it. Because disassemble the camera may lead the sensor to get wet, or it may cause more dust to come in. If you need clean the protection window, it is best to do it during the daytime.

The Suggested way to clean them is try to blow them away with a manual air pump.



## Quality Assurance

The SC311 camera warranty time is one year. Within warranty period, if the camera fails to function, we will provide free after-sales maintenance service. Besides the warranty days, we provide life-long maintenance services and charge only the parts that need repair or replacement. The buyer will pay for the postage of returning camera to factory to be repaired. Within the warranty period, if the following condition occurs, certain maintenance costs will be charged.

- The malfunction and damaged caused by incorrect use, the unauthorized repairs and alteration.
- The damage caused by fire, flood, earthquake, other natural disasters and secondary product damage.
- The product malfunction caused by the fall and transportation failures after purchase.
- The malfunction and damaged caused by the other barriers (man-made factors or external device).
- Purchase without the warranty card and purchase invoices.

## Warning



**ATTENTION!**

Before using this device, read this guide which contains important operating instructions for safe usage and control for compliance with applicable standards and regulations.

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.

## General consumer goods

Note: This equipment has been tested and found to comply with the limits for a Class B digital device. 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.

## CE

• (Simple EU declaration of conformity) Hong Kong Svbon Technology Co.,Ltd declares that the equipment type is in compliance with the essential requirements and other relevant provisions of RED Directive 2014/53/EU, EMC Directive 2014/30/EU, the ROHS Directive 2011/65/EU and the WEEE Directive 2012/19/EU; the full text of the EU declaration of conformity is available at the following internet address: [www.svbon.com](http://www.svbon.com).

## Disposal

The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that all electrical and electronic products, batteries, and accumulators (rechargeable batteries) must be taken to designated collection locations at the end of their working life. Do not dispose of these products as unsorted municipal waste. Dispose of them according to the laws in your area.



## License-exempt RF equipment

Unauthorized modification and adjustment

Changes or modifications not expressly approved by the party responsible for compliance may void the user's authority granted by the local government radio management departments to operate this radio and should not be made. To comply with the corresponding requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and repairs in the private land mobile and fixed services as certified by an organization representative of the user of those services. Replacement of any transmitter component (crystal, semiconductor, etc.) not authorized by the local government radio management departments equipment authorization for this radio could violate the rules.

## Electronic eyepiece with detachable antenna

This radio transmitter has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

## RF Safety

This device is designed for and classified as "General population/uncontrolled use". General population/uncontrolled environments are defined as locations where there is exposure of individuals who have no knowledge or control of

RF exposure level.

### **Batteries Safety**

- In the event of a battery leaking, do not allow the liquid to come into contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice immediately

### **Warnings on storage and disposal of batteries**

- Since batteries are sensitive to high temperatures when storing them, keep them in a cool and dry place. The recommended temperature should be between +10 °C and +25 °C and never exceed +30 °C. Batteries should therefore not be stored next to radiators or boilers nor in direct sunlight. Extremes of humidity (below 35% and above 95% relative humidity for sustained periods) should be avoided since they are detrimental to both batteries and packing. Although the storage life of batteries at room temperature is good, storage is improved at lower temperatures provided special precautions are taken. Also, accelerated warming is harmful.

### **Charging guide**

- Batteries shall be charged at 10 °C~40 °C environment temperature specified. If the environment temperature is lower than 0 °C, the charge shall be prohibited.
- Rechargeable batteries are only to be charged by adults or by children at least 8 years old under adult supervision.

The power delivered by the charger must be between min 5Watts and max 10 Watts required by the radio equipment in order to achieve the maximum charging speed.

### **Authorized Accessories List**

Antenna: 3.15 dBi, 50Ω

This device meets the regulatory standards when used with the Svbonny accessories supplied or designated for the product.

### FCC Caution:

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

NOTE: 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.
- To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

## Guarantee

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Purchasing Date: \_\_\_\_\_

Dealer: \_\_\_\_\_ Telephone: \_\_\_\_\_

User's Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

Country: \_\_\_\_\_ Address: \_\_\_\_\_

Post Code: \_\_\_\_\_ Email: \_\_\_\_\_

### Remarks:

- 1.This guarantee card should be kept by the user, no replacement if lost.
- 2.Most new products carry a two-year manufacturer's warranty from the date of purchase. Further details, pls read <http://www.retevis.com/after-sale/>
- 3.The user can get warranty and after-sales service as below:
  - Contact the seller where you buy.
  - Products Repaired by Our Local Repair Center
- 4.For warranty service, you will need to provide a receipt proof of purchase from the actual seller for verification

### Exclusions from Warranty Coverage:

- 1.To any product damaged by accident.
- 2.In the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs.
- 3.If the serial number has been altered, defaced, or removed.





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RoHS



MADE IN CHINA

## **说明书要求**

尺寸：90×130mm

印刷：全彩色

样式：胶粘

纸张：封面封底铜版纸  
+内容双胶纸

**此页无需印刷**