

Smart Telescope Camera

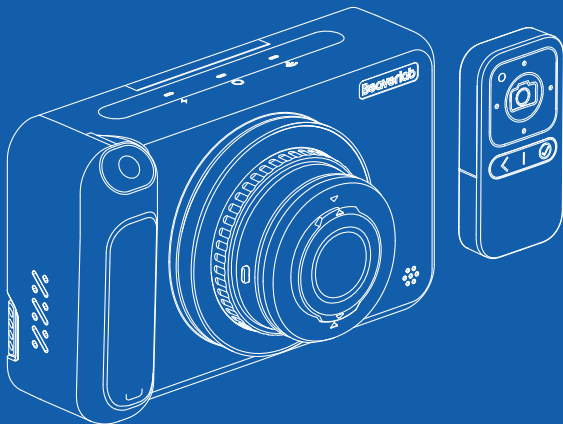
DDL-DS1 Instruction Manual

Please read the instructions in detail.

Please keep this instruction manual in a safe place.



Beaverlab



Hawkeye DS1

This product is compatible with all kinds of telescopes with a 1.25-inch interface.



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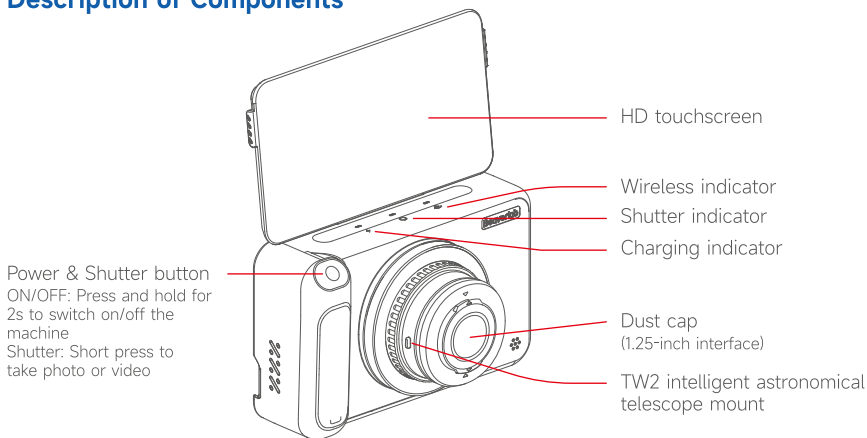
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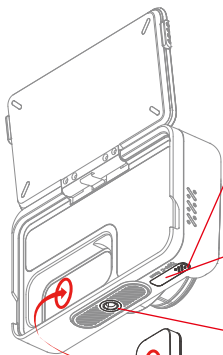
01 Product Overview

Thank you for purchasing the Smart Telescope Camera Hawkeye DS1. Please read the instructions carefully before use and keep it properly.

Please read this manual carefully before using the product and store the manual safely. Do not attempt to use the Starlight Camera without knowing how to use it correctly in order to avoid unnecessary damage caused by incorrect use.

Description of Components





Magnetic part

Battery compartment
cover (button cell CR2032)

Remote controller

Type-C interface

Charging: When the camera is low in power, the power indicator light will flash. At this point, connect the adapter using the Type-C charging cable to charge the camera. When the camera is fully charged, the power indicator light will be continually lit.

Image video transmission: Connect the camera to your computer and launch the software to view the relevant images and videos in real-time.

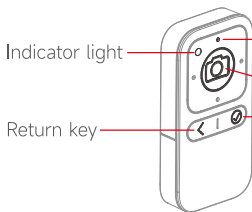
Reset button

Press and hold the Reset button to reset. After a successful reset, the network will enter pending connection status and each indicator light will flash once;

1/4-inch adapter

Compatible with all kinds of tripods with a 1/4-inch interface.(JB/T8249.2-2016/ISO1222:2010)

Remote controller



Indicator light

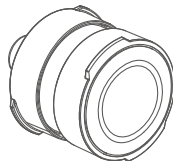
Return key

Arrow keys
(Up/down/left/right)

Photo shortcuts

Confirmation key

1.25 inch connector



02 Operation Instruction

- Please prevent dust from entering the camera.
- Pay attention to the protection of the objective lens. Be sure to close the dust cap after use to prevent contamination by dust or foreign matter.
- Take care to protect the starlight camera and put it in the storage bag after use.
- If this product is placed on a tripod, remove it and put it away when not in use.
- Please use this product in a temperature environment of -10–45°C.
- This product is not waterproof. Please prevent it from making contact with any liquid.
- Please keep this product away from fire, heat sources, etc.
- This product is a precision device. Please prevent it from being hit or shaken violently.
- At low temperatures, the available capacity of the lithium battery will be reduced to varying degrees. Please rest assured that this is normal.
- If any abnormal phenomenon occurs, please check the troubleshooting instructions promptly.
- Unauthorized disassembly of the product will not be covered by the warranty policy and may result in irreparable damage.

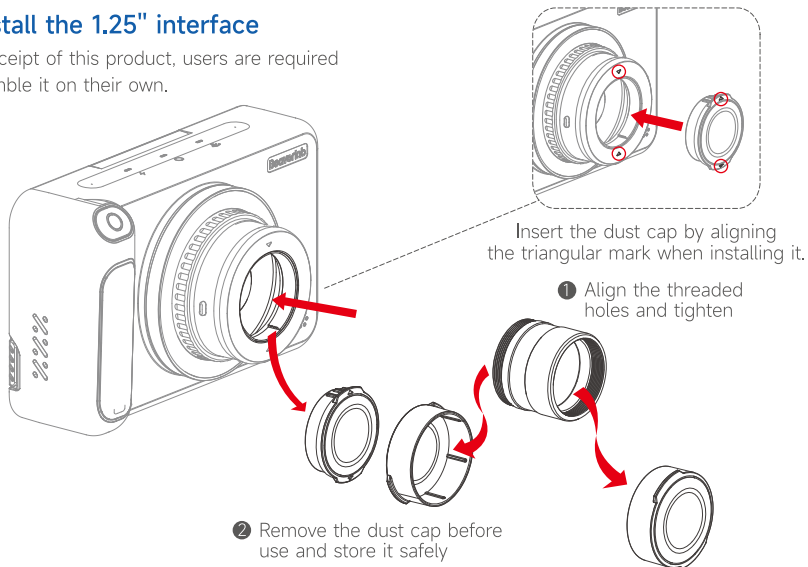
Special Reminder:

- Do not observe the sun directly without the “Special solar filter” installed or else the camera’s chip will burn out.
- Minors should be accompanied by an adult when using this product.
- Do not modify the telescope without authorization.

03 How to Install the Camera

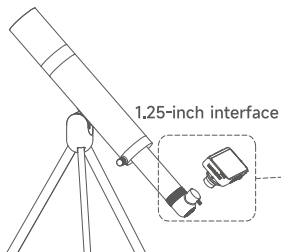
3.1 Install the 1.25" interface

Upon receipt of this product, users are required to assemble it on their own.



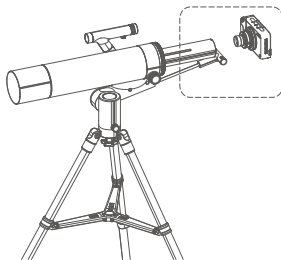
★ Warn: Remember to close the dust cap after use

3.2 Install the common telescope

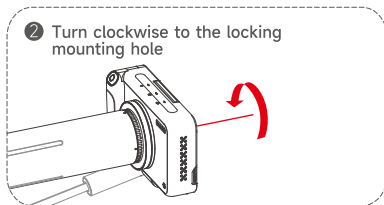
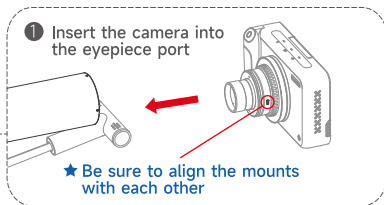
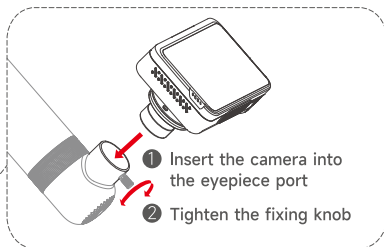


★ Reminder: Note that the interface is only suitable for 1.25-inch interface, please confirm before use.

3.3 Installation of Smart telescope TW2



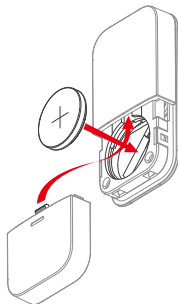
★ Note: Smart telescope TW2 apply equally.



3.4 Replacing the remote controller battery

★ **Reminder:** Note the orientation of the positive and negative terminals of the battery, with the positive terminal facing outward.

- 1 Insert the cell battery
- 2 Close the battery compartment cover



3.5 Charging the Smart Ultra Telephoto Camera

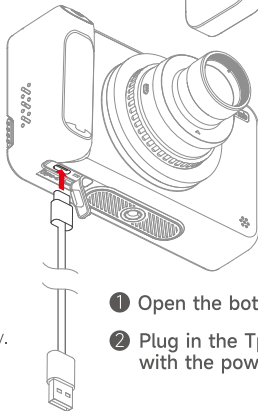
★ **Reminder**



The Smart Telescope Camera can be charged using a charger adapted for 5V $\overline{\text{---}}$ 2A.



Do not charge for more than 12 hours to avoid affecting the service life of battery.



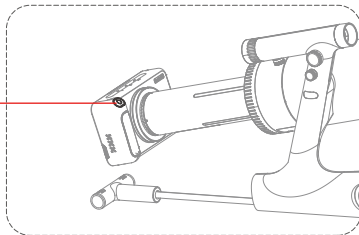
- 1 Open the bottom rubber plug.
- 2 Plug in the Type-C charging cable with the power adapter for charging.

04 How to Use the Camera

4.1 Powering on/off

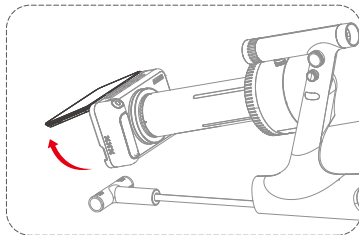
Press and hold the Power button for 2 seconds to power on/off the camera.

Power & Shutter
button

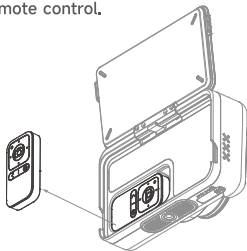


4.2 Photo taking/video shooting

Unfold the touch screen at an appropriate viewing angle.



- ① Remove the remote control.



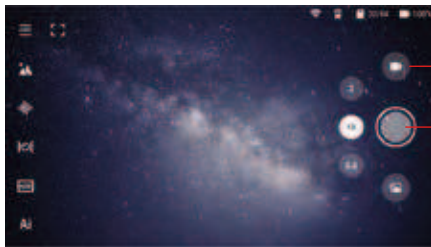
- ② Switch on the remote control: Press and hold the ON/OFF & shutter keys for 2s, the remote control is switched on/off. When the remote control is switched on, it automatically connects the Smart Telescope Camera. (*Note that the remote control is close to the telescope smart lens)

Power & Shutter button



Remote control shooting operation:
After the remote control is automatically and successfully connected to the telescope smart lens, click the shutter button to realize the shooting work.

- Telescope smart lens:
Short press the ON/OFF and shutter keys for shooting directly.
- In-screen operation:
Click the shooting and video keys in the screen to achieve the photographing work.



Video shooting

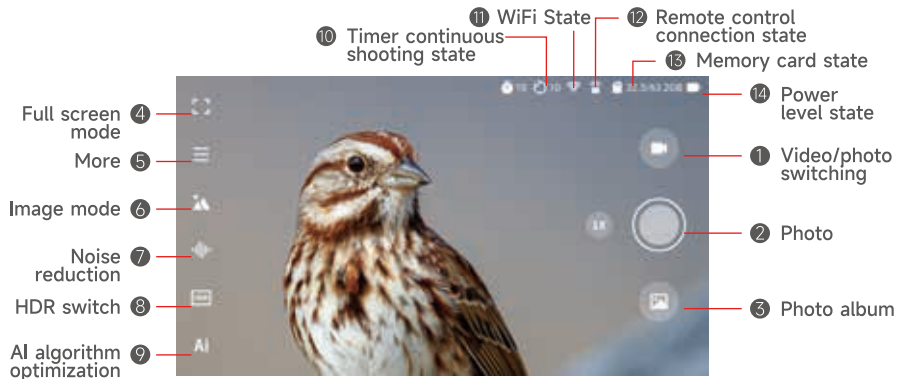
Photo taking

4.3 Auto shutdown

(Touch screen interface)

In the WiFi connection or wired mode connection state, it enters the standby state if there is no operation for 3min. Short press the power key/photo key to wake up the machine. If not woken up for more than 15min, it is automatically switched off.

4.4 Description of main functions of screen



(Touch screen interface)

- ① **Video/photo switching:** Switch the photo/video functions;
- ② **Photo:** Short press to start taking photos or videos, and save the files to the album when finished. When there is not enough memory, it reminds the user that the memory card is full and terminates the taking of photos and videos, and saves the images and videos that have been taken;
- ③ **Albums:** Picture and video classification, viewing and video preview, and deletion functions;
- ④ **Full screen mode:** In full-screen mode, elements that affect observation such as the settings menu bar on the left and the status bar on the top are hidden, and the exit full-screen icon and photo (video) icon are retained in the interface;

5 More

Lens switching: There are three lens modes switching: wide angle, medium focus, telephoto;

Reference line setting: A total of three modes: Disable mode / Tic-Tac-Toe reference line mode / Cross reference line mode;

Continuous shooting setting: To set the number of consecutive shots, simply set the framing frame, press the shutter, and the camera will take consecutive shots at the set number of shots;

timed photographing: To set a timer to take a picture, simply set the framing screen, press the shutter, and the camera will automatically take the picture at the end of the selected time countdown;

WiFi switch: On the WiFi switch;

6 **Image mode:** manual, landscape, moon, sports, cloudy, night, starry night mode;

7 **Noise reduction:** Noise reduction switch is used for fusion elimination of noise;

8 **HDR switch:** Highly dynamic image mode switch suppresses image over-burst and over-darkness, thus retaining richer image details;

9 **AI algorithm optimization:** Wide Dynamic Range (WDR), Motion-Compensated Temporal Filtering (MCTF), Defogging (DF);

10 **Timer continuous shooting state:** Displays the currently selected number of continuous shots;

11 **WiFi State:** Displays whether the currently connected WiFi status is normal or disconnected;

12 **Remote control connection state:** After the Smart Telescope camera and the remote control are switched on, they will be automatically connected to the remote control (note the battery level). At this point, the connection status of the remote control can be viewed at the Smart Telescope camera. If the status of the remote control is shown as disconnected, please check the power level of the remote control in time, or the remote control shall be as close as possible to the Smart Telescope camera;

13 **Memory card state:** Displays the current used capacity and maximum capacity of the memory card;

Mobile phone wireless connection

1. APP Download and installation:

1. The Smart Telescope Camera should be fully charged before use. If the observation time needs to be extended, it can also be equipped with charging devices such as mobile charging bank to charge in time during the observation.

2. Scan the QR code below to download the APP (search "Beaver Point" in App store or Google Play to download the APP)



Android

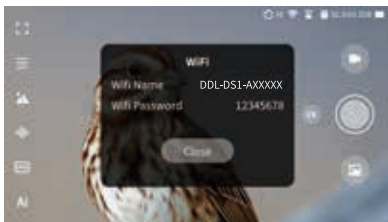
Scan here to download APP



iOS

2. Equipment connection

Connect WiFi of Smart Telescope Camera (More → WiFi Switch → Connect WiFi of Telescope Smart Camera) WiFi name: DDL-DS1-AXXXXX; Password: 12345678



Telescope Smart Camera WiFi password: 12345678

Start the APP → select the corresponding Smart Telescope Camera → corresponding WiFi name (e.g. DDL-DS1-XXXXXX) and connect it → click to enter if connected.

WiFi name: DDL-DS1-XXXXXX.

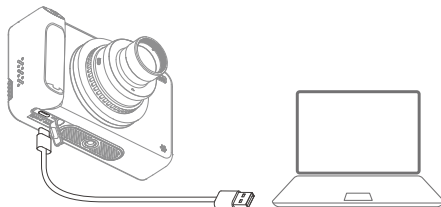
WiFi password: 12345678

Open the home page and click the Start Observation button to enter the interface of real-time transmission.

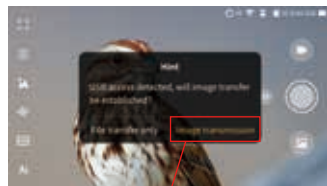


PC wired connection

- 1 Connect PC to the telescope smart lens via USB cable.
- 2 After the software detects the USB port, click the "Image Transmission" button in the pop-up window.

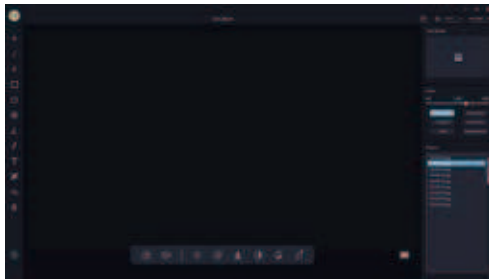


Connect PC via USB cable



Click the "Image Transmission" button

- 3 Open the Windows software and select the device to observe.



Computer users can download the Windows version of the software to's official website (www.beaverlabtech.com)

05 Accessories & Tools



Storage bag×1



Telescope camera body×1



Manual×1



1.25-inch interface×1



Type-C data cable×1



Remote controller×1

06 Troubleshooting and Solutions

Issues	Reason	Treatment
Unable to charge the device	1. The charging interface is not connected firmly.2. The power supply is not connected.3. An equipment failure has occurred.	1.Re-plug the interface. 2.Connect the product to the power supply. 3.Need maintenance
Unable to use the device	1. The Starlight Camera is low in power. 2.The Starlight Camera short-circuits due to water exposure. 3.The Starlight Camera crashes.	1.Charge the product in time. 2.Need maintenance 3.Press the Reset button once to reset.
Blurry images	1. The lens is foggy due to a sudden change in ambient temperature.2. The filter of the Starlight Camera lens is dirty.	1.Use the product until the ambient temperature becomes constant and the mist dissipates. 2.Wipe the filter with a cotton swab moistened with alcohol.
The shell breaks or creaks due to dropping, impact, etc.	Damage due to external use	Need maintenance
Unable to power on the device or button malfunction	Crash	Press the Reset button once to reset.

The Smart Telescope camera is a precision optical equipment with a high level of professionalism. In the event of any fault not described above, Need maintenance.It is recommended to do the following in daily use to keep your telescope in the best condition:

1. When the product is not in use, please close the dust cap on the objective lens to protect the lens and prevent the accumulation of dust. If there is dust on the Telescope Smart Camera, it is recommended to use a camel hair brush or air to blow it off.
2. Do not clean the optical lens excessively. A small amount dust on the lens will have little effect on the overall image.
3. Keep the camera in a cool and ventilated place.

Warning: Do not use chemical lens cleaning solutions as they may damage the optical parts.

07 Trademark and Legal Statements

Beaverlab is a trademark applied for or registered world wide by Beaverlabtech Limited Liability Company for the use of this product. Without the explicit permission of the trademark owner, no individual or organization is permitted to utilize the aforementioned trademark logo on any unauthorized commodities.

This manual is produced and copyrighted by Beaverlabtech Limited Liability Company No organization or individual may reproduce or distribute all or any part of this manual without permission.

Due to ongoing improvements in product functionality, design changes and other factors, this manual may not be fully consistent with the specific product you purchased. Please refer to the actual product for accurate information.

FCC WARNING

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.
- The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction

Battery Precautions

- 1.The product uses rechargeable batteries.
2. Rechargeable batteries must be charged under adult supervision.
3. Please use the recommended charger.
4. Power supply electronics shall not short circuit

08 Overall Specifications

Item	Specifications
Product Name	Smart Telescope Camera (Hawkeye DS1)
Product model	DDL-DS1
Battery capacity	6000mAh
Charging power	DC5V $\overline{=}$ 2A
Charging interface	Type-C
Compatible telescopes	Telescopes and spotting scopes with 1.25-inch mount



By scanning you will be able to
Download APP
Get exclusive benefits
Unlock more ways to play

Smart Telescope Camera

Product Name: Smart Telescope Camera (Hawkeye DS1)

Product Model: DDL-DS1

Product Weight: About 398g

Product Size: 139x86x87mm

Input Voltage: DC5V \equiv 2A

Operating Temperature: -10°C ~45°C

Brand Company: Beaverlabtech Limited Liability Company

E-mail: support@beaverlabtech.com

YouTube: <https://www.youtube.com/channel/UCU-prXLB>

QS-DdJa-iEJ9Njg

Facebook: <https://www.facebook.com/people/BEAVERLAB-Us/100093065594303/>

Website: www.beaverlabtech.com

INS: <https://www.instagram.com/beaverlabtech/>

Twitter: <https://twitter.com/BEAVERLABOS>



Made in China