

HD Motorized Vari-focal Lens

User's Manual





Foreword

General

This manual introduces the functions and operations of the HD Motorized Vari-focal Lens (hereinafter referred to as "the lens").

Safety Instructions

The following signal words might appear in the manual.

Signal Words	Meaning
 CAUTION	Indicates a potential risk which, if not avoided, could result in property damage, data loss, reductions in performance, or unpredictable results.
 NOTE	Provides additional information as a supplement to the text.

Revision History

Version	Revision Content	Release Time
V1.0.0	First release.	August 2024

About the Manual

- The manual is for reference only. Slight differences might be found between the manual and the product.
- We are not liable for losses incurred due to operating the product in ways that are not in compliance with the manual.
- The manual will be updated according to the latest laws and regulations of related jurisdictions. For detailed information, see the paper user's manual, use our CD-ROM, scan the QR code or visit our official website. The manual is for reference only. Slight differences might be found between the electronic version and the paper version.
- All designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual. Please contact customer service for the latest program and supplementary documentation.
- There might be errors in the print or deviations in the description of the functions, operations and technical data. If there is any doubt or dispute, we reserve the right of final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and company names in the manual are properties of their respective owners.
- Please visit our website, contact the supplier or customer service if any problems occur while using the device.
- If there is any uncertainty or controversy, we reserve the right of final explanation.

Important Safeguards and Warnings

This section introduces content covering the proper handling of the device, hazard prevention, and prevention of property damage. Read carefully before using the device, comply with the guidelines when using it, and keep the manual safe for future reference.

Operation Requirements



- Make sure that the power supply of the device works properly before use.
- Do not pull out the power cable of the device while it is powered on.
- Only use the device within the rated power range.
- Transport, use and store the device under allowed humidity and temperature conditions.
- Prevent liquids from splashing or dripping on the device. Make sure that there are no objects filled with liquid on top of the device to avoid liquids flowing into it.
- Do not disassemble the device.
- Checklist content.

Installation Requirements



WARNING

- Connect the device to the adapter before power on.
- Strictly abide by local electrical safety standards, and make sure that the voltage in the area is steady and conforms to the power requirements of the device.
- Do not connect the device to more than one power supply. Otherwise, the device might become damaged.



- Observe all safety procedures and wear required protective equipment provided for your use while working at heights.
- Do not expose the device to direct sunlight or heat sources.
- Do not install the device in humid, dusty or smoky places.
- Install the device in a well-ventilated place, and do not block the ventilator of the device.
- Use the power adapter or case power supply provided by the device manufacturer.
- The power supply must conform to the requirements of ES1 in IEC 62368-1 standard and be no higher than PS2. Note that the power supply requirements are subject to the device label.
- Connect class I electrical appliances to a power socket with protective earthing.
- Checklist content.

Maintenance Requirements

Checklist content.

Table of Contents

Foreword..... I

Important Safeguards and Warnings..... II

1 Installation..... 4

 1.1 Lens Maintenance.....4

 1.2 Lens Installation.....4

2 Web Operation..... 5

 2.1 Zoom and Focus.....5

 2.2 Iris Control.....6

 2.2.1 P-Iris6

 2.2.2 DC-Iris.....6

3 Protection of the lens..... 7

1 Installation

1.1 Lens Maintenance



CAUTION

The lens surface is deposited with a special optical coating to increase the transmittance. If there is dirt, grease, fingerprints, etc. on the surface, the performance of the lens will decrease, and flare will occur in severe cases; the dirt may cause a moldy or faded surface.

Step 1 Remove dust on the lens surface.

Use an oil-free soft brush or an air brush (for photography) to remove debris and dust.

Step 2 Degrease the lens surface.

- 1) Wipe the lens with a clean soft cloth, dry the surface, and then clean it with a non-fading absorbent cotton cloth containing alcohol, lens cleaning paper, or liquid lens cleaner.
- 2) Wipe gently with a soft cloth from the center to the edge of the lens, then change to another clean and soft cloth and wipe again until the lens is completely clean.

1.2 Lens Installation

The lens adopts standard CS/C mount. Please pay attention to matching the camera mount before installation.

- C mount lens can be directly installed on the C mount camera. If you need to install it on the CS mount camera, please use a 5 mm adapter.
- CS mount lens can only be installed on CS mount camera.



Please make sure that the lens surface is clean before installation, otherwise it may affect the image quality.

Step 1 Remove the protective covers from camera.

Step 2 Align the lens to the lens mount position on the camera, and turn the lens clockwise until it is securely mounted.

Connect the lens to the corresponding ports of the camera, then you can zoom, focus, or control the aperture of the lens on the web of the camera.

2 Web Operation

2.1 Zoom and Focus

Log in to the web of the camera and enter the zoom and focus interface. You can adjust focal length to zoom in and out the image, change the clarity of the image by adjusting focus manually or automatically and regional focus, and correct error caused by repeated lens adjustments.



Take a camera with a 4-pin motorized lens as an example. Interfaces may vary with different cameras. For details, please refer to the web manual of the corresponding camera.

Figure 2-1 Zoom and focus

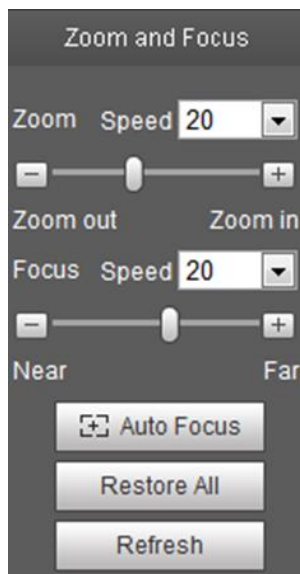




Table 2-1 Zoom and focus description

Parameter	Function
Zoom	Changes the focal length of the camera to zoom in or out the image. 1. Configure Speed . The larger the speed is, the more the image would zoom in or out at one click. 2. Click +/- or drag the slider to adjust.
Focus	Adjusts the back focal length (BFL) to make the image clearer. 1. Configure Speed . The larger the speed is, the more obvious the adjustment would be at one click. 2. Click +/- or drag the slider to adjust.
Auto focus	Adjusts image clarity automatically.  Do not make any other operation during auto focus process.

Parameter	Function
Restore All	Restores the lens configurations to default value and corrects lens adjustment errors.  You can restore the lens if the image has poor clarity or has been zoomed or focused frequently.
Refresh	Syncs the hardware zoom and focus settings.

2.2 Iris Control

2.2.1 P-Iris

The lens adopts a stepping motor to precisely control the digital iris. It can be used in conjunction with a P-Iris camera to automatically adjust the aperture according to the lighting conditions. Select an appropriate aperture to achieve the best imaging effect.



CAUTION

The camera using the P-Iris lens must be able to support P-Iris control, or the camera must have a P-Iris signal control port.



If you need to manually control the iris, you need to operate on the web setting interface. See the manual of the corresponding camera for details.

2.2.2 DC-Iris

The lens does not have a built-in electronic amplifier (automatic iris control circuit), and the lens diaphragm is automatically driven by the DC signal and cannot be adjusted manually.



CAUTION

The camera using the DC-Iris lens must be able to support DC-Iris control, or the camera must have a video/DC signal control port.

3 Protection of the lens

- The lens surface is with special optical coat to improve the transmittance. The lens can be contaminated or damaged and result in lens scratches or haze image when being touched with dust, grease, fingerprints and other similar substances.
- Do not touch the image sensor directly (CCD or CMOS). Dust and dirt could be removed with air scrubbers or soft brushes, or you can wipe the lens gently with soft cloth that moistened with alcohol or lens cleaning solution.