

HCSTVCON HC-HK45A

HCSTVCON HC-HK45A 4K HDMI 20x Optical Zoom PTZ Camera User Manual

Model: HC-HK45A

1. INTRODUCTION

The HCSTVCON HC-HK45A is a high-performance 4K PTZ (Pan-Tilt-Zoom) camera designed for professional video applications. It features 4K resolution, 20x optical zoom, and multiple output interfaces including HDMI, USB 3.0, and LAN, making it suitable for videoconferencing, live streaming, online education, and church services.

2. PRODUCT OVERVIEW

This section details the key features and capabilities of your HCSTVCON HC-HK45A camera.

2.1. Key Features

- **4K HDMI PTZ Camera:** Equipped with a 1/2.8" HD CMOS sensor, delivering up to 8.5 megapixels and a maximum resolution of 3840 x 2160 for clear, realistic HD video. Ideal for various professional settings including religious services, videoconferencing, and online teaching.
- **20x Optical Zoom:** Features a 20x optical zoom lens with a 58.7° wide-angle view, providing fast and precise autofocus. Advanced 2D and 3D noise reduction technology ensures image clarity even in low-light conditions.
- **Multiple Output Interfaces:** Supports simultaneous 4K30 fps video output via HDMI, USB 3.0, and IP (LAN). Effective transmission distance up to 100 meters over Ethernet. Compatible with YUY2, H265, MJPG, and H264 video compression formats. Works with popular platforms like Zoom, vMix, OBS, Skype, and GoToMeeting.
- **Smooth PTZ Movement:** Offers horizontal rotation from -168° to +168° and vertical movement from -30° to 90°. Control options include the included IR remote, RS232, and RS485 serial ports. Supports 10 presets via IR remote and 255 presets via VISCA/Pelco-D/Pelco-P protocols. Network protocols supported: ONVIF, SRT, RTSP, RTMP.
- **Flexible Mounting Options:** Dual mounting brackets allow for suspension, wall mounting, or tripod mounting, providing versatility for installation.



Figure 2.1: Camera interfaces, zoom capabilities, and low-light performance.



Figure 2.2: Detailed view of camera interfaces and connectivity options.

3. PACKAGE CONTENTS

Please verify that all items are present in the package:

- HCSTVCON HC-HK45A PTZ Camera
- Remote Control
- Mounting Bracket
- Power Supply
- User Manual (this document)

4. SETUP

Follow these steps for initial setup of your camera.

4.1. Mounting the Camera

The camera offers versatile mounting options:

- **Suspension:** Use the provided mounting bracket to suspend the camera from a ceiling.
- **Wall Mounting:** Securely attach the camera to a wall using the mounting bracket.
- **Tripod Mounting:** The camera can be placed on a tripod for portable setups.

Ensure the mounting surface is stable and capable of supporting the camera's weight. Use appropriate screws and anchors for secure installation.

4.2. Connecting Power

1. Connect the power supply to the DC 12V input port on the camera.
2. Plug the power adapter into a suitable electrical outlet.

4.3. Connecting Video Outputs

The camera supports simultaneous video output through multiple interfaces:

- **HDMI:** Connect an HDMI cable from the camera's HDMI port to a display, capture card, or video switcher.
- **USB 3.0:** Connect a USB 3.0 cable from the camera's USB 3.0 port to a computer for direct video capture.
- **LAN (IP Streaming):** Connect an Ethernet cable from the camera's LAN port to a network switch or router for IP streaming. Configure network settings as required (refer to the Operating Instructions for network setup).

4.4. Connecting Control (Optional)

For advanced control, connect a serial joystick or control system:

- **RS232/RS485:** Connect a serial cable to the RS232 or RS485 port for external PTZ control using compatible controllers.

5. OPERATING INSTRUCTIONS

This section provides guidance on operating your HCSTVCON HC-HK45A camera.

5.1. Powering On/Off

- **Power On:** Ensure the power supply is connected and plugged in. The camera will automatically power on.
- **Power Off:** Disconnect the power supply from the camera or the electrical outlet.

5.2. Using the IR Remote Control

The included IR remote control allows for basic PTZ functions and preset recall.

- **Pan/Tilt:** Use the directional arrows to move the camera horizontally (pan) and vertically (tilt).
- **Zoom:** Use the zoom in/out buttons to adjust the optical zoom.
- **Focus:** Adjust focus manually if autofocus is not desired.
- **Presets:** The remote supports 10 preset positions. To set a preset, move the camera to the desired position, then press the 'SET' button followed by a number (0-9). To recall a preset, press the corresponding number button.

5.3. Connecting to Software (USB/IP)

For use with video conferencing or streaming software:

- **USB Connection:** After connecting the camera via USB 3.0 to your computer, the camera should appear as a video input device in applications like Zoom, OBS, vMix, or Skype. Select the camera as your video source.
- **IP Streaming:** For network-based streaming, ensure the camera is connected to your network via LAN. Access the camera's web interface (refer to the camera's IP address, usually found via a network scanner or default settings) to configure streaming protocols (RTSP, RTMP, SRT) and integrate with software like OBS or vMix.



Figure 5.1: Camera compatibility with various software platforms.



Figure 5.2: Diverse applications of the PTZ camera.

6. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your camera.

- **Cleaning the Lens:** Use a soft, lint-free cloth specifically designed for optical lenses to gently clean the camera lens. Avoid abrasive materials or harsh chemicals.
- **General Cleaning:** Wipe the camera body with a dry, soft cloth. Do not use liquid cleaners directly on the camera.
- **Environmental Conditions:** Operate and store the camera in a clean, dry environment, away from extreme temperatures, humidity, and direct sunlight.
- **Firmware Updates:** Periodically check the manufacturer's website for any available firmware updates to ensure your camera has the latest features and performance enhancements.

7. TROUBLESHOOTING

If you encounter issues with your camera, refer to the following common problems and solutions.

Problem	Possible Cause	Solution
No video output	Loose cable connection, incorrect input selection on display, camera not powered on.	Check all cable connections (HDMI, USB, LAN). Ensure the display is set to the correct input source. Verify the camera is powered on.
PTZ functions not responding	IR remote battery low, remote not aimed at camera, serial control cable disconnected, incorrect control protocol.	Replace IR remote batteries. Ensure clear line of sight for IR remote. Check serial cable connections. Verify correct control protocol (VISCA/Pelco-D/Pelco-P) is selected.
Poor image quality	Dirty lens, insufficient lighting, incorrect camera settings.	Clean the camera lens. Ensure adequate lighting in the environment. Adjust camera settings (exposure, white balance) via the remote or web interface.
Network connectivity issues	Loose Ethernet cable, incorrect IP settings, firewall blocking.	Check Ethernet cable connection. Verify camera's IP address, subnet mask, and gateway settings. Ensure no firewall rules are blocking camera communication.

8. SPECIFICATIONS

Detailed technical specifications for the HCSTVCON HC-HK45A camera.

Feature	Specification
Brand	HCSTVCON
Model Name	HC-HK45A
Connectivity Technology	Wired
Connectivity Protocol	ONVIF, RTSP
Mounting Type	Optional (Suspension, Wall, Tripod)
Interface/Zoom Configuration	HDMI/USB3.0/LAN - 20X
Form Factor	Dome
Material	Plastic
Alert Type	Motion only
Light Source	Infrared
International Protection Rating	IP66
Photo Sensor Resolution	8.5 MP
Video Capture Resolution	4K
Focus Type	Autofocus
Photo Sensor Technology	CMOS

Feature	Specification
Item Dimensions	22.4 x 17.3 x 17.3 cm
Unit Count	1 Unit
Included Components	Remote control, manual, mounting bracket, power supply
Number of Channels	1
Night Vision Range	20 Meters
Night Vision	Color night
Flash Memory Type	SD (Note: External SD card for recording may be supported, not internal storage.)

9. WARRANTY AND SUPPORT

Your HCSTVCON HC-HK45A camera comes with a comprehensive warranty and dedicated technical support.

- **Warranty:** This product is covered by a 2-year warranty from the date of purchase.
- **Technical Support:** Lifetime technical support is provided for this product.

For any questions, technical assistance, or warranty claims, please contact HCSTVCON customer support through the retailer where you purchased the product or visit the official HCSTVCON website for contact information.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

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Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

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