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› TONGVEO PTZ Camera Model 2010 User Manual: 20X Optical Zoom, HDMI, IP, SDI, USB3.0

TONGVEO 2010

TONGVEO PTZ Camera Model 2010 User Manual

20X Optical Zoom, HDMI, IP, SDI, USB3.0

1. INTRODUCTION

This manual provides comprehensive instructions for the setup, operation, and maintenance of your TONGVEO PTZ Camera Model 2010. This camera is designed for high-quality video capture in various professional settings, including live streaming, video conferencing, education, and worship services. It features versatile connectivity options and advanced functionalities like 20X optical zoom and AI auto-tracking.

2. PACKAGE CONTENTS

Please verify that all items listed below are included in your package:

- 1 x TONGVEO PTZ Camera (Model 2010)
- 1 x IR Remote Control
- 1 x 9.8ft USB 3.0 Cable
- 1 x DC 12V/2A Power Adapter
- 1 x Wall Mount Bracket with Screws
- 1 x User Manual (this document)

Flexible for Any Space

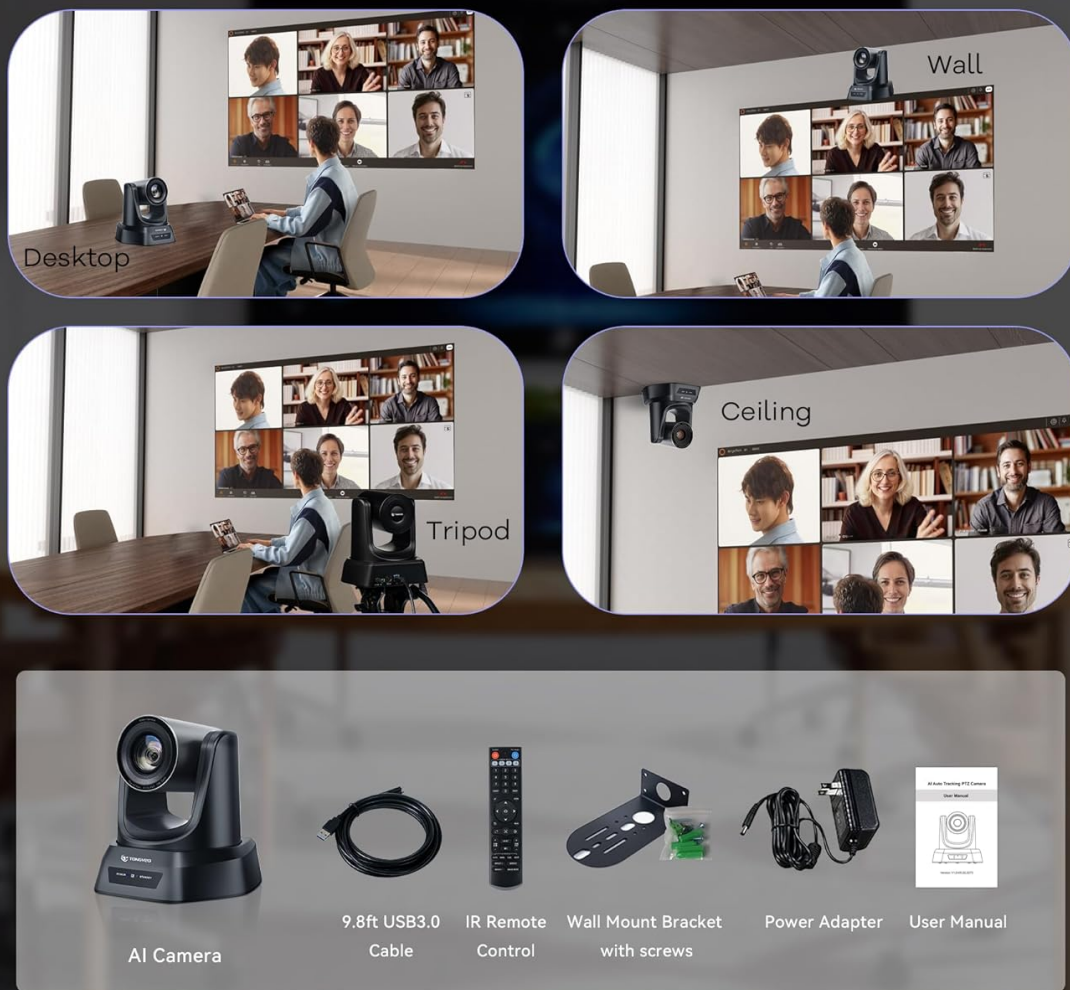


Figure 2.1: Package contents and various installation options for the TONGVEO PTZ Camera.

3. SETUP

3.1 Physical Installation

The TONGVEO PTZ Camera offers flexible installation options to suit your environment:

- **Desktop:** Place the camera on a stable, flat surface.
- **Wall Mount:** Use the provided wall mount bracket and screws to secure the camera to a wall.
- **Tripod:** The camera base includes a standard 1/4-inch screw mount for tripod compatibility.
- **Ceiling Mount:** The camera can also be mounted upside down on a ceiling using the appropriate bracket (may require additional accessories not included). Ensure the image orientation is adjusted in the camera settings if mounted inverted.

3.2 Connecting the Camera

The camera supports multiple output interfaces for diverse applications:

1. **Power Connection:** Connect the DC 12V/2A power adapter to the camera's DC 12V input port and plug it into a power outlet.

2. **USB 3.0 Connection:** Use the supplied 9.8ft USB 3.0 cable to connect the camera's USB port to your computer. This allows the camera to function as a webcam for video conferencing software.
3. **HDMI Connection:** Connect an HDMI cable from the camera's HDMI output port to an HDMI input on a display, switcher, or capture card.
4. **SDI Connection:** For long-distance video transmission (up to 328ft/100m), connect an SDI cable from the camera's SDI output port to an SDI input on a compatible device. A converter may be required.
5. **IP (RJ45) Connection:** Connect an Ethernet cable to the RJ45 port for IP control and streaming. This port supports Power over Ethernet (PoE IEEE802.3a), allowing power and data transmission over a single cable if your network infrastructure supports it.
6. **RS232/RS485:** These ports are available for joystick control and advanced integration with control systems. For controlling multiple PTZ cameras, RS485 is recommended.



Figure 3.1: Rear panel connections of the TONGVEO PTZ Camera, illustrating various input/output options and compatible systems.

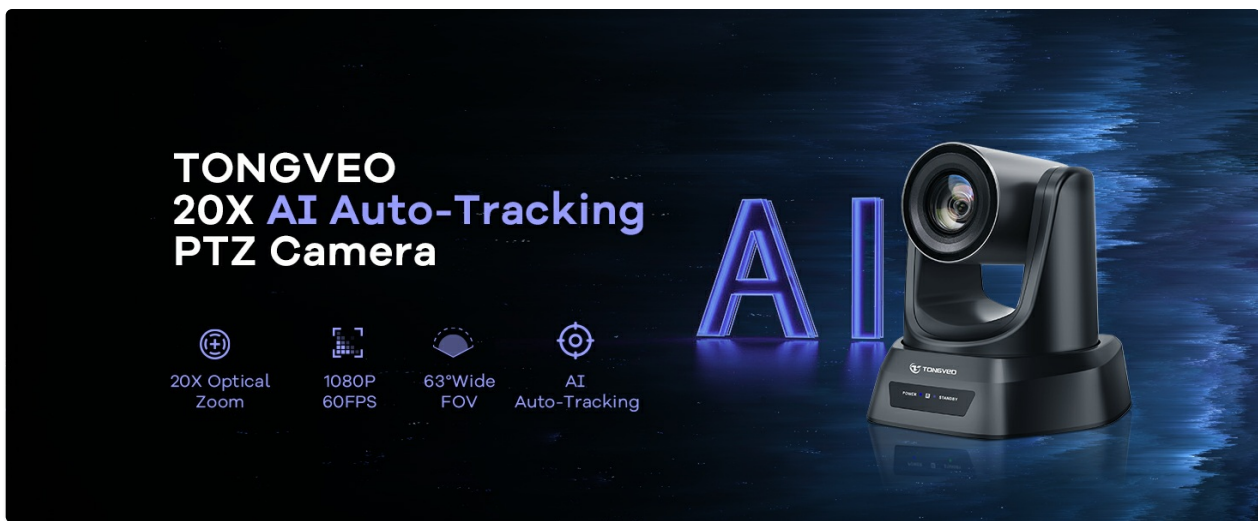


Figure 3.2: Detailed view of the TONGVEO PTZ Camera's rear connectivity panel.

4. OPERATING THE CAMERA

4.1 PTZ Control

The camera features Pan, Tilt, and Zoom (PTZ) capabilities:

- **Pan:** Rotates horizontally up to 350° ($\pm 175^\circ$).
- **Tilt:** Moves vertically from -35° to +55°.
- **Zoom:** 20X optical zoom for detailed close-ups.

Flawless Indoor Conferencing

63° Wide Field of View



Figure 4.1: Illustration of the camera's pan, tilt, and zoom capabilities, highlighting its wide field of view.

4.2 Remote Control Functions

The included IR remote control allows for easy adjustment of camera functions:

- **Power:** Enter/exit standby mode.
- **Camera Select:** Control up to 4 cameras using a single remote.
- **PTZ Control Keys:** Navigate the camera's pan and tilt.
- **Zoom Control:** Adjust optical zoom (slow or fast).
- **Preset Positions:** Store and recall up to 10 preset positions (255 via PELCO, 64 via VISCA).
- **Focus:** Auto or manual focus adjustment (Near/Far).
- **Brightness:** Adjust image brightness.
- **Mirror:** Enable picture left/right flip for inverted mounting.
- **Image Mode:** Select various image modes.
- **AI Tracking:** Turn on/off multi-person tracking mode.
- **L/R Set:** Support for left/right direction adjustment (press for 10 seconds).



Figure 4.2: Layout of the IR remote control with key functions labeled.

4.3 AI Auto-Tracking and Auto-Framing

The camera features intelligent AI capabilities to enhance your video production:

- **AI Auto-Tracking:** The camera can automatically follow a presenter or speaker, ensuring they remain in frame without manual intervention.
- **Auto-Framing:** Automatically adjusts the zoom and pan to keep all participants within the frame during group discussions.



Figure 4.3: The camera's AI auto-tracking feature keeps the subject in view.

5. CONNECTIVITY & COMPATIBILITY

The TONGVEO PTZ Camera is designed for broad compatibility:

- **Operating Systems:** Supports Windows 7, 8.1, 10, 11, and Mac OS 10.10 or higher.
- **Software:** Works with popular video conferencing and live streaming platforms such as Zoom, OBS, Facebook Live, WebEx, Polycom, and BlueJeans.
- **Video Compression:** Supports YUV, MJPEG, H.264, and H.265 formats for fluent and clear video.

6. SPECIFICATIONS

Feature	Detail
Model Number	2010
Photo Sensor Technology	IMX327 CMOS
Video Capture Resolution	1080p @ 60fps
Optical Zoom	20X
Field of View (FOV)	61° (W) - 3.64° (T)
Pan Rotation	±175° (350° total)
Tilt Rotation	-35° ~ +55° (90° total)
Connectivity Technology	RJ45 (IP, PoE), HDMI, SDI, USB 3.0
Control Interfaces	IR Remote, RS232, RS485, IP
Power Input	DC 12V/2A or PoE (IEEE802.3a)
Item Weight	6.25 pounds
Color	Black

7. TROUBLESHOOTING

- **IP Control Limitations:** For optimal IP control, directly enter the camera's IP address in your browser for VISCA serial protocol control. Some camera functions may be limited when controlled through VISCA TCP or VISCA UDP protocols.
- **Bitfocus/Companion Preset Settings:** If using with Bitfocus/Companion, the preset settings function may be limited. Firmware upgrades are continuously released to address such issues.
- **Joystick Control:** If controlling two or more PTZ cameras, use RS485 for better performance.
- **No Built-in Mic:** Please note that this camera does not have a built-in microphone. External audio solutions are required.
- **Image Orientation:** If the camera is ceiling-mounted, ensure the image orientation is flipped in the camera settings using the remote control or IP interface.

If you encounter any network control issues or other problems, please contact TONGVEO customer support for assistance.

8. MAINTENANCE

To ensure the longevity and optimal performance of your TONGVEO PTZ Camera, follow these general maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the camera body. For the lens, use a specialized lens cleaning cloth and solution to avoid scratches.
- **Storage:** When not in use for extended periods, store the camera in a cool, dry place away from direct sunlight and extreme temperatures.
- **Firmware Updates:** Regularly check the TONGVEO official website for firmware updates to ensure your camera has the latest features and bug fixes.
- **Avoid Obstructions:** Ensure the camera's movement path (pan and tilt) is free from obstructions to prevent damage to the motor or camera body.

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official TONGVEO website or contact their customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.

Thank you for choosing TONGVEO.