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› TONGVEO NDI AI Auto-Tracking IP PTZ Camera User Manual

TONGVEO TV-NVMAX-30A-NDI

TONGVEO NDI AI Auto-Tracking IP PTZ Camera User Manual

Model: TV-NVMAX-30A-NDI

Brand: TONGVEO

1. PRODUCT OVERVIEW

The TONGVEO NDI AI Auto-Tracking IP PTZ Camera is a professional-grade camera designed for high-quality video capture and streaming. It features NDI technology for simplified setup, AI auto-tracking for dynamic environments, and multiple output interfaces for versatile connectivity.

Key Features:

- **NDI Technology:** Sends high-quality video and audio over a single Ethernet cable, simplifying setup and reducing cable clutter. Offers smooth 1080p resolution with low latency, ideal for live events and streaming.
- **AI Auto-Tracking:** Automatically follows and focuses on a subject without manual intervention, useful in dynamic environments like live streaming, conferences, church services, and educational settings.
- **Versatile Outputs:** HDMI, SDI, LAN, and USB3.0 outputs can operate simultaneously. LAN supports PoE power and IP control. SDI supports remote video transmission up to 328ft/100m (requires converter).
- **High-Resolution Imaging:** Equipped with a 1/2.8" sensor with 2.07MP, Full HD 1080p output resolution at 60fps.
- **Powerful Zoom:** Superior 30x optical + 16x digital zoom lens with a wide angle FOV of 72.5°(W)-3.63°(T) without distortion.
- **Smooth PTZ Movement:** Rotates 350° horizontally and 180° vertically with quiet operation. Supports 10 presets via IR remote, 255 via PELCO, and 64 via VISCA.
- **Broad Compatibility:** Works with popular video conferencing and live streaming software such as Zoom, Skype, OBS, Facebook Live, WebEx, polycom, Microsoft Lync, and BlueJeans. Supports Windows 7/8.1/10/11 and Mac OS 10.10+.



Figure 1: TONGVEO NDI AI Auto-Tracking IP PTZ Camera with included remote control and detailed view of rear connectivity ports.

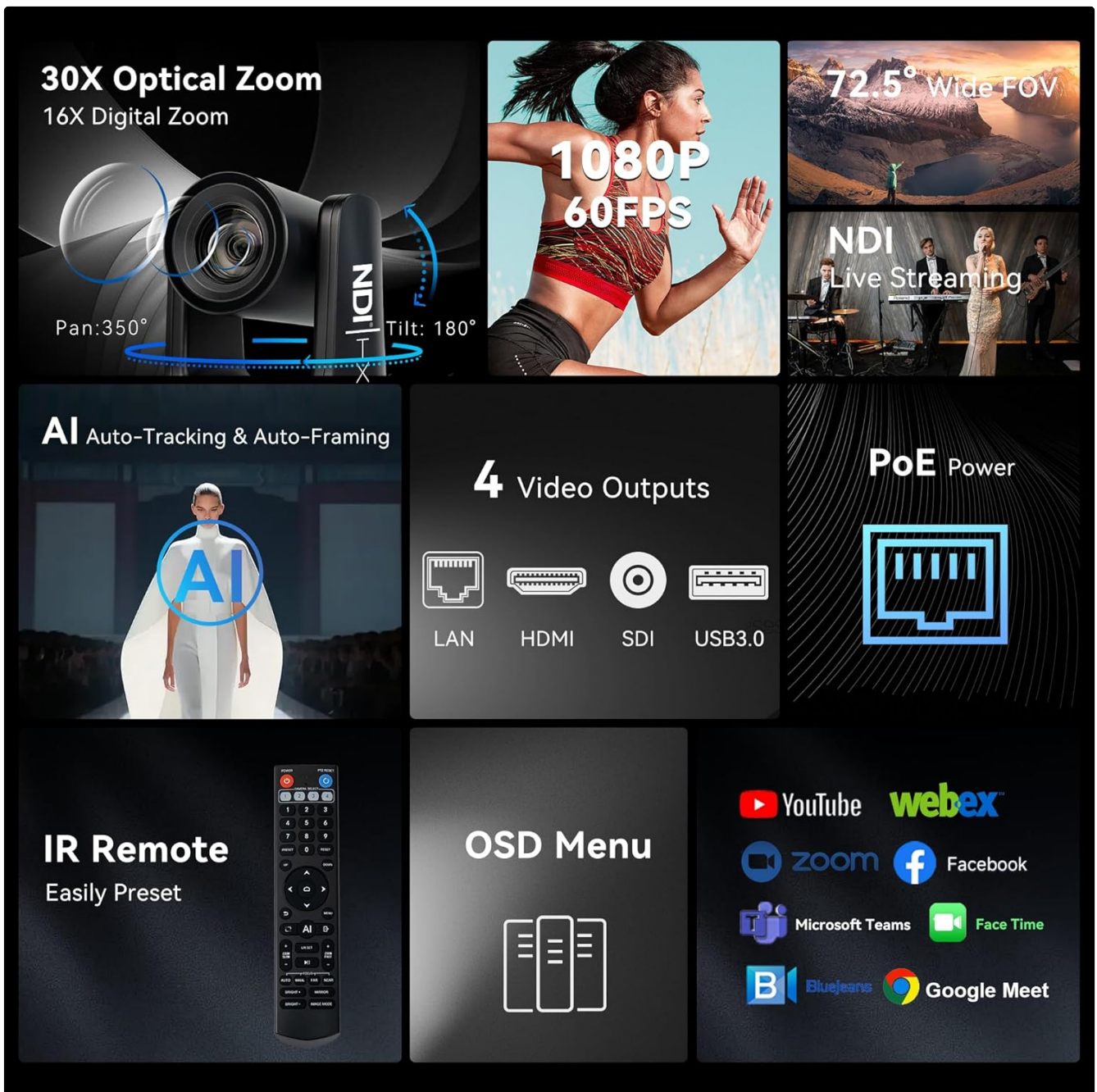


Figure 2: Infographic highlighting key features including 30X Optical Zoom, 1080P 60FPS video, AI Auto-Tracking, multiple video outputs, PoE power, IR remote control, OSD menu, and compatibility with various streaming platforms.

Package Contents:

- 1 * PTZ Camera
- 1 * IR remote control
- 1 * 9.8ft USB 3.0 cable
- 1 * DC 12V/2A power adaptor
- 1 * wall bracket with screws
- 1 * manual



Figure 3: Visual representation of the package contents and various installation options for the camera, including tripod, wall, and ceiling mounts.

2. SETUP GUIDE

2.1 Physical Installation

The TONGVEO PTZ camera offers multiple installation options to suit your environment:

- **Desk Mount:** Place the camera on a stable, flat surface.
- **Wall Mount:** Use the included wall bracket and screws to secure the camera to a wall. Ensure the wall can support the camera's weight.
- **Tripod Mount:** Attach the camera to a standard tripod using the threaded mount on its base.
- **Ceiling Mount:** Utilize a compatible ceiling mount (not included, unless specified) to suspend the camera from the ceiling.

2.2 Connecting the Camera

The camera provides various connectivity options for video, audio, and control:

- **Power:** Connect the DC 12V/2A power adaptor to the camera's power input. Alternatively, if using a PoE-enabled network switch, connect an Ethernet cable to the LAN port for Power over Ethernet (PoE).
- **LAN (Ethernet):** Connect an Ethernet cable from the camera's LAN port to a network switch or router for IP control, NDI streaming, and PoE (if supported).
- **HDMI:** Connect an HDMI cable from the camera's HDMI output to a TV, monitor, or video capture device.
- **SDI:** Connect an SDI cable from the camera's SDI output to an SDI-compatible device. Note that long-distance transmission via SDI may require a converter.
- **USB 3.0:** Connect the included USB 3.0 cable from the camera's USB 3.0 port to a computer for video output.
- **Audio Input/Output:** Use the LINE IN and LINE OUT ports to connect external microphone and speaker devices. Note: The camera does not have a built-in microphone.
- **RS232/RS485:** These interfaces support joystick control for advanced PTZ operations. For controlling multiple PTZ cameras, RS485 is recommended.



Figure 4: Detailed diagram of the camera's multi-interface connections and their typical uses.

3. OPERATING INSTRUCTIONS

3.1 Powering On/Off

To power on the camera, connect the power adapter or PoE Ethernet cable. The camera will initiate its startup sequence. To power off, disconnect the power source.

3.2 Remote Control Functions

The included IR remote control allows for comprehensive camera operation:

- **Camera Select:** One remote can control up to 4 PTZ cameras. Use buttons 1-4 to select the camera you wish to control.
- **Position Presets:** Store and recall up to 10 preset positions for quick camera movements.
- **Up/Down:** Adjust the image orientation (can be set upside down or normal).
- **Pan/Tilt:** Control the camera's horizontal (350° Pan) and vertical (180° Tilt) movement with adjustable speed settings.
- **AI Auto-Tracking:** Turn ON/OFF AI Auto-Tracking/Auto-Framing for single or multiple persons.
- **Zoom/Focus:** Adjust zoom up to 30X (optical) and 16X (digital). Control focus with Auto/Manual Focus settings.
- **Bright/Mirror:** Set brightness level and image flip.
- **Menu:** Press to access the OSD menu for image parameters or camera address settings.
- **PTZ Set/Backlight:** Long press to switch L/R controls. Turn on/off backlight compensation.

IP/HDMI/SDI/USB AI PTZ Camera with IR Remote Control



Figure 5: Functions of the IR remote control for the PTZ camera.

3.3 AI Auto-Tracking and Auto-Framing

The AI tracking feature allows the camera to automatically follow and frame a subject. This is particularly useful for presentations, lectures, or live events where the subject moves. You can access the Web UI for more advanced person/zone tracking settings.

AI Tracking Auto Framing

Auto tracking to keep you centered in the frame

Access the Web UI to Experience More Advanced Person/Zone Tracking Settings



Figure 6: AI Auto-Tracking and Auto-Framing in action, demonstrating how the camera maintains optimal framing of the subject.

3.4 Video Streaming and Recording

The camera outputs 1080p at 60fps, making it ideal for fast-moving subjects and actions. It integrates seamlessly with various streaming and conferencing software.

Video 1: Official TONGVEO video demonstrating the 30x Zoom AI PTZ camera's capabilities for live events, including AI tracking, pan/tilt movement, and 1080p 60fps capture for various applications like indoor sports, church services, conference calls, and extreme sports. This video highlights the camera's remote control features and zoom capabilities.

30X NDI Streaming PTZ Camera

High-Quality Streaming, Real-Time Delivery.

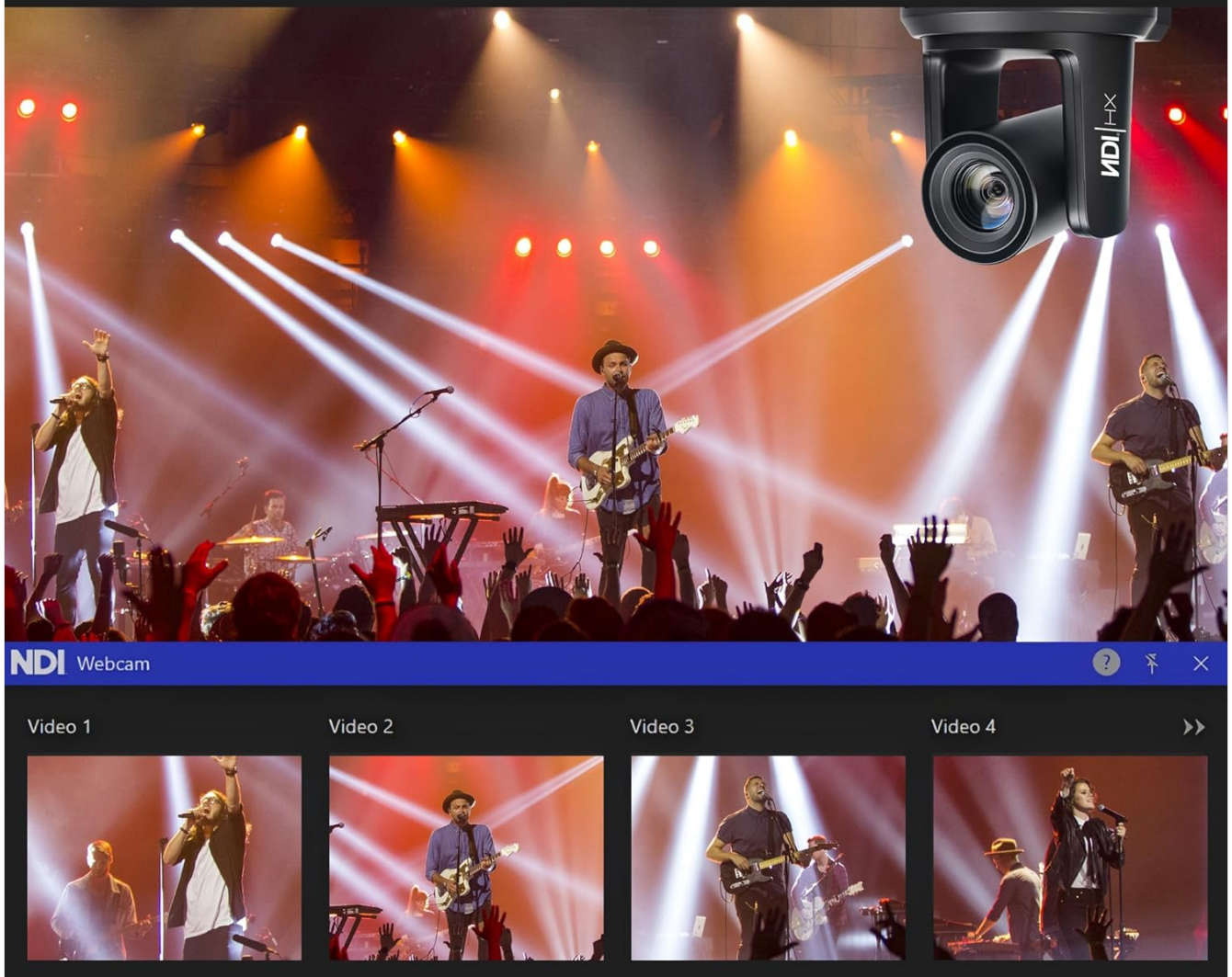


Figure 7: The camera in a live streaming scenario, showcasing its ability to deliver high-quality, real-time video.

3.5 Applications

The TONGVEO PTZ camera is suitable for a wide range of applications:

- Church Services / House of Worship
- Live Streaming Events
- Educational Settings (College Lectures, Teaching Broadcast)
- Video Conferences / Business Meetings
- Esports
- Sports Events
- Talk Shows



Figure 8: Diverse applications of the TONGVEO PTZ camera.

4. MAINTENANCE

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

- **Cleaning:** Use a soft, dry cloth to clean the camera body. For the lens, use a lens cleaning cloth and specialized lens cleaning solution. Avoid abrasive cleaners or solvents.
- **Storage:** When not in use for extended periods, store the camera in a cool, dry place away from direct sunlight and extreme temperatures.
- **Handling:** Handle the camera with care. Avoid dropping or subjecting it to strong vibrations.
- **Ventilation:** Ensure proper ventilation around the camera to prevent overheating. Do not block ventilation openings.
- **Firmware Updates:** Periodically check the TONGVEO official website for any available firmware updates to

ensure the camera has the latest features and bug fixes.

5. TROUBLESHOOTING

If you encounter issues with your TONGVEO PTZ camera, refer to the following common troubleshooting steps:

5.1 No Power

- Ensure the power adapter is securely connected to both the camera and a working power outlet.
- If using PoE, verify that your network switch is PoE-enabled and providing power, and that the Ethernet cable is properly connected.
- Check the power indicator light on the camera.

5.2 No Video Output

- Verify that the correct input source is selected on your display or capture device.
- Check all video cables (HDMI, SDI, USB) for secure connections and ensure they are not damaged.
- Try a different cable or port if available.
- Ensure the camera's resolution and frame rate settings are compatible with your receiving device.

5.3 AI Auto-Tracking Not Working

- Ensure the AI Auto-Tracking feature is enabled via the remote control or Web UI.
- Check for sufficient lighting in the environment.
- Ensure the subject is within the camera's field of view and not obscured.
- Avoid rapid or erratic movements that might confuse the tracking system.

5.4 Remote Control Issues

- Replace the batteries in the IR remote control.
- Ensure there are no obstructions between the remote and the camera's IR receiver.
- Confirm the correct camera ID is selected on the remote if controlling multiple cameras.

For persistent issues, please refer to the full user manual PDF or contact TONGVEO customer support.

6. SPECIFICATIONS

Feature	Specification
Brand	TONGVEO
Model Number	TV-NVMAX-30A-NDI
Photo Sensor Technology	CMOS
Video Capture Resolution	1080p
Optical Zoom	30x
Digital Zoom	16x
Maximum Focal Length	132.6 Millimeters
Connectivity Technology	HDMI, SDI, LAN, USB3.0
Special Feature	AI Auto-Tracking, Indoor Streaming, PoE Support, NDI Camera
Item Weight	6.17 pounds
Package Dimensions	11.27 x 8.71 x 7.92 inches
Date First Available	December 25, 2024

7. WARRANTY AND SUPPORT

This TONGVEO product is manufactured with high standards of quality and performance. For detailed warranty information, please refer to the warranty card included in your package or visit the official TONGVEO website. For technical support, product inquiries, or service requests, please contact TONGVEO customer support through their official channels. You can also refer to the comprehensive User Manual (PDF) for more in-depth information.