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## FoMaKo K600N

# FoMaKo K600N 4K 60fps NDI PTZ Camera User Manual

Model: K600N

## 1. INTRODUCTION

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This manual provides detailed instructions for the setup, operation, and maintenance of the FoMaKo K600N 4K 60fps NDI PTZ Camera. The K600N is a high-performance camera designed for professional video production, offering advanced features such as 4K 60fps video output, 20x optical zoom, and Gen 3 AI auto-tracking. It supports NDI HX3, HDMI, 3G-SDI, USB, and Power over Ethernet (PoE) connectivity.

## 2. WHAT'S IN THE BOX

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Verify that all items are present in the package:

- FoMaKo AI Tracking 4K 60FPS NDI PTZ Camera (20x optical zoom)
- IR Remote Controller
- Wall Mount Bracket
- USB Cable
- Power Adapter (12V 2A)
- User Manual (this document)

## 3. PRODUCT FEATURES

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The FoMaKo K600N camera incorporates several advanced features for professional use:

- **4K 60fps NDI HX3 Output:** Supports uncompressed Ultra High Definition video output at 60 frames per second via NDI HX3, HDMI, and LAN. USB output supports 4K30, and 3G-SDI supports 1080P60.
- **20x Optical Zoom:** Equipped with a high-quality lens (f=5.1–94.5mm) for detailed close-up shots from a distance.
- **Gen 3 AI Auto-Tracking:** Advanced human-shape and facial recognition algorithms enable automatic tracking of subjects. Customizable tracking modes, sensitivity, figure size, character position, and lost target actions are available.
- **Multiple Video Outputs:** Simultaneous output via HDMI 2.0, USB 3.0, LAN (NDI), and 3G-SDI.

- **Power over Ethernet (PoE):** Power, video, and control data can be transmitted through a single Ethernet cable, simplifying installation.
- **Auto-Focus (AF) Technology:** Provides fast, accurate, and stable auto-focusing. Supports Auto, Manual, and One Push Focus modes.
- **Adjustable Pan/Tilt/Zoom Speed:** Pan, Tilt, and Zoom speeds are adjustable, as are preset speeds.
- **Multiple Presets:** Supports up to 255 presets, with 10 accessible via the IR remote control.
- **Control Interfaces:** RS232/RS485 control, TCP/IP, RTSP, RTMP, VISCA OVER IP, VISCA, SRT, and NDI Network Protocols are supported.

**FoMaKo**

# 4K PTZ Camera

## Product Features

**NDI PTZ Camera**

**NDIHX3**  
CERTIFIED



**4K P60**  
3840x2160



**AI**  
Auto-Tracking



**Video Output**

**USB 3.0, HDMI, 3G-SDI, LAN/POE, NDIHX3**

Image: Overview of the FoMaKo K600N PTZ Camera's key features, including 4K60 resolution, 20x optical zoom, AI auto-tracking, and various video output ports.

## 4. SETUP

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### 4.1 Physical Installation

The K600N camera supports three primary installation methods:

- **Wall Mount:** Securely attach the camera to a wall using the provided wall mount bracket.
- **Tripod Mount:** Mount the camera onto a standard tripod for portable or temporary setups.
- **Ceiling Mount:** Install the camera inverted on a ceiling using an appropriate ceiling mount (may require additional accessories not included). Ensure proper orientation settings are configured in the camera's web interface if mounted inverted.



● Wall mount

● Tripod mount

● Ceiling mount

Image: Visual representation of the three supported installation methods: wall mount, tripod mount, and ceiling mount for the FoMaKo K600N camera.

## 4.2 Power Connection

Connect power to the camera using one of the following methods:

- **Power Adapter:** Connect the included 12V 2A power adapter to the DC 12V input port on the camera and plug it into a power outlet.
- **Power over Ethernet (PoE):** If using a PoE-enabled network switch or injector, connect an Ethernet cable from the switch/injector to the LAN port on the camera. This will provide both power and network connectivity.

### 4.3 Video Output Connections

Connect the camera to your video production equipment using the appropriate output ports:

- **HDMI:** Connect an HDMI cable from the camera's HDMI 2.0 port to a display, switcher, or capture device.
- **USB 3.0:** Connect a USB cable from the camera's USB 3.0 port to a computer for direct video capture or streaming.
- **LAN (NDI):** Connect an Ethernet cable to the LAN port for NDI video output and IP control. The camera's IP address will be displayed on its front panel for easy access to the web UI.
- **3G-SDI:** Connect an SDI cable from the camera's 3G-SDI port to professional video equipment.

### 4.4 Audio Input

The camera features a 3.5mm line-in audio jack for external audio input. Connect your audio source to this port.



**USB 3.0**  
**4K@60fps**

**HDMI**  
**4K@60fps**

**SDI**  
**1080P@60fps**

**NDI|HX3/LAN/PoE**  
**4K@60fps**

Image: Detailed view of the FoMaKo K600N PTZ Camera's rear panel, highlighting the USB, HDMI, 3G-SDI, LAN/PoE, and control ports.

**5. OPERATING INSTRUCTIONS**

**5.1 Basic Control**

The camera can be controlled via the included IR remote, a PTZ controller, or its web interface.

- **Pan/Tilt/Zoom:** Use the directional and zoom buttons on the remote control or PTZ controller to adjust the

camera's view.

- **Speed Adjustment:** Pan/Tilt/Zoom speeds are adjustable to achieve smooth movements.

## 5.2 AI Auto-Tracking

The K600N features a Gen 3 AI auto-tracking system:

- **Activate Tracking:** Press the **F2** button on the IR remote control to enable automatic tracking.
- **Switch Tracking Target:** Press the **F4** button on the IR remote control to switch between detected tracking targets.
- **Tracking Modes:** Adjust tracking modes, sensitivity, figure size, character position, and lost target actions via the camera's web interface. Available modes include:
  - *Close body*
  - *Half body*
  - *Full body*
  - *Custom*
- **Real-time vs. Regional Tracking:** Choose between real-time tracking (follows immediately) and regional tracking (follows when subject leaves a defined zone) based on your environment and preference.



### Tracking can adjust distance:

- Close body
- Half body
- Full body
- Custom

Image: A demonstration of the AI auto-tracking feature, showing a green box around a subject and options for adjusting tracking distance (Close body, Half body, Full body, Custom).

### 5.3 Focus Control

The camera offers flexible focus options:

- **Auto Focus (AF):** The camera automatically adjusts focus for clarity.
- **Manual Focus:** Allows for precise manual adjustment of the focus.
- **One Push Focus:** Initiates a single auto-focus cycle and then holds the focus.

## 5.4 Presets

Configure and recall camera positions:

- The camera supports up to 255 preset positions.
- Up to 10 presets can be stored and recalled directly using the IR remote control.

## 6. CONNECTIVITY AND OUTPUT

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The K600N provides versatile connectivity options for integration into various production workflows:

- **HDMI 2.0:** Supports 4K60, 1080P60, 1080P50, 1080P30, and other resolutions.
- **USB 3.0:** Supports 4K60, 1080P60, 1080P30, and other resolutions.
- **LAN (NDI HX3):** Supports 4K60, 1080P60, and other resolutions. NDI HX3 provides low-latency video transmission over IP networks.
- **3G-SDI:** Supports 1080P60 resolution.
- **Network Protocols:** Compatible with TCP/IP, RTSP, RTMP, VISCA OVER IP, VISCA, SRT, and NDI.
- **Software Compatibility:** Works with vMix, OBS, and other live video streaming software.

# FoMaKo

# 4K Auto-Tracking NDI PTZ camera



**4K@60fps(3840x2160)**

ULTRA HIGH DEFINITION PICTURE QUALITY

**NDI HX3**  
CERTIFIED

Image: The FoMaKo K600N PTZ Camera displaying a 4K@60fps output, indicating compatibility with various streaming platforms and software like YouTube, vMix, Facebook Live, Twitch, OBS Studio, and Zoom.

## 7. APPLICATION SCENARIOS

The FoMaKo K600N PTZ Camera is designed for professional AV live streaming, production, and broadcasting in various environments:

- Church worship live services
- Live studio environments

- University lectures and educational streaming
- Factory live monitoring
- Sports club / eSports / dance club events
- Training classrooms
- Large conference and summit events
- Theater / concert live streaming



Image: A collage illustrating various application scenarios for the FoMaKo K600N PTZ Camera, including education, church, video conferencing, live broadcast, large conferences, and live concerts.

## 8. MAINTENANCE

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To ensure optimal performance and longevity of your FoMaKo K600N camera, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the camera body. For the lens, use a specialized lens cleaning cloth and solution. Avoid abrasive cleaners or solvents.
- **Environment:** Operate and store the camera in a clean, dry environment, away from extreme temperatures, humidity, and direct sunlight.
- **Handling:** Handle the camera with care to prevent physical damage. Avoid sudden impacts or excessive force on the pan/tilt mechanism.
- **Firmware Updates:** Periodically check the FoMaKo official website for firmware updates to ensure the camera has the latest features and performance enhancements.

## 9. TROUBLESHOOTING

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If you encounter issues with your FoMaKo K600N camera, refer to the following common troubleshooting steps:

- **No Power:** Ensure the power adapter is securely connected and plugged into a working outlet, or that the PoE connection is active and functional.
- **No Video Output:** Verify all video cables (HDMI, USB, SDI, Ethernet for NDI) are correctly connected to both the camera and the receiving device. Check input selections on your display or switcher.
- **Network Connectivity Issues:** Confirm the Ethernet cable is properly connected. Check network settings on your computer and ensure the camera's IP address is accessible on your network. The camera's front panel displays its current IP address.
- **Auto-Tracking Not Working:** Ensure auto-tracking is enabled (F2 on remote). Check tracking mode settings in the web interface. Ensure the subject is within the effective tracking distance (up to 18 meters).
- **Image Quality Issues:** Ensure proper lighting in the environment. Check lens for smudges or dust. Verify resolution and frame rate settings are appropriate for your setup.
- **Remote Control Not Responding:** Check battery in the remote. Ensure there are no obstructions between the remote and the camera's IR receiver.

For further assistance, please contact customer support.

## 10. SPECIFICATIONS

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Feature	Specification
Brand	FoMaKo
Model Number	K600N
Photo Sensor Technology	CMOS
Video Capture Resolution	1080p, 4K
Optical Zoom	20x
Maximum Focal Length	94.5 Millimeters
Minimum Focal Length	5.1 Millimeters

Feature	Specification
Maximum Aperture	92 Millimeters
Connectivity Technology	4K NDI, LAN, HDMI, 3G-SDI, USB3.0
Special Features	AI tracking 4K NDI PTZ Camera
Color	Black
Item Weight	1.2 Kilograms
Screen Size (on camera)	2 Inches
Image Stabilization	No
UPC	735530571972
ASIN	B0GC66B5RK

## 11. WARRANTY AND SUPPORT

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FoMaKo provides comprehensive support for the K600N camera:

- **Limited Warranty:** A 3-year limited warranty covers manufacturing defects.
- **Money-Back Guarantee:** A 30-day no-questions-asked money-back guarantee is offered.
- **Online Training:** Free online training resources are available to assist with setup and operation.
- **Expert Assistance:** 24/7 expert assistance is available, with responses typically provided within 24 hours. Please include your Order ID when contacting support.
- **Technical Support:** Lifetime customer technical support is provided. Remote assistance for setup can be arranged if necessary.