SMTAV BX20X-WH

SMTAV PTZ Camera BX20X-WH User Manual

Model: BX20X-WH

1. INTRODUCTION

This manual provides comprehensive instructions for the setup, operation, and maintenance of your SMTAV PTZ Camera, model BX20X-WH. Please read this manual thoroughly before using the product to ensure proper functionality and to prevent damage.

1.1 Product Overview

The SMTAV PTZ Camera BX20X-WH is a versatile camera designed for various applications including meetings, church services, live events, and educational settings. It features 20X optical zoom and multiple output interfaces including HDMI, 3G-SDI, LAN, and USB3.0, supporting Full NDI for high-quality, low-latency video transmission. The camera also incorporates AI tracking capabilities for intelligent subject following.

1.2 What's in the Box

- SMTAV PTZ Camera (BX20X-WH)
- Remote Control
- Mounting Bracket
- Power Adapter
- USB Cable
- Network Cable

Figure 1.1: SMTAV PTZ Camera BX20X-WH with included remote control and mounting bracket.

2. SETUP

2.1 Physical Installation

The camera can be installed on a flat surface, tripod, or mounted using the provided bracket. Ensure the camera is placed in a stable location with adequate ventilation.

2.2 Connecting the Camera

The BX20X-WH camera offers multiple connectivity options:

- **Power:** Connect the DC 12V power adapter to the camera's power port.
- **Video Output:**

  - **HDMI:** Connect an HDMI cable to an HDMI display or capture device.
  - **3G-SDI:** Connect an SDI cable to an SDI compatible device.
  - **USB3.0:** Connect a USB3.0 cable to a computer for video capture.

- **LAN (Ethernet):** Connect an Ethernet cable for IP streaming (NDI, RTMP) and control. Supports Power over Ethernet (PoE) if connected to a PoE switch.

- **Audio:**

    - **3.5mm Audio Input:** Connect an external microphone or audio source.
    - **3.5mm Audio Output:** Connect to an audio monitoring device.

- **Control Ports:**

    - **RS232 (IN/OUT):** For serial control via RS232.
    - **RS485:** For serial control via RS485.

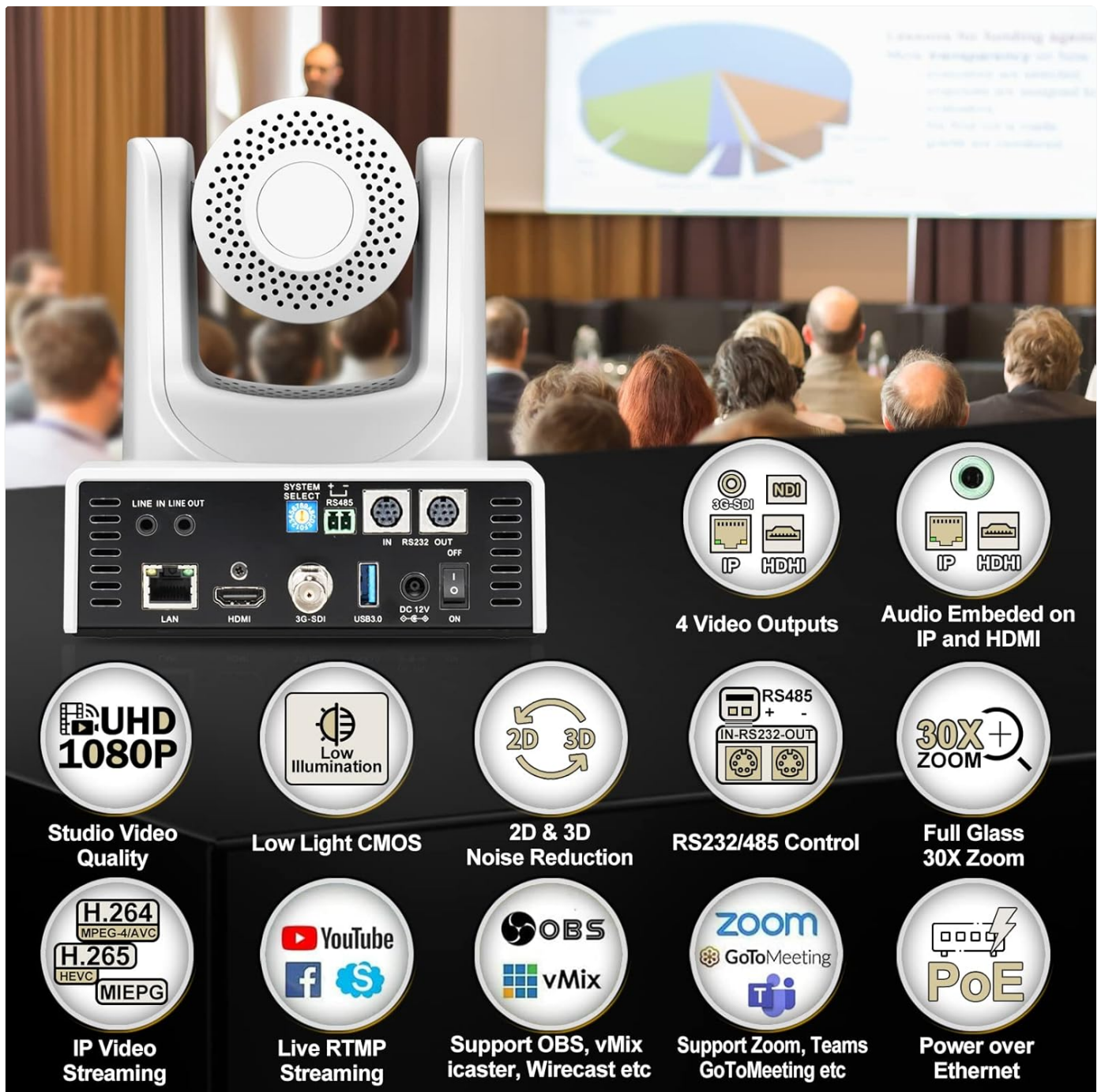Figure 2.1: Detailed view of the camera's rear panel with labeled ports.

Figure 2.2: Overview of camera features and connectivity options.

3. OPERATING INSTRUCTIONS

3.1 Powering On/Off

To power on the camera, connect the power adapter. The camera will initiate a self-test. To power off, disconnect the power adapter or use the power switch on the rear panel.

3.2 Control Methods

The SMTAV PTZ Camera can be controlled via several methods:

- **IR Remote Control:** Use the included remote for basic pan, tilt, zoom, and preset recall functions.
- **Serial Joystick:** Connect a serial joystick controller via RS-232 or RS-485 for precise control.
- **Network Joystick:** Control the camera over the network using a compatible IP joystick.
- **Web Browser:** Access the camera's web interface via its IP address for configuration and control.

- **APP & Software:** Utilize dedicated software applications for Mac or Windows for advanced control and management.

Figure 3.1: Available control methods for the PTZ camera.

3.3 Pan, Tilt, and Zoom (PTZ) Operations

Use the directional controls on your chosen control device (remote, joystick, software) to pan (horizontal movement), tilt (vertical movement), and zoom (optical and digital magnification) the camera. The camera features 20X optical zoom for clear images even at a distance.

3.4 AI Tracking Feature

The camera is equipped with an AI tracking function that can automatically follow a designated subject. This feature identifies targets based on clothes, body shape, hair style, and face identification, ensuring the subject remains in frame during movement. Refer to the camera's web interface or software for specific AI tracking setup and activation.

Figure 3.2: AI tracking in action, locking onto a speaker.

3.5 Network Configuration (LAN/NDI)

For IP streaming and control, connect the camera to your network via the LAN port. The camera supports NDI for high-resolution, low-latency video over IP. Default IP settings can be found in the camera's documentation or accessed via a connected computer. Ensure your network setup allows for proper communication with the camera.

Figure 3.3: Example network setup for SMTAV PTZ cameras.

4. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your SMTAV PTZ Camera.

4.1 Cleaning

- Use a soft, dry cloth to clean the camera body.
- For the lens, use a specialized lens cleaning cloth and solution. Avoid abrasive materials.
- Do not use strong detergents or solvents as they may damage the surface.

4.2 Storage

When not in use for extended periods, store the camera in a cool, dry place, away from direct sunlight and excessive dust.

4.3 Firmware Updates

Periodically check the SMTAV official website for firmware updates. Keeping the firmware updated can improve performance, add new features, and resolve potential issues.

5. TROUBLESHOOTING

This section addresses common issues you might encounter with your SMTAV PTZ Camera.

Problem	Possible Cause	Solution
No power indicator	Power adapter not connected or faulty.	Ensure power adapter is securely connected and functional. Check power outlet.
No video output	Incorrect cable connection; wrong input selected on display; camera not powered on.	Verify all video cables (HDMI, SDI, USB, LAN) are correctly connected. Select the correct input source on your display/capture device. Ensure camera is powered on.
Camera not responding to control	Remote control battery low; incorrect control method selected; network issue for IP control.	Replace remote batteries. Ensure line of sight for IR remote. Check network cable and IP settings for network control. Verify correct serial connections for RS232/RS485.
Poor image quality	Lens dirty; lighting conditions; incorrect camera settings.	Clean the lens. Adjust lighting in the environment. Check camera settings (exposure, white balance, focus).
AI tracking not working	Subject not clearly visible; tracking feature not enabled; environmental factors.	Ensure the subject is well-lit and distinct from the background. Activate AI tracking in camera settings. Avoid rapid, erratic movements of the subject.

If you encounter issues not listed here or if the suggested solutions do not resolve the problem, please contact SMTAV customer support.

6. SPECIFICATIONS

Feature	Detail
Model Number	BX20X-WH

Feature	Detail
Brand	SMTAV
Optical Zoom	20X
Video Output Interfaces	HDMI, 3G-SDI, LAN (Ethernet), USB3.0
Supported Resolutions	Up to 1080p60
Photo Sensor Technology	CMOS
Maximum Focal Length	88.5 Millimeters
Maximum Aperture	1.8 Millimeters
Control Interfaces	IR Remote, RS232, RS485, LAN (IP Control)
Special Features	Full NDI Support, AI Tracking, PoE (Power over Ethernet)
Product Dimensions	6.61 x 6.65 x 5.75 inches
Item Weight	3.31 pounds

7. WARRANTY AND SUPPORT

7.1 Warranty Information

All SMTAV products, including the BX20X-WH PTZ Camera, are backed by a **3-year warranty**. This warranty covers manufacturing defects and ensures peace of mind regarding your investment.

7.2 Customer Support

For technical assistance, troubleshooting, or warranty claims, please contact SMTAV customer support. Lifetime service is provided for all SMTAV products.
You can find contact information on the official SMTAV website or through your purchase platform.

8. APPLICATIONS

The SMTAV PTZ Camera BX20X-WH is ideal for a variety of professional and educational environments:

- **Churches and Houses of Worship:** For live streaming services and capturing sermons.
- **Conferences and Meetings:** For recording presentations and facilitating remote participation.
- **Educational Institutions:** For lecture capture, distance learning, and classroom monitoring.
- **Live Events:** For capturing performances, concerts, and other public gatherings.
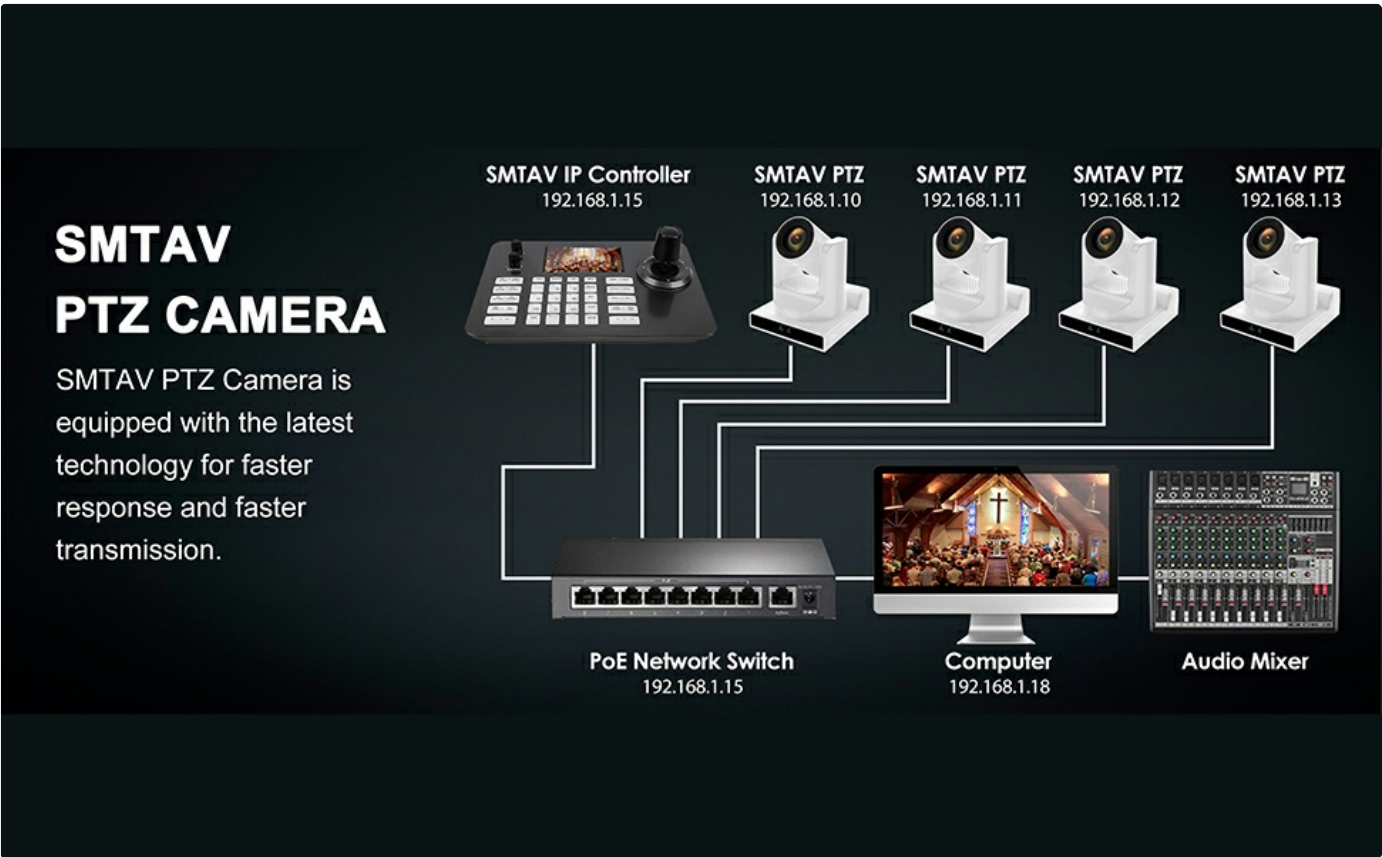
Figure 8.1: Camera deployed in a church environment.

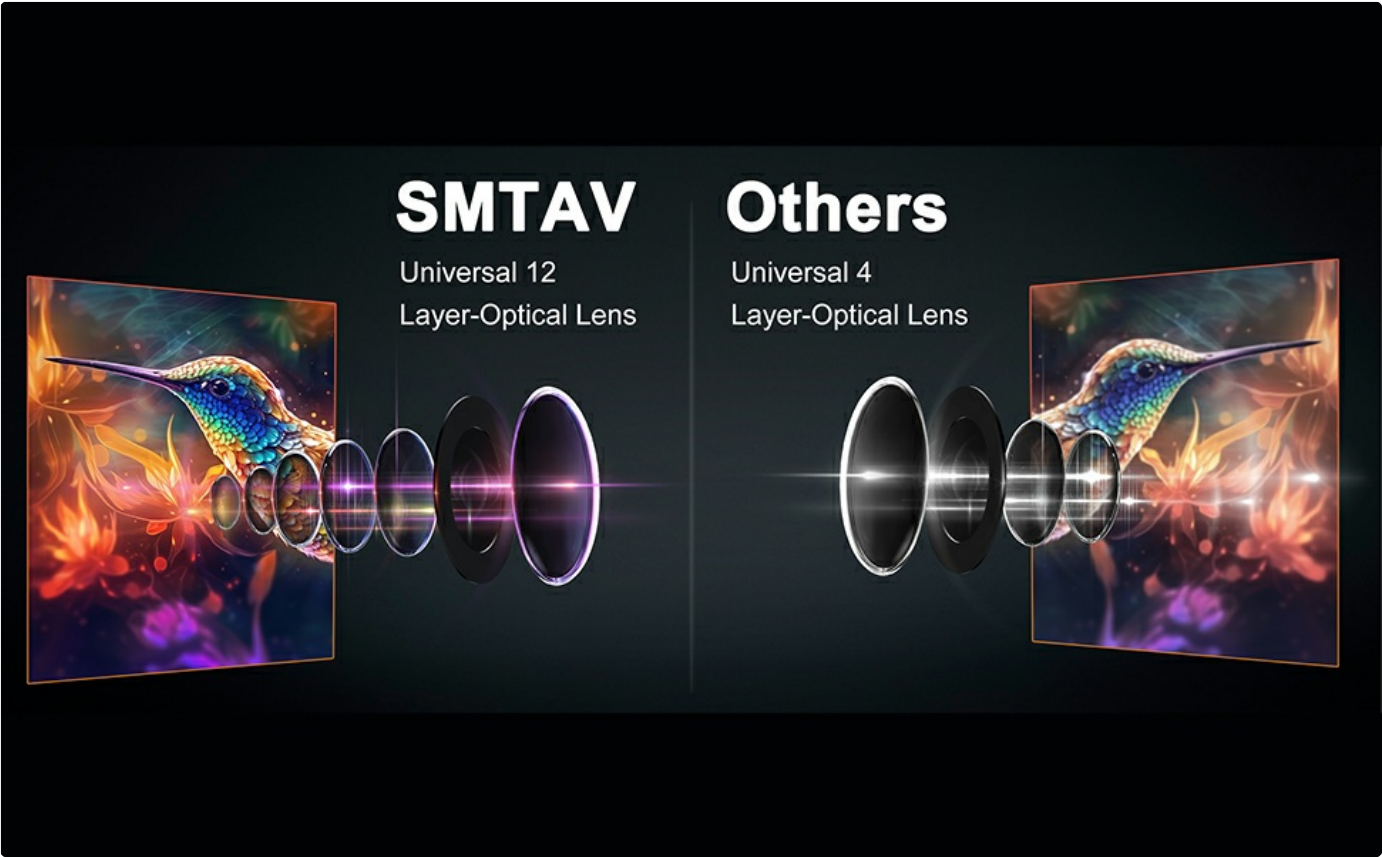Figure 8.2: Live event setup with SMTAV PTZ Camera.

Figure 8.3: Camera in use at a performance venue.

Figure 8.4: Diverse applications of the SMTAV PTZ Camera.

9. ADVANCED FEATURES

9.1 Superior Image Quality

The SMTAV PTZ Camera utilizes an advanced CMOS sensor and a 12-layer optical lens system to deliver superior image clarity, realistic colors, and improved visual fidelity compared to standard sensors and lenses.
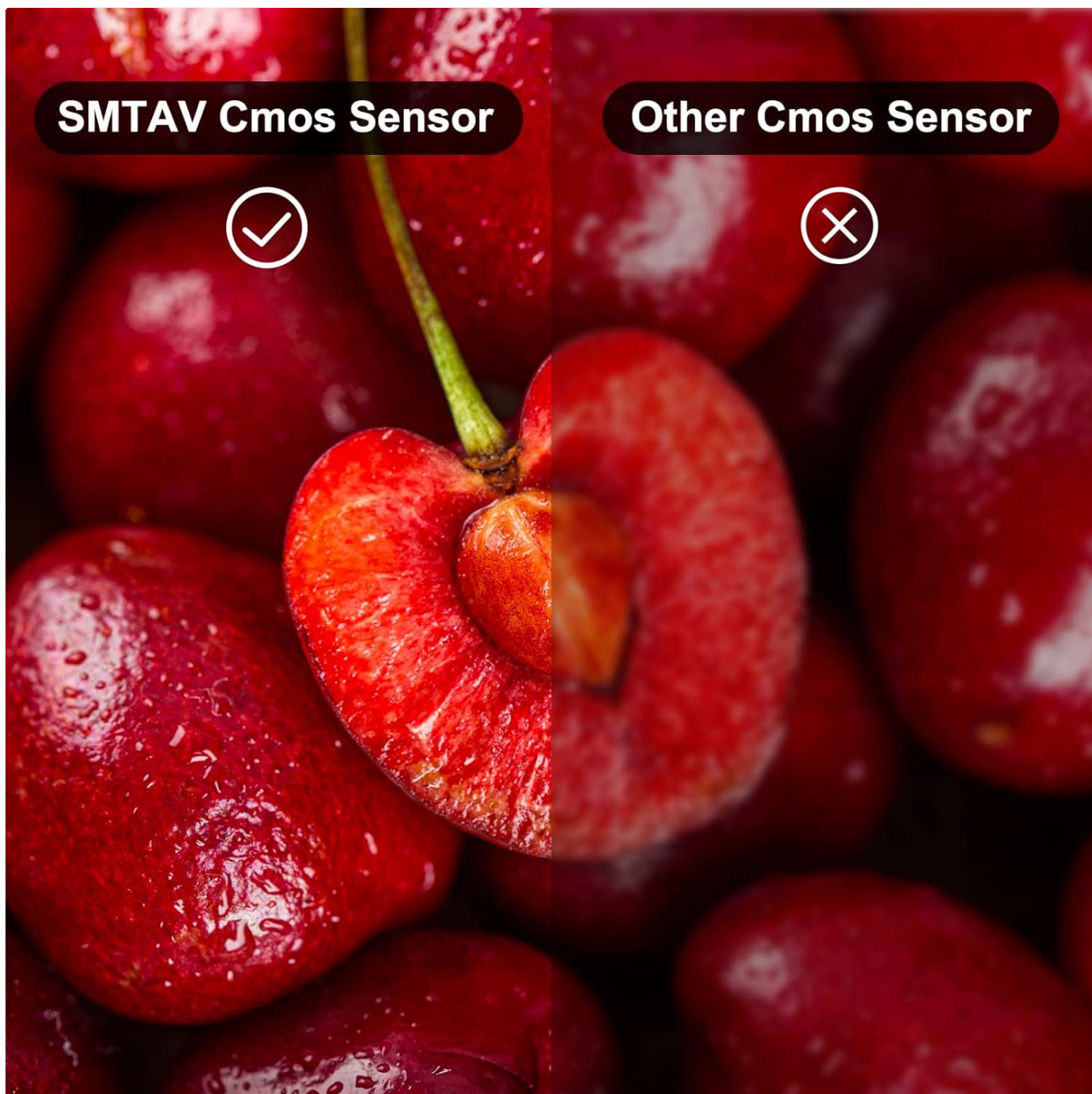
Figure 9.1: SMTAV CMOS Sensor vs. Other CMOS Sensor comparison.

Figure 9.2: SMTAV Universal 12-Layer Optical Lens vs. Universal 4-Layer Optical Lens.

10. VIDEO INFORMATION

No official seller videos were found in the provided product data, therefore no videos are embedded in this manual.

Related Documents - BX20X-WH

[PTZOptics Studio SE HD Streaming Camera - Specifications and Features](#)
Explore the PTZOptics Studio SE, a professional HD streaming camera featuring 12X/20X optical zoom, 1080p 60 FPS video, NDI HX3, SDI, and HDMI outputs. Full technical specifications, connectivity, and package contents.

[PTZOptics Move SE: Quick Start Guide for Video Production Cameras](#)
A comprehensive quick start guide for the PTZOptics Move SE series of cameras, covering setup, connection, configuration, streaming, and control options. Includes details on NDI integration, web UI access, IR remote functions, and auto-tracking.

[PTZOptics 30X Move 4K Camera User Manual](#)

Comprehensive user manual for the PTZOptics 30X Move 4K camera, covering installation, operation, features like 4K video, NDI|HX, auto-tracking, and technical specifications. Essential guide for professional video production and conferencing.

[Karran Vitreous China Sinks: Care and Maintenance Guide](#)

Comprehensive guide on how to care for and maintain Karran vitreous china sinks, including regular cleaning, stain removal, and recommended cleaning products.

[Panasonic Air-to-Water Hydromodule + Tank Operating Instructions](#)

Comprehensive operating instructions for the Panasonic Air-to-Water Hydromodule + Tank system, covering safety precautions, system overview, operating conditions, and detailed setup and servicing information for installers and users.

[ADT Security System Owner's Manual: Setup, Features, and Operation](#)

Comprehensive guide to setting up, using, and maintaining your ADT Security System. Learn about components, installation, features, and troubleshooting for ADT Base, sensors, keypads, and more.