

SMTAV BA30S

SMTAV PTZ Camera User Manual

Model: BA30S

SMTAV PTZ Camera with 3G-SDI, HDMI and IP Streaming Outputs, 30X + 8X Zoom, Video Conference Live Streaming Camera for Broadcast, Conference, Events, Church and School

1. INTRODUCTION

This manual provides comprehensive instructions for the setup, operation, and maintenance of your SMTAV PTZ Camera (Model BA30S). Please read this manual thoroughly before using the product to ensure proper functionality and to prevent damage.

The SMTAV BA30S PTZ Camera is designed for professional video applications, including broadcast, video conferencing, live streaming, and event recording in various settings such as churches and schools. It features a high-quality HD CMOS sensor and a powerful zoom lens for clear image capture.



Figure 1: Front view of the SMTAV PTZ Camera, showcasing its sleek black design and prominent lens. The base includes indicator lights for power and signal.

2. PRODUCT OVERVIEW

2.1 Key Features

- **High-Quality Sensor & Lens:** Equipped with a 1/2.7-inch HD CMOS sensor and a TAMRON Lens, offering a wide 60.7-degree Field of View (FOV) and supporting 30x optical zoom plus 8x digital zoom.
- **Low Light Performance:** High Signal-to-Noise Ratio (SNR) CMOS sensor with 2D & 3D Digital Noise Reduction for effective operation in low light conditions (down to 0.5 Lux).
- **PTZ Capabilities:** Supports horizontal rotation (-170° to 170°) and vertical rotation (-30° to 90°).
- **Multiple Control Options:** Controllable via IR remote controller, CGI/HTTP/Visca/Pelco-D/Pelco-P protocols through RS485, RS232, or IP.
- **Simultaneous Video Outputs:** Outputs max 1080p@60fps video simultaneously from 3G-SDI, HDMI, and IP streaming (MJPEG, H.264, H.265).
- **Power over Ethernet (PoE):** Supports PoE (802.3af) for simplified installation.
- **Advanced Streaming Protocols:** Supports RTSP, RTMP, SRT, and other technologies for live streaming.
- **Versatile Installation:** Compatible with tripod brackets, wall brackets, and ceiling brackets.

2.2 Components and Interfaces

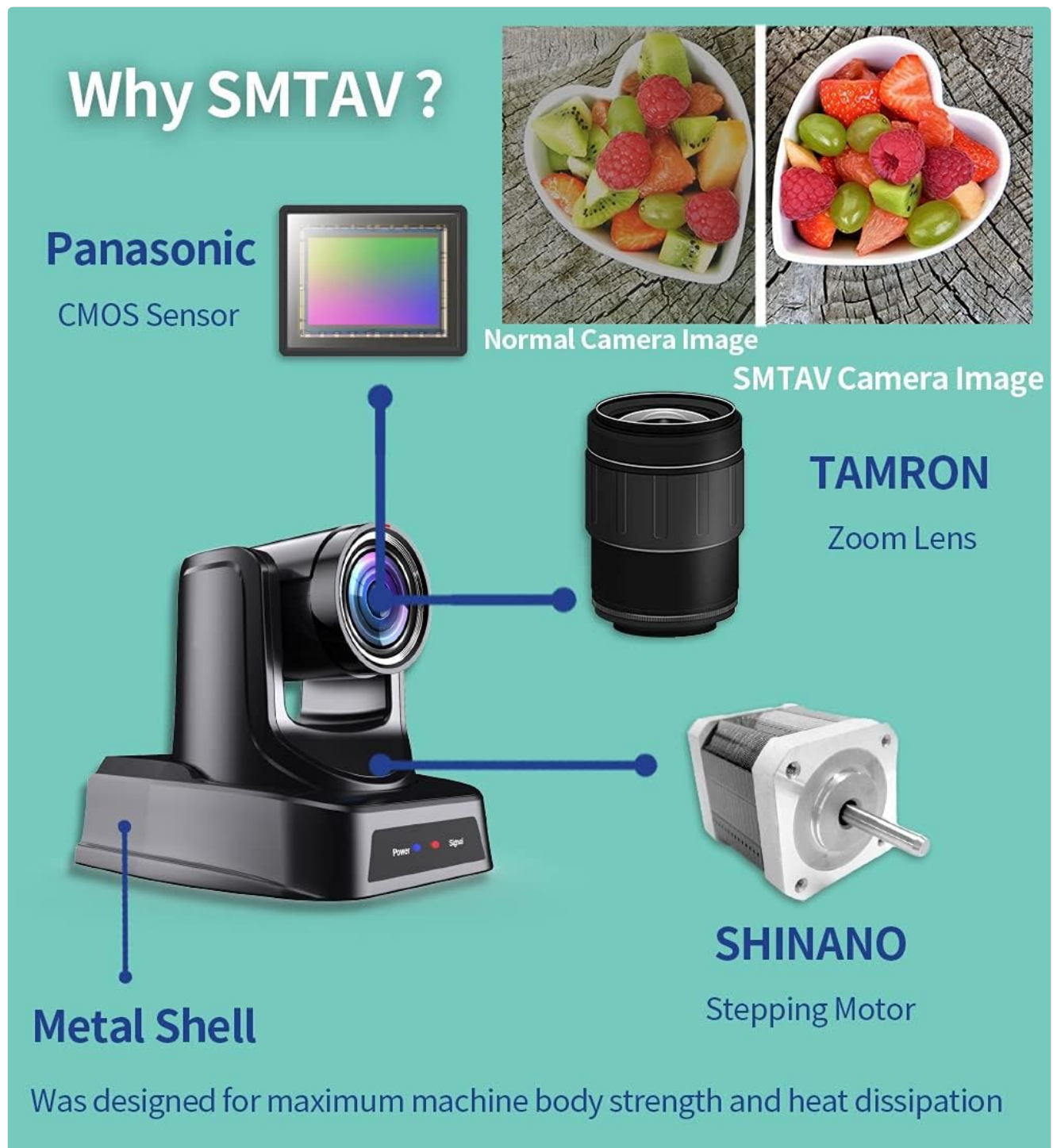


Figure 2: Internal components of the SMTAV PTZ Camera, highlighting the Panasonic CMOS Sensor, TAMRON Zoom Lens, SHINANO Stepping Motor, and the durable Metal Shell designed for strength and heat dissipation.

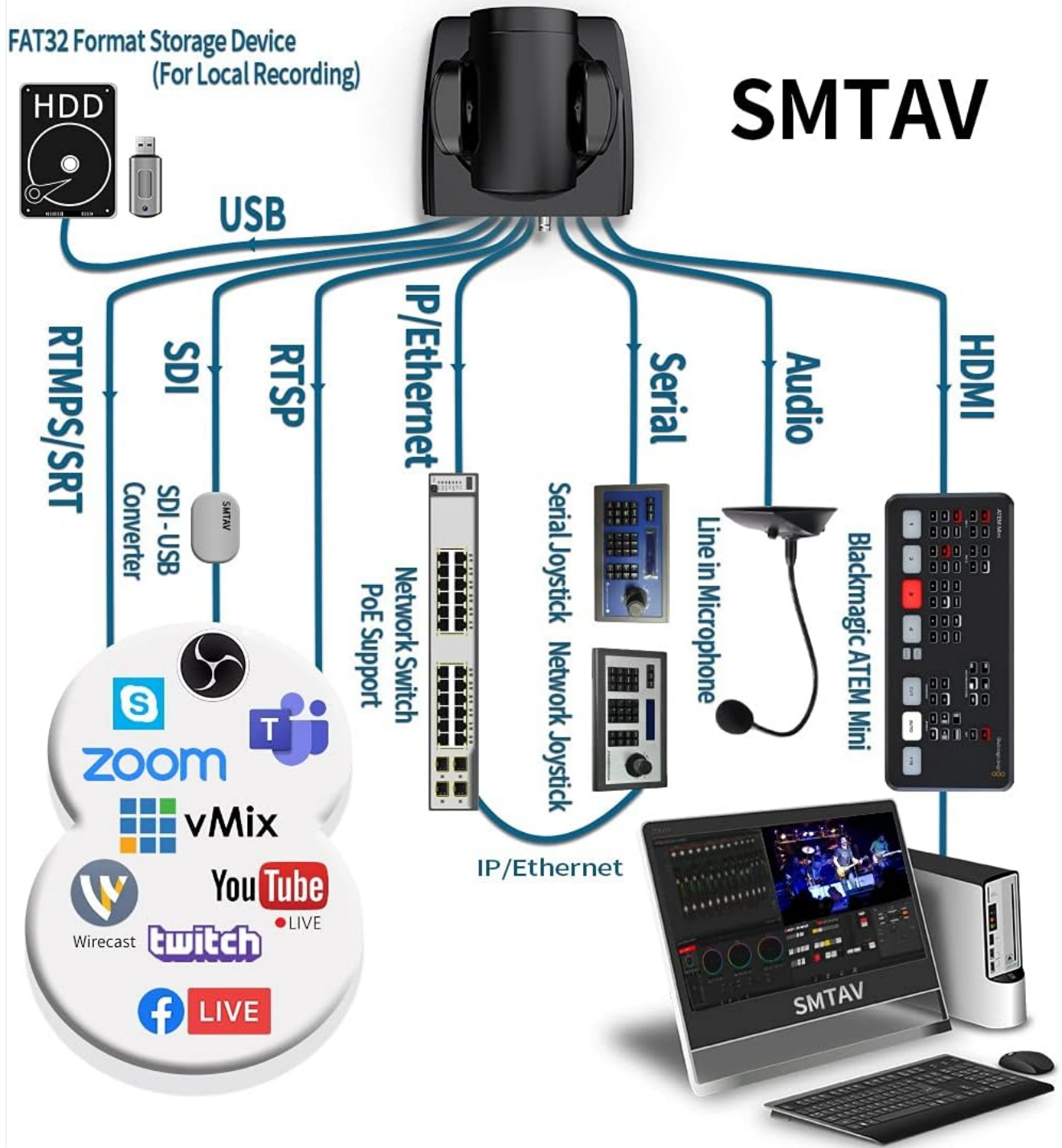


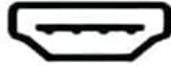
Figure 3: Connectivity diagram of the SMTAV PTZ Camera, illustrating various input/output ports including USB, SDI, RTSP, IP/Ethernet, Serial, Audio, and HDMI, and compatibility with platforms like Zoom, vMix, YouTube, Twitch, and Facebook Live.

Main Features

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3G-SDI

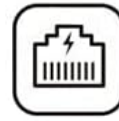


HDMI



IP

3 Video Simultaneous Outputs



PoE



Power
Adapter

2 Power Supply Support

4.42 - 132.6mm

F/1.8 - 2.8



Large Aperture 30x Zoom Lens



3.5mm LINE IN

Audio Embedded on HDMI and IP



PTZ Camera

H.264

Onvif

TCP/IP

VISCA

H.265

RTSP

HTTP

POLCO-P/D

ACC

RTMP

CGI

etc

Figure 4: Main features of the SMTAV PTZ Camera, detailing its 3G-SDI, HDMI, and IP simultaneous outputs, PoE and power adapter support, 4.42-132.6mm F/1.8-2.8 large aperture 30x zoom lens, 3.5mm LINE IN for audio embedding, PTZ capabilities with 30x zoom and auto-focus, and supported protocols like H.264, H.265, Onvif, TCP/IP, VISCA, HTTP, POLCO-P/D, ACC, RTMP, and CGI.

Multiple Control Options

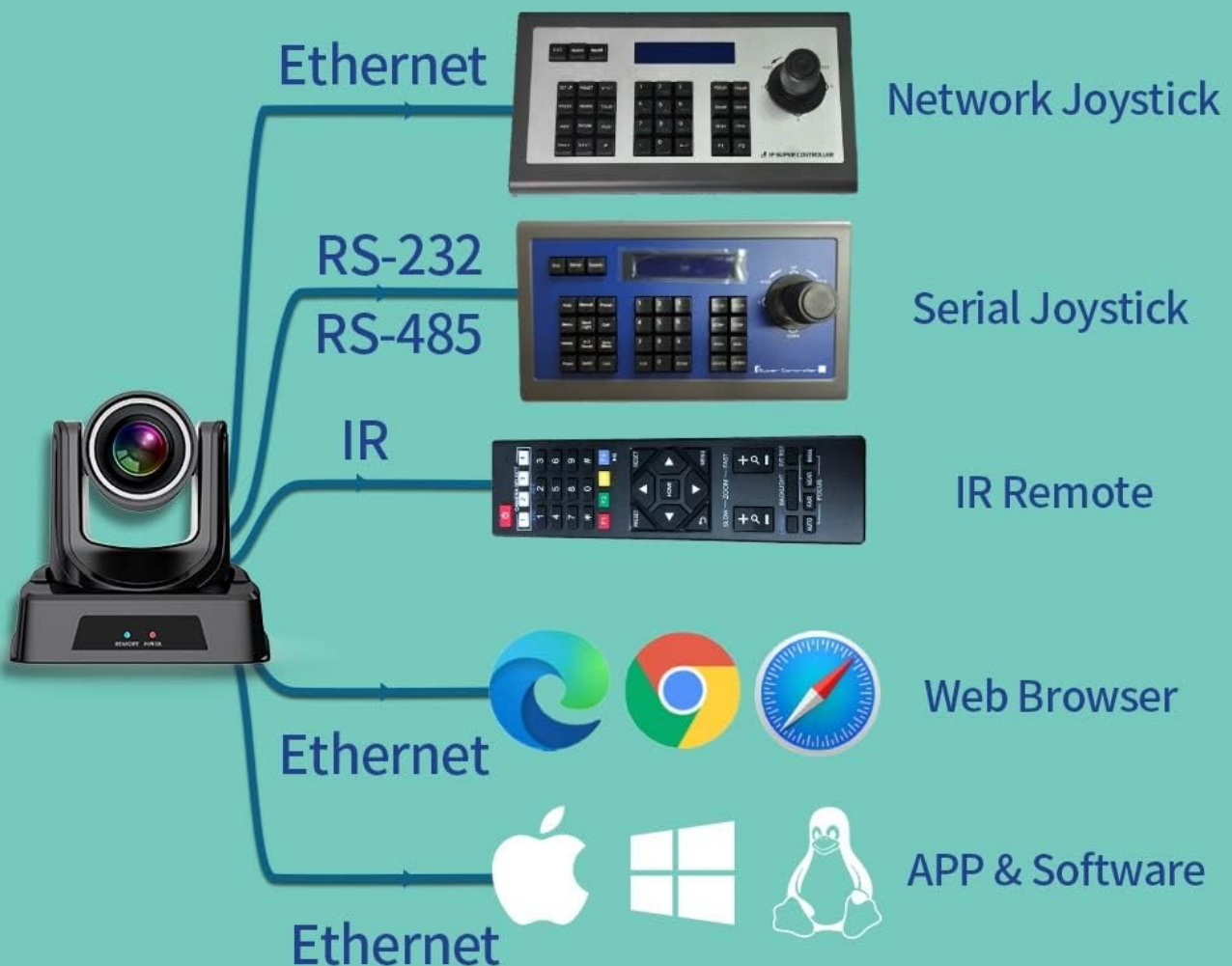


Figure 5: Multiple control options for the SMTAV PTZ Camera, including Ethernet (Network Joystick, Web Browser, APP & Software), RS-232, RS-485 (Serial Joystick), and IR (IR Remote).



Figure 6: Rear panel connections of the SMTAV PTZ Camera, detailing the 3.5mm audio input (line in, mic in), IP Streaming Video Output with PoE Support, HDMI Video output (up to 1080P@60fps), 3G-SDI Video output (up to 1080P@60fps), USB 2.0 for FAT32 storage devices (for local recording only, not video output), RS-232 and RS-485 serial camera control ports, and a system selection switch for video output resolution and frame rate settings.

3. SETUP

3.1 Unpacking and Inspection

Carefully unpack all components and verify that all items listed in the packing list are present and undamaged. The package typically includes: 30X Full HD PTZ Camera, Power adapter, IR remote control, user manual, and Serial control cable.

3.2 Installation Options

The SMTAV PTZ Camera offers flexible installation options:

- **Tripod Mounting:** The camera can be mounted on a standard tripod for portable or temporary setups.
- **Wall Mounting:** Utilize a compatible wall mount bracket (search B08SC4N9J2 if needed) for fixed installations.
- **Ceiling Mounting:** Utilize a compatible ceiling mount bracket (search B08SC4N9J2 if needed) for overhead installations.

Ensure the mounting surface is stable and capable of supporting the camera's weight (approximately 5.04 pounds).

3.3 Power Connection

The camera supports two power supply methods:

- **Power Adapter:** Connect the included power adapter to the DC 12V input port on the camera's rear panel.
- **Power over Ethernet (PoE):** If using a PoE-enabled network switch, connect an Ethernet cable to the LAN port. This will supply both power and data.

3.4 Video and Audio Connections

Connect the camera to your display or recording device using one or more of the following outputs:

- **HDMI Output:** Connect an HDMI cable to the HDMI port for video output up to 1080p@60fps.
- **3G-SDI Output:** Connect an SDI cable to the 3G-SDI port for video output up to 1080p@60fps.
- **IP Streaming:** Connect an Ethernet cable to the LAN port for IP streaming (MJPEG, H.264, H.265).
- **Audio Input:** Connect an external microphone or audio source to the 3.5mm LINE IN port. Audio will be embedded into HDMI and IP streams.

For local recording, connect a FAT32 formatted storage device to the USB 2.0 port. This port is for recording only and is not a video output interface.

4. OPERATING INSTRUCTIONS

4.1 Initial Power-On

After connecting power, the camera will perform a self-test. Wait for this process to complete before attempting to control the camera.

4.2 Remote Control Operation

The included IR remote control allows for comprehensive camera control. Ensure the remote is pointed towards the camera's IR receiver.

Controlling Multiple Cameras with One Remote:

To control multiple SMTAV PTZ cameras with a single remote, each camera must have a unique address set. The default address of the camera is 1. Follow these steps to set camera addresses and control them:

1. Turn on the first camera and wait for its self-test to complete.
2. On the remote control, press the "*", "#", and "F1" keys in sequence to set the address of the first camera to "1".
3. Select the white key "1" in the "CAMERA SELECT" area of the remote control. You can now test control of the first camera.
4. Turn off the first camera. Turn on the second camera and wait for its self-test to complete.
5. On the remote control, press the "*", "#", and "F2" keys in sequence to set the address of the second camera to "2".
6. Select the white key "2" in the "CAMERA SELECT" area of the remote control. You can now test control of the second camera.
7. Repeat this process for additional cameras, using "F3" for camera 3, "F4" for camera 4, and so on, up to "F7" for camera 7.
8. Once all cameras have unique addresses, turn on all cameras one by one and wait for their self-check to complete.
9. You can now select the desired camera using the corresponding white key (1-7) in the "CAMERA SELECT" area of the remote control to operate it individually.

Your browser does not support the video tag.

Video 1: This video demonstrates how to control multiple SMTAV PTZ cameras using a single remote control by assigning unique addresses to each camera.

4.3 Pan, Tilt, and Zoom (PTZ) Control

- Use the directional arrows on the remote control or joystick to pan (horizontal movement) and tilt (vertical movement) the camera.
- Use the "ZOOM" buttons (SLOW-ZOOM, FAST-ZOOM) to adjust the optical and digital zoom levels.
- The camera supports auto-focus. Manual focus adjustment may be available via advanced control interfaces if needed.

4.4 Preset Positions

The camera allows you to save and recall specific PTZ positions as presets. Refer to the detailed instructions in the full user manual for programming and recalling presets using the remote control or other control interfaces.

5. CONNECTIVITY AND STREAMING

5.1 IP Streaming Setup

The camera supports various IP streaming protocols including RTSP, RTMP, and SRT. Configuration is typically done via a web browser interface or dedicated software.

- Connect the camera to your network via the LAN port.

- Obtain the camera's IP address (refer to the full user manual or use the provided app for discovery).
- Access the camera's web interface through a web browser to configure streaming settings, resolution, and frame rate.

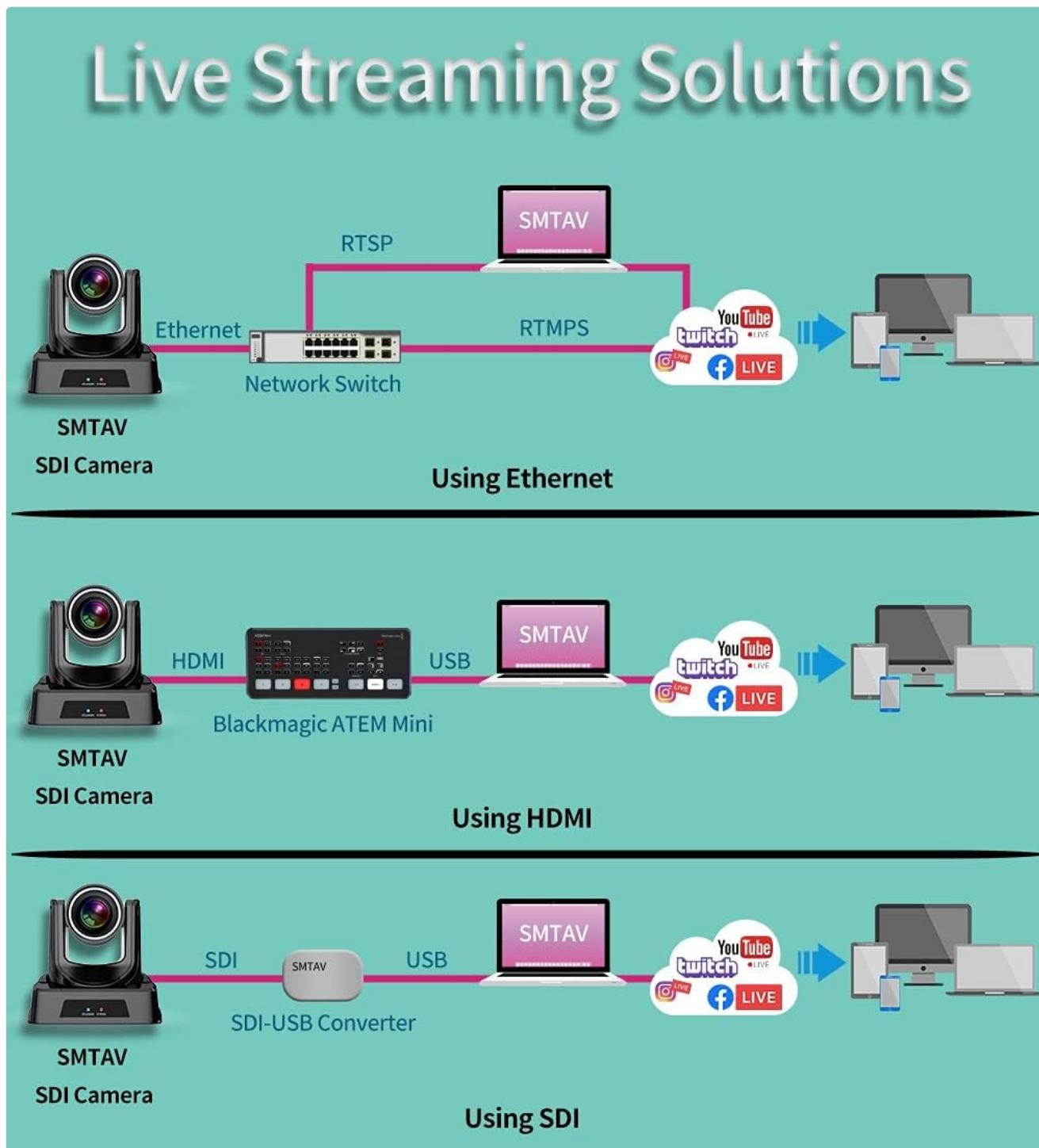


Figure 7: Live streaming solutions with the SMTAV PTZ Camera, demonstrating setups using Ethernet (RTSP/RTMPS via network switch), HDMI (via Blackmagic ATEM Mini), and SDI (via SDI-USB Converter) to stream to platforms like YouTube, Twitch, and Facebook Live.

5.2 RS232/RS485 Control

For advanced control, the camera supports RS232 and RS485 serial communication using Visca, Pelco-D, and Pelco-P protocols. These ports allow integration with professional control systems and joysticks.

- **RS232:** Cable connection up to 30 meters.
- **RS485:** Cable connection up to 1200 meters.

6. MAINTENANCE

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

- **Cleaning:** Use a soft, dry cloth to clean the camera body. For the lens, use a lens cleaning solution and a microfiber cloth specifically designed for optical surfaces. Avoid abrasive materials or harsh chemicals.
- **Dust Prevention:** Keep the camera in a clean environment. When not in use, cover the lens with the provided cap to prevent dust accumulation.
- **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.
- **Cable Management:** Ensure all cables are securely connected and not under strain. Proper cable management prevents accidental disconnections and damage to ports.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your SMTAV PTZ Camera. For more detailed troubleshooting, refer to the full user manual or contact customer support.

Problem	Possible Cause	Solution
No Power Indicator Light	Power adapter not connected or faulty; PoE not active.	Check power connections. Ensure power adapter is working or PoE switch is active and providing power.
No Video Output	Incorrect cable connection; incorrect input selected on display; camera not powered on.	Verify HDMI/SDI/Ethernet cable connections. Select correct input on your display. Ensure camera is powered on and self-test is complete.
Remote Control Not Responding	Batteries low/dead; IR receiver blocked; incorrect camera selected (for multi-camera setup).	Replace remote batteries. Ensure clear line of sight to camera's IR receiver. Verify correct camera address is selected on the remote.
Image is Blurry	Out of focus; dirty lens.	Allow auto-focus to adjust or manually adjust focus if supported. Clean the camera lens.
IP Streaming Issues	Network connectivity problems; incorrect IP settings; firewall blocking.	Check network cable and switch. Verify camera IP address and streaming settings. Adjust firewall rules if necessary.

8. SPECIFICATIONS

Feature	Detail
Brand	SMTAV
Model Number	BA30S

Feature	Detail
Image Sensor	1/2.7 inch HD CMOS sensor
Lens	TAMRON Lens, 30x Optical Zoom + 8x Digital Zoom (4.42 - 132.6mm, F/1.8 - 2.8)
Field of View (FOV)	60.7 degrees
Pan Rotation	-170° to 170°
Tilt Rotation	-30° to 90°
Video Outputs	3G-SDI, HDMI, IP Streaming (simultaneous, max 1080p@60fps)
IP Streaming Formats	MJPEG, H.264, H.265
Supported Protocols	RTSP, RTMP, SRT, CGI, HTTP, Visca, Pelco-D, Pelco-P, Onvif, TCP/IP, ACC
Control Interfaces	IR Remote, RS485, RS232, IP (Ethernet)
Power Supply	DC 12V, PoE (802.3af)
Dimensions	6.65 x 5.59 x 6.46 inches
Item Weight	5.04 pounds

9. WARRANTY AND SUPPORT

This product comes with a standard manufacturer's warranty. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official SMTAV website.

If you encounter any issues or have questions regarding your SMTAV PTZ Camera, please feel free to contact our support team. Our support team aims to reply within 24 hours.

For additional resources and software, you may visit the [SMTAV Store on Amazon](#).

SMTAV

PTZ Video Camera

User Manual

V2.5

Model Nos: BA30S | BA30N | BA30S-W | BA30N-W
(English)

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