

Mirabox HSV321

Mirabox HSV321 USB3.0 HDMI Video Capture Card User Manual

Model: HSV321

1. SAFETY INFORMATION

To ensure safe operation and prevent damage, please observe the following guidelines:

- Do not expose this unit to rain, moisture, or liquids.
- Do not attempt to repair the device or open its enclosure without professional guidance to avoid electrical shock.
- Ensure adequate ventilation around the device during operation to prevent overheating.

2. PRODUCT OVERVIEW

The Mirabox HSV321 is a USB3.0 HDMI video and audio capture card designed for high-quality streaming and recording. It supports 4K@30Hz input and zero-latency 4K@30Hz HDMI passthrough, while capturing video at 1080P@60FPS. Its plug-and-play design ensures broad compatibility with various operating systems and streaming software.



Image 2.1: Mirabox HSV321 USB3.0 HDMI Video Capture Card. This image displays the compact, black and red aluminum casing of the capture card, highlighting its USB3.0 and HDMI input ports.

Key Features:

- **4K@30Hz Input and Zero Latency Passthrough:** Supports 4K@30Hz input and passthrough for seamless monitoring without delay. Note: Capture resolution is 1080P@60Hz.
- **USB3.0 High-Speed Transmission:** Utilizes USB3.0 for faster data transfer, facilitating smooth live streaming and recording.
- **1080P 60FPS Capture (YUY2 4:4:4):** Captures video at 1080P resolution with 60 frames per second, ideal for gaming and high-motion content.
- **Wide Compatibility:** Compatible with various HDMI devices including game consoles (PS4, PS5, Xbox, Nintendo Switch), DSLR cameras, and set-top boxes.
- **Plug and Play:** No driver installation required for Windows 7/8/10, Mac OS, and Linux.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- Mirabox HSV321 Capture Card
- USB3.0 Cable

- Installation Guide (this document)

4. SYSTEM REQUIREMENTS

Ensure your computer meets the following minimum specifications for optimal performance:

Host Interface:

- USB3.0 (recommended for 300-350MB/s transfer)
- USB2.0 (supports up to 40MB/s)

Operating System Support:

- Windows 7, Windows 8, Windows 10, Windows 11
- Mac OS X (10.8 and above)
- Linux (Kernel version 2.6.38 and above)

Recommended Computer Configuration:

For Apple computers with USB3.0 Port:

- OS: macOS Sierra or higher
- GPU: NVIDIA
- CPU: Intel i5-44xx quad-core or equivalent

For Windows computers with USB3.0 Port:

- Operating System: Windows 7, Windows 8, Windows 10
- GPU: Intel HD or NVIDIA GeForce 600 series graphics card or equivalent
- CPU: Intel i5-44xx quad-core or equivalent

5. SETUP GUIDE

Follow these steps to connect your Mirabox HSV321 capture card:

5.1 Basic Connection Diagram

Compatible Devices and Connection Diagram



Image 5.1: General connection diagram for the Mirabox HSV321. This diagram illustrates how to connect the capture card between a source device (like a game console or camera) and a display, with a USB connection to a computer for capture.

1. **Connect HDMI Input:** Connect your source device (e.g., game console, camera, DVD player) to the 'HDMI IN' port on the Mirabox HSV321 using an HDMI cable.
2. **Connect HDMI Output (Passthrough):** Connect your display (e.g., TV, monitor) to the 'HDMI OUT' port on the Mirabox HSV321 using an HDMI cable. This provides zero-latency passthrough.
3. **Connect USB to Computer:** Connect the USB3.0 port on the Mirabox HSV321 to a USB3.0 port on your computer using the provided USB3.0 cable.
4. **Power On:** Power on your source device, display, and computer. The capture card is plug-and-play and should be recognized automatically by your operating system.

5.2 Connecting a Game Console (e.g., PS5, Nintendo Switch, Xbox)

The Mirabox HSV321 is compatible with various game consoles for streaming and recording.

ZERO Latency HDMI Pass-through

- Capture upto YUY2 4:4:4 1080P
- Pass-through upto 4K Resolution
- Input upto 4K Resolution



Image 5.2: PlayStation 5 connected to the Mirabox HSV321 for zero-latency HDMI passthrough. The image shows a PS5 connected via HDMI to the capture card, which then connects to a monitor and a laptop for streaming.

Mirabox Capture for Switch Live Streaming



Image 5.3: Nintendo Switch connected to the Mirabox HSV321 for live streaming. This image illustrates the connection of a Nintendo Switch (in its dock) to the capture card, which then feeds to a laptop for streaming and a separate monitor for gameplay.



Image 5.4: Xbox 360 connected to the Mirabox HSV321 for game live streaming. The image shows an Xbox 360 console and controller connected to the capture card, with the output displayed on a monitor.

Follow the general connection steps above. Ensure your console's video output settings are configured to a resolution supported by the capture card (up to 4K@30Hz input).

5.3 Connecting a DSLR Camera as a Webcam

The Mirabox HSV321 can convert your DSLR camera's HDMI output into a webcam feed for high-quality video conferencing or streaming.

DSLR to Webcam Solution



Image 5.5: DSLR camera connected to the Mirabox HSV321 for use as a webcam. This image shows a DSLR camera on a tripod connected via HDMI to the capture card, which is then connected to a laptop, enabling the camera's feed to be used in video applications.

1. Connect your DSLR camera's HDMI output to the 'HDMI IN' port of the capture card.
2. Connect the capture card's USB3.0 port to your computer.
3. Configure your camera to output a clean HDMI signal (without on-screen display elements). Refer to your camera's manual for specific settings.
4. In your video conferencing or streaming software, select the Mirabox HSV321 as your video input device.

6. OPERATING INSTRUCTIONS

Once connected, the Mirabox HSV321 functions as a standard UVC (USB Video Class) and UAC (USB Audio Class) device, making it compatible with various software applications.

6.1 Software Compatibility

The capture card is compatible with popular streaming and recording software, including but not limited to:

- OBS (Open Broadcaster Software)
- XSplit

- Potplayer
- VLC
- Twitch Studio
- YouTube Live
- Facebook Live
- Wirecast
- Google Hangouts, Skype, Zoom, Microsoft Teams (for webcam functionality)

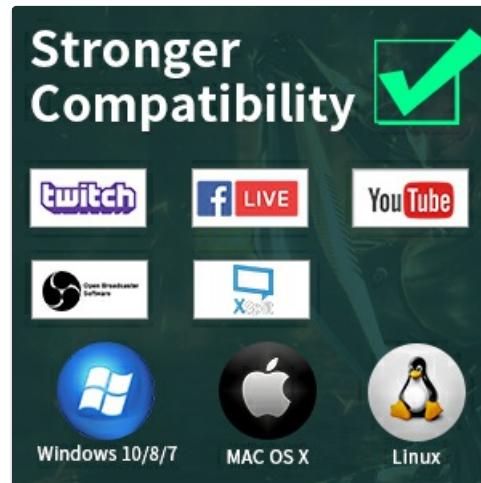


Image 6.1: Logos of compatible streaming platforms and operating systems. This image displays logos for Twitch, Facebook Live, YouTube, OBS, XSplit, Windows, Mac OS, and Linux, indicating broad software and OS compatibility.

6.2 Using with OBS (Open Broadcaster Software)

1. Download and install OBS Studio from the official website (obsproject.com).
2. Launch OBS Studio.
3. In the 'Sources' panel, click the '+' icon and select 'Video Capture Device'.
4. Create a new source or select an existing one, then click 'OK'.
5. In the properties window, select 'Mirabox HSV321' (or similar name) from the 'Device' dropdown menu.
6. Configure resolution, FPS, and audio input as needed. For optimal quality, set resolution to 1920x1080 and FPS to 60.
7. Click 'OK' to add the source. You should now see your video feed in OBS.

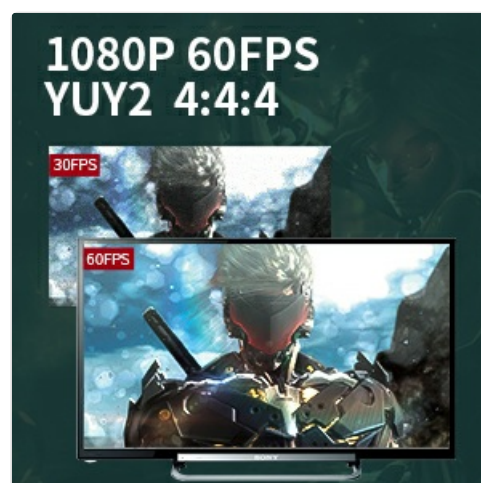


Image 6.2: Comparison of 30FPS vs 60FPS video quality. This image visually demonstrates the smoother motion achieved with 60 frames per second capture compared to 30 frames per second.

6.3 Zero Latency HDMI Passthrough

The HDMI 'OUT' port provides a direct, uncompressed video signal to your display, ensuring no delay between your source device and your monitor. This is crucial for gaming where input lag can affect performance.

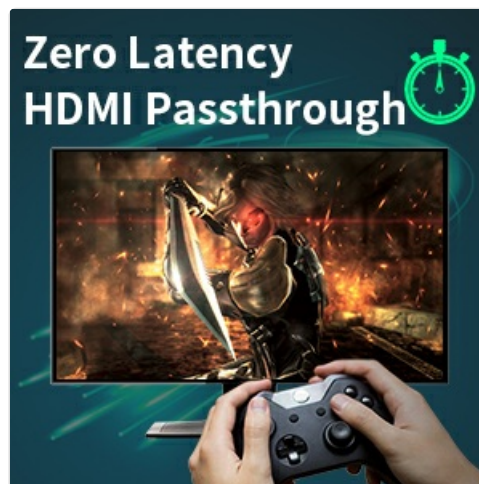


Image 6.3: A game controller in use, illustrating the benefit of zero-latency HDMI passthrough for responsive gaming. The image emphasizes the real-time display on a monitor, crucial for competitive gameplay.

7. MAINTENANCE

The Mirabox HSV321 is designed for durability with an aluminum casing that aids in heat dissipation. To ensure longevity and optimal performance:

- **Ventilation:** Always place the capture card in an area with adequate airflow. Avoid covering it or placing it in enclosed spaces.
- **Temperature:** The device may become warm during extended use. This is normal. However, ensure it is not exposed to extreme temperatures (Working Temperature: 0-50 deg C, Storage Temperature: -20~70 deg C).
- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Do not use liquid cleaners or solvents.

Strong Function , Portable Size

Anti-interference heat dissipation fast



Image 7.1: Detailed view of the Mirabox HSV321, showing its dimensions (95x63x22 mm) and port labels. This image highlights the compact size and the anti-interference heat dissipation design of the device.

8. TROUBLESHOOTING

If you encounter issues with your Mirabox HSV321, refer to the following common problems and solutions:

8.1 No Video Signal or Device Not Recognized

- **Check Connections:** Ensure all HDMI and USB cables are securely connected. Try re-plugging them.
- **USB Port:** Verify that the capture card is connected to a USB3.0 port on your computer. Using a USB2.0 port may result in performance issues or recognition problems.
- **Restart Computer:** If the device is not recognized, try restarting your computer with the capture card still plugged in.
- **Source Device Output:** Confirm that your source device (console, camera) is powered on and outputting an HDMI signal. Check its video output settings.
- **Power Settings (Windows):** Ensure your computer's USB ports are not configured to shut down for power saving. Go to Device Manager > Universal Serial Bus controllers > USB Root Hub (USB 3.0) > Properties > Power Management, and uncheck "Allow the computer to turn off this device to save power."

8.2 Audio Desynchronization

- **Windows Settings:** Audio desync issues can often be corrected within Windows sound settings or your

streaming software (e.g., OBS audio delay filters).

- **Source Audio:** If possible, use the audio streamed via HDMI from your source device rather than a separate microphone connected directly to the computer, to minimize potential sync issues.

8.3 Video Quality Issues (e.g., Saturated Colors)

- **Software Adjustments:** Color settings may need to be tweaked within your streaming or recording software (e.g., OBS filters) to achieve desired visual output.

8.4 Device Gets Warm During Use

- The aluminum casing is designed for heat dissipation, and it is normal for the device to become warm. Ensure it has sufficient breathing room and is not obstructed.

9. SPECIFICATIONS

Feature	Specification
Model Number	HSV321
Host Interface	USB3.0 (300-350MB/s), USB2.0 (40MB/s)
Input Interface	HDMI
HDMI Input Formats	480i, 480p, 576i, 576p, 720p50/60, 1080i50/60, 1080p24/25/30/50/60, 4K@30Hz
HDMI Passthrough	Up to 4K@30Hz (Zero Latency)
Capture Resolution	1080P@60FPS (YUY2 4:4:4)
Output Formats Resolutions	640x480 to 1920x1200 (various aspect ratios)
Frame Rate	25/29.97/30/50/59.94/60 fps
Audio and Video Capture	Standards of UVC and UAC
Operating System Support	Windows 7/8/10/11, Mac OS X (10.8+), Linux (Kernel 2.6.38+)
Dimensions (LxWxH)	95 x 63 x 22 mm (3.74 x 2.48 x 0.87 inches)
Item Weight	3.7 ounces
Power Consumption	<= 2.5W
Working Temperature	0-50 °C (32-122 °F)
Storage Temperature	-20~70 °C (-4-158 °F)
Storage Humidity	5%-90%