

## AVMATRIX SHARK S6

# AVMATRIX Shark S6 User Manual

6CH HDMI/SDI Multi-Camera Video Mixer Switcher

### 1. INTRODUCTION

Thank you for choosing the AVMATRIX Shark S6, a professional 6-channel HDMI/SDI multi-camera video mixer switcher designed for live streaming, recording, and video production. This manual provides detailed instructions on how to set up, operate, and maintain your device to ensure optimal performance and longevity. Please read this manual thoroughly before using the product.

### 2. PRODUCT OVERVIEW

The AVMATRIX Shark S6 is a compact yet powerful video switcher featuring a 5-inch FHD display, multiple input/output options, and advanced control capabilities for seamless live production workflows.



**Figure 2.1:** Front and top view of the AVMATRIX Shark S6, showcasing the integrated 5-inch display, control buttons, and T-bar for smooth transitions.

# Stream via Ethernet



**Figure 2.2:** Rear panel of the AVMATRIX Shark S6, displaying various input and output ports including SDI, HDMI, LAN, USB, and audio connections.

# Convenient Panel Button Design

PIP/POP/DSK/CHROMA/AUDIO/LOGO



**Figure 2.3:** Close-up view of the built-in 5-inch Full HD display on the AVMATRIX Shark S6, providing real-time monitoring of all video inputs and program output.

## 3. SETUP GUIDE

### 3.1 Unpacking and Inspection

Carefully unpack the AVMATRIX Shark S6 and all accessories. Inspect the unit for any signs of damage during transit. If any damage is found, contact your dealer immediately.

### 3.2 Connecting Power

Connect the provided DC 12V power adapter to the 'DC 12V' input port on the rear panel of the Shark S6. Plug the adapter into a suitable power outlet. The device will power on automatically or can be turned on using the power switch.

### 3.3 Video Input Connections

The Shark S6 features 4 SDI inputs and 2 HDMI inputs. Connect your cameras or other video sources to the corresponding input ports (SDI IN 1-4, HDMI IN 5-6) on the rear panel.

### 3.4 Video Output Connections

Connect your display monitors or recording devices to the following output ports:

- **PGM Outputs:** 2 SDI and 1 HDMI PGM outputs for your main program feed.
- **Multiview Output:** 1 HDMI Multiview output for monitoring all inputs simultaneously.
- **AUX Outputs:** 2 SDI AUX outputs, configurable to display IN 1-6, PGM, PVW, Multiview, etc.

### 3.5 Audio Connections

The unit supports 6 embedded audio inputs (via SDI/HDMI) and 2 external MIC inputs. Connect external microphones to the 3.5mm MIC input jacks. An earphone slot is also available for audio monitoring.

### 3.6 Network and USB Connections

For live streaming via Ethernet, connect an Ethernet cable to the LAN port. For USB capture, connect a USB Type-C cable to the 'USB Type-C' port. For recording to external storage, insert a USB disk into the 'USB REC' port or an SD card into the 'SD Card' slot.

## 4. OPERATING INSTRUCTIONS

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### 4.1 Basic Switching Operations

Use the numbered buttons (1-6) on the control panel to select your input sources. The 'CUT' button performs an instant cut transition, while the 'AUTO' button executes an automatic transition with a preset duration. The T-bar can be used for manual transitions.



# Extraordinary Camera Control

Up to 6 cameras can be controlled simultaneously



**Figure 4.1:** The convenient panel button design of the Shark S6, allowing direct access to functions like PIP/POP, DSK, Chroma Key, Audio, and Logo insertion.

## 4.2 Live Streaming via Ethernet

The LAN port supports IP streaming via RTMP(S), RTSP, and SRT protocols. Configure your streaming settings through the device's menu system to connect to platforms like YouTube, Facebook, Twitch, and Skype. Ensure a stable internet connection for optimal streaming quality.

# Built-in 5-inch Display

## Easily monitoring all the time



**Figure 4.2:** Illustration of the Shark S6 connected for live streaming via Ethernet, compatible with various social media and streaming platforms.

### 4.3 USB Disk & SD Card Recording

Record your PGM signal directly to an SD card or USB disk. The device supports MP4/TS file formats with an encode bitrate up to 32Mbps. Insert your storage device and press the 'RECORD' button to start/stop recording. Ensure sufficient storage space and a compatible file system (FAT32/exFAT/NTFS).

### 4.4 USB Capture for Streaming Software

The USB Type-C port allows the Shark S6 to function as a webcam, capturing video and audio for use with various software and platforms such as OBS, vMIX, ZOOM, Teams, Skype, and VLC. It is compatible with Windows, Linux, and Mac operating systems.

### 4.5 Professional Audio Mixer

Utilize the integrated audio mixer to manage 6 embedded audio inputs and 2 external MIC inputs. Adjust individual audio levels and apply audio delay settings for each channel to ensure perfect audio-video synchronization.

### 4.6 PTZ Camera Control

Control PTZ (Pan-Tilt-Zoom) cameras directly from the Shark S6 via LAN and RS-232/RS-422/RS-485 connections. Supported protocols include VISCA, VISCA over IP, Pelco D/P, and ON-VIF. This feature allows for precise camera adjustments during live productions.

## Widespread Application

The video switcher can be widely used in various field events, such as live sports, virtual studio, Education, internet, concert, and so on.



**Figure 4.3:** The Shark S6's capability to control up to 6 PTZ cameras simultaneously, offering precise pan, tilt, and zoom adjustments.

### 4.7 FTB (Fade to Black) Function

Press the 'FTB' button to instantly fade the PGM output to a black screen. This function is useful for emergency situations or intentional blackouts during a live production.

## 5. MAINTENANCE

To ensure the longevity and optimal performance of your AVMATRIX Shark S6, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Do not use liquid cleaners or aerosols, as they may damage the device.
- **Ventilation:** Ensure that the ventilation openings are not blocked. Proper airflow is crucial to prevent overheating.
- **Storage:** When not in use for extended periods, store the unit in a cool, dry place away from direct sunlight and



extreme temperatures.

- **Firmware Updates:** Periodically check the AVMATRIX official website for firmware updates. Keeping your device's firmware up-to-date can improve performance and add new features.

## 6. TROUBLESHOOTING

This section addresses common issues you might encounter with your AVMATRIX Shark S6. If you experience a problem not listed here, please contact AVMATRIX support.

Problem	Possible Cause	Solution
No video output	Incorrect input/output selection; Loose cable connections; Incompatible video format.	Verify PGM output is selected; Check all HDMI/SDI cable connections; Ensure input video formats are supported (refer to specifications).
No audio output	Audio levels too low; Incorrect audio input selected; Muted audio.	Adjust audio levels in the mixer; Confirm correct audio input source; Check if audio is muted.
Streaming issues (buffering, disconnection)	Unstable internet connection; Incorrect streaming settings; Network congestion.	Check network cable and internet speed; Verify RTMP/RTSP/SRT settings; Reduce streaming bitrate if necessary.
Recording fails	Insufficient storage space; Incompatible USB disk/SD card format; Slow write speed of storage device.	Ensure enough free space; Format USB disk/SD card to FAT32/exFAT/NTFS; Use a high-speed storage device.
PTZ camera not responding	Incorrect control protocol; Wrong IP address/serial settings; Loose control cable.	Verify PTZ protocol (VISCA, Pelco D/P, ON-VIF); Check IP/serial settings; Ensure control cables are securely connected.

## 7. SPECIFICATIONS

Detailed technical specifications for the AVMATRIX Shark S6.

Feature	Detail
Product Dimensions	9.4 x 6.2 x 1.8 inches
Item Weight	5.39 pounds
Model Number	SHARK S6
Color	Black
Video Inputs	4 x SD/HD/3G-SDI (75Ω), 2 x HDMI type-A (100Ω)
Video Outputs	2 x HD/3G-SDI PGM, 1 x HDMI type-A PGM, 1 x HDMI Multiview, 2 x 3G-SDI AUX
Audio Inputs	6CH Embedded Audio, 2 x MIC (3.5mm Jack)
Audio Outputs	1 x Line Out, 1 x Earphone Slot
Stream Output	LAN (RTMP(S), RTSP, SRT)

Feature	Detail
Capture Output	USB Type-C (UVC/UAC compatible)
Media Port	USB Type-A, SD Card Slot
Recording Bitrate	2M-32Mbps
Recording File Formats	MP4/TS
PTZ Camera Control	LAN, RS-232/RS-422/RS-485 (VISCA, VISCA over IP, Pelco D/P, ON-VIF)
Power Input	DC 12V
Compatible Devices	Camera
Cable Type	USB


## 8. WARRANTY AND SUPPORT






The AVMATRIX Shark S6 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 AVMATRIX website. For technical support, troubleshooting assistance, or service inquiries, please contact AVMATRIX customer support directly. You may also refer to the seller, AVMATRIX COMPANY, for purchase-related support.

**Protection Plans:** Extended protection plans may be available for purchase. Please check with your retailer for options such as 2-Year or 3-Year Protection Plans.

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Product specifications are subject to change without notice.

### Related Documents - SHARK S6

	<p><a href="#">AVMATRIX SHARK S8X PLUS: 8-Channel SDI/HDMI Video Switcher User Manual</a></p> <p>Discover the AVMATRIX SHARK S8X PLUS, a professional 8-channel SDI/HDMI audio/video switcher. This manual details its comprehensive features, including a 17.3-inch FHD display, advanced video effects like chroma key and PIP, PTZ camera control, live streaming, and recording capabilities, designed for professional live production environments.</p>
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<div></div> <div><b>HVS0402U</b> MICRO 4 CHANNEL HDMI LIVE STREAM MULTI-FORMAT VIDEO SWITCHER</div>	<p><a href="#">AVMATRIX HVS0402U User Manual: 4-Channel HDMI Live Stream Video Switcher</a></p> <p>This user manual provides comprehensive instructions and specifications for the AVMATRIX HVS0402U, a 4-channel HDMI multi-format video switcher designed for live streaming and video production. Learn about its features, interfaces, operation, and system settings.</p>
<div></div> <div><b>SHARK H4M</b> ALL-IN-ONE 4-CH HDMI AUDIO &amp; VIDEO SWITCHER</div>	<p><a href="#">AVMATRIX SHARK H4M: Professional 4-Channel HDMI Video Switcher &amp; Audio Mixer for Live Streaming</a></p> <p>The AVMATRIX SHARK H4M is a professional, all-in-one 4-channel HDMI audio and video switcher designed for live streaming and complex production needs. It integrates advanced video switching with comprehensive audio mixing, offering features like multiple inputs, USB/SD recording, RTMP/SRT streaming, and USB Type-C capture.</p>
<div></div> <div><b>SHARK S4</b> MICRO 4-CH SDI/HDMI LIVE STREAM MULTI-FORMAT VIDEO SWITCHER</div>	<p><a href="#">AVMATRIX SHARK S4: 4-Channel SDI/HDMI Live Stream Video Switcher User Manual</a></p> <p>Explore the AVMATRIX SHARK S4, a compact 4-channel SDI/HDMI multi-format video switcher. This manual details its features for live streaming, recording, audio mixing, keying, transitions, and output configurations, designed for professional video production.</p>
<div></div> <div><b>VS0601U</b> MINI 6 CHANNEL MULTI-FORMAT STREAMING VIDEO SWITCHER</div>	<p><a href="#">AVMATRIX VS0601U Mini 6-Channel Multi-Format Streaming Video Switcher Manual</a></p> <p>Comprehensive guide to the AVMATRIX VS0601U, a compact 6-channel SDI/HDMI multi-format video switcher for live streaming, audio mixing, and transitions. Features include USB3.0 live streaming, multiple outputs, and versatile input support.</p>
<div></div> <div><b>PVS0613</b> PORTABLE 6 CHANNEL MULTI-FORMAT VIDEO SWITCHER</div>	<p><a href="#">AVMATRIX PVS0613 Portable 6-Channel Multi-Format Video Switcher User Manual</a></p> <p>This manual provides comprehensive information on the AVMATRIX PVS0613, a portable 6-channel multi-format video switcher. It covers safety precautions, interfaces, specifications, front panel controls, operation instructions, and menu settings for video switching, audio mixing, and transition effects.</p>