

FoMaKo M4

FoMaKo M4 SDI 4K HDMI Video Mixer Switcher

USER INSTRUCTION MANUAL

1. Introduction

This manual provides detailed instructions for the setup, operation, and maintenance of your FoMaKo M4 SDI 4K HDMI Video Mixer Switcher. Please read this manual thoroughly before using the device to ensure proper functionality and to prevent damage.



Packaging Box



Power Supply



Instruction Manual



USB 3.1 Cable

Image 2.1: Included accessories: the switcher unit, power supply, instruction manual, and USB 3.1 cable.

3. Setup

3.1. Device Overview and Connections

The FoMaKo M4 features a comprehensive set of inputs and outputs for professional video production. Familiarize yourself with the panel layout and port functions.

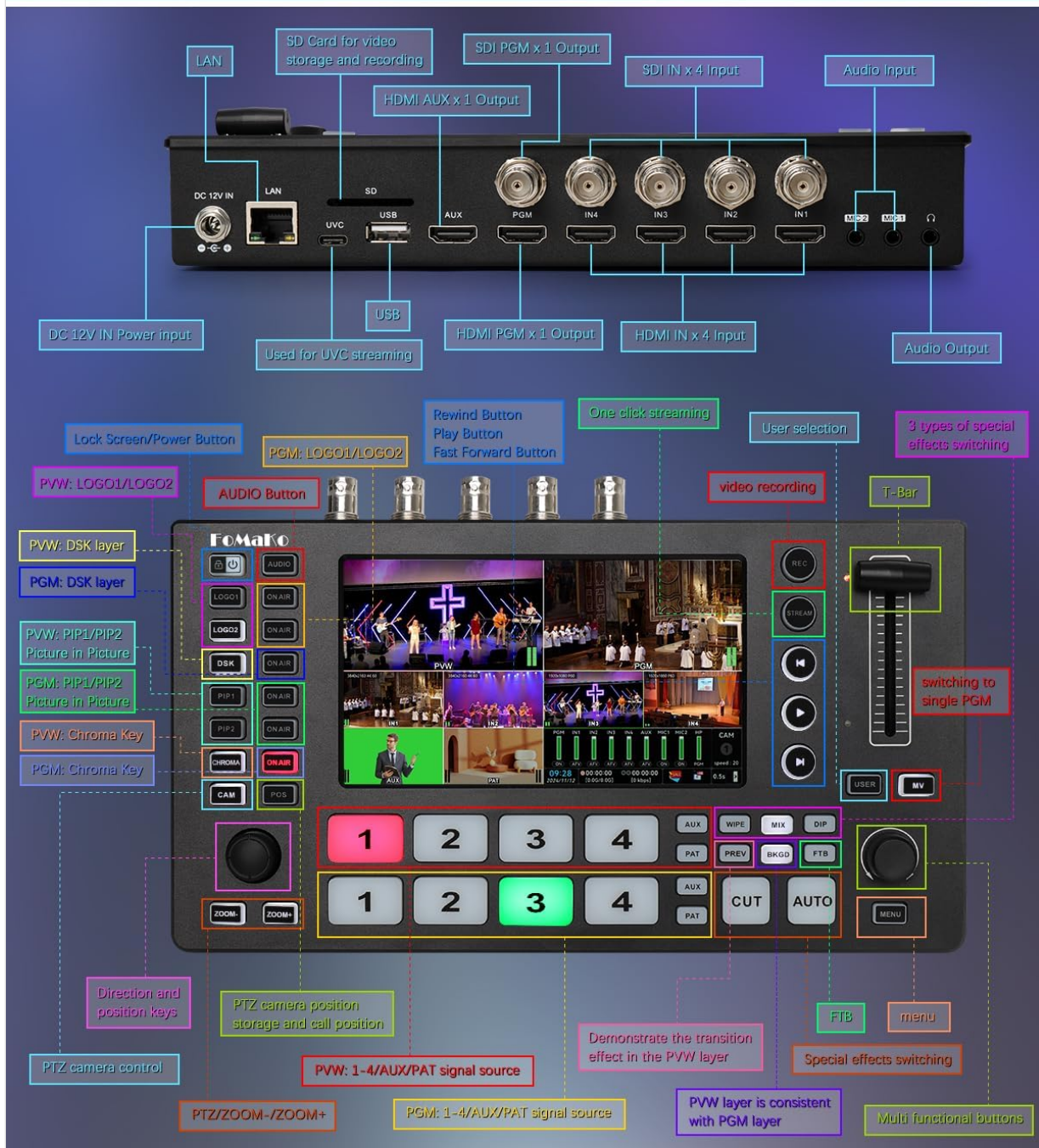


Image 3.1: Detailed diagram illustrating the front panel controls and rear interface ports of the M4 switcher.

3.2. Connecting Your Devices

Follow the connection diagram to integrate your cameras, monitors, and other equipment with the switcher.

- **Video Inputs:** Connect up to four HDMI sources and four SDI sources. HDMI IN1 and IN2 support 4K 60FPS input.
- **Audio Inputs:** Utilize the two independent 3.5mm inputs for microphones or line devices.
- **Video Outputs:** Connect your program (PGM) and auxiliary (AUX) monitors via SDI and HDMI outputs.
- **USB 3.1:** Connect to a computer for lossless live streaming.
- **USB 2.0:** For PGM recording and firmware upgrades.

- **LAN Port:** For network control and RTSP live streaming.



Image 3.2: A visual guide for connecting various devices such as cameras, computers, monitors, and audio equipment to the M4 switcher.

3.3. Powering On

After all connections are secure, connect the power supply to the DC 12V IN port and then to a power outlet. Press the power button to turn on the device.

4. Operating Instructions

4.1. Input and Output Management

The 5.5-inch FHD LCD screen provides real-time monitoring of all multi-source feeds. Use the input selection buttons (1-4) to choose your preview (PVW) and program (PGM) sources.



Image 4.1: The M4 switcher's capability to simultaneously accept 4K P60 and 1080P60 inputs across its various ports.

4.2. Transition Effects

The M4 offers 30 professional transition effects, including MIX, WIPE, and DIP. Select your desired effect using the dedicated buttons and execute transitions with the T-Bar or CUT/AUTO buttons.



Image 4.2: Visual representation of the 30 available switching effects, categorized by MIX, WIPE, and DIP.

4.3. Advanced Keying Functions

Utilize Chroma Key, Luma Key, and DSK for real-time graphics overlay, picture-in-picture (PIP), and logo insertion.

- **Chroma Key:** For green screen effects. Ensure the PAT layer is active during chroma operations.
- **DSK:** For adding subtitles and other graphic overlays.
- **PIP:** Display multiple video sources simultaneously.

Supports 30 Switching Effects

3 types of effect shortcut keys for switching

WIPE MIX DIP



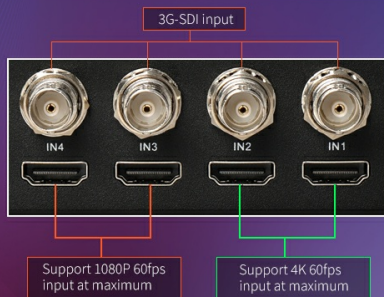
Image 4.3: Demonstration of double channel chroma keying functionality, showing both preview and program outputs with green screen effects.

4.4. PTZ Camera Control

The M4 supports PTZ camera control, allowing for rapid and precise camera switching. Ensure all PTZ cameras and the video mixer are connected to the same router.

- **CAM Button:** Short press to activate a camera; long press to select a camera for knob control.
- **POS Button:** Save and recall camera presets.
- **ZOOM+/- Buttons:** Control the zoom function of the PTZ camera lens.

Can simultaneously input 4K P60 and 1080P60



Most video switchers on the market do not support simultaneous input of 4K P60 and 1080P60, or do not support 4K PTZ cameras



Image 4.4: The PTZ camera control interface on the M4, highlighting the joystick and dedicated buttons for camera movement and zoom.

4.5. Video Recording

The M4 supports high bit rate dual recording via both SD card and USB storage options. Users can select a bit rate range from 5-30 Mbps (default is 20 Mbps).

Support PTZ camera control

(All PTZ cameras and the video mixer switcher must connect to the same router)

CAM: Activate the camera, short press the CAM button.

Motion control: long press the CAM button, selecting the camera to be controlled by the knob.

POS: Camera preset saving and calling

PTZ camera joystick control.

ZOOM-/ZOOM+ Button: Used for the zoom function of the PTZ camera lens.



Image 4.5: The M4 switcher connected to external USB storage and an SD card, illustrating its dual recording capabilities.

4.6. Live Streaming

The M4 offers two-channel RTSP network livestreaming to various platforms and Type-C USB 3.1 for direct live streaming. Users can control bitrate (5-50 Mbps) and frame rate (24-60fps) for each channel.



Image 4.6: The M4 switcher displaying both vertical (mobile) and horizontal (computer) live streaming modes, adaptable for different platforms.

4.7. Remote Control

The built-in web server allows for remote control via computers and smartphones. Access the switcher's interface through a web browser for comprehensive control.



Phone



Tablet



Web Browser

Professional-Grade Remote Control

Control via Web Browser/tablet/Phone:
Command Your Video Switcher Beyond
the Booth

Image 4.7: Examples of remote control interfaces on a smartphone, tablet, and computer web browser for the M4 switcher.

4.8. Customization: Videos, Backgrounds, and Logos

The AUX input can import SD cards and USB drives to record videos, as well as import custom videos. You can add custom logos and backgrounds, with adjustable position and cropping.



Image 4.8: Interface showing options to add custom videos, backgrounds, and logos to the M4 switcher's output.

5. Maintenance

5.1. Cleaning

Regularly clean the device with a soft, dry cloth. Avoid using liquid cleaners or solvents that may damage the surface or internal components.

5.2. Firmware Updates

Periodically check the FoMaKo official website for firmware updates. Updates can be performed via the USB 2.0 port to enhance functionality and performance.

6. Troubleshooting

If you encounter issues with your FoMaKo M4, refer to the following common solutions:

- **No Power:** Ensure the power adapter is securely connected to both the device and a working power outlet.
- **No Video Output:** Verify that input sources are active and correctly connected. Check output monitor connections and ensure the correct PGM source is selected.
- **Audio Issues:** Confirm audio input levels and settings. Check cable connections for microphones or line devices.
- **Flickering Screen:** If the internal display flickers, try powering the unit off and on. If the issue persists, contact customer support.
- **Remote Control Connectivity:** Ensure the switcher and your control device are on the same network and the LAN cable is properly connected.

7. Specifications

Feature	Detail
Model Number	M4
Product Dimensions	7 x 14 x 4 inches
Item Weight	2.2 pounds

Video Inputs	4x HDMI (IN1/IN2 support 4K 60FPS), 4x SDI
Video Outputs	1x SDI PGM, 1x HDMI PGM, 1x HDMI AUX, 1x USB 3.1 Lossless
Audio Inputs	2x 3.5mm (MIC/Line)
Display	5.5 Inch FHD LCD Screen
Recording	SD Card, USB 2.0 (PGM recording)
Live Streaming	Type-C USB 3.1, 2-Channel RTSP Network
Keying Functions	Chroma Key, Luma Key, DSK, PIP, LOGO
Transition Effects	30 (MIX, WIPE, DIP)
Control	PTZ Camera Control, Built-in Web Server (Remote Control)







8. Warranty and Support

FoMaKo provides comprehensive support for your product:

- **3-Year Limited Warranty:** Covers manufacturing defects and ensures product reliability.
- **30-Day Money-Back Guarantee:** Risk-free purchase.
- **Free Online Training:** Resources to help you get started easily.
- **24/7 Expert Assistance:** Responses within 24 hours. Please include your Order ID for faster service.
- **Lifetime Customer Technical Support:** Ongoing assistance for the lifespan of your product.



Image 8.1: Overview of FoMaKo's customer support and warranty offerings, including 24/7 assistance and a 3-year limited warranty.

<div><p>FoMaKo Live Stream Video Mixer Switcher User Manual V1.0</p><p>FoMaKo 4-Link 1080P/60FPS Live Streaming Video Mixer Switcher Model: UVLIVE ME, KC601 Pro Address: 10F, Hengsheng Building, No. 10, Zhongyuan Road, Xixiang, Shenzhen, China, 518103 Email: support@fomako.com</p></div>	<p>FoMaKo Live Stream Video Mixer Switcher User Manual V1.0</p> <p>Comprehensive user manual for the FoMaKo Live Stream Video Mixer Switcher (UVLIVE ME, KC601 Pro). Covers product introduction, control panel, video/audio operations, PTZ control, menu functions, and shortcut keys for live production.</p>
<div><p>FoMaKo 12G-SDI HDMI NDI USB 4K PTZ CAMERA (User Manual V1.0)</p><p>FoMaKo 4-Link 1080P/60FPS Live Streaming Video Mixer Switcher Model: UVLIVE ME, KC601 Pro Address: 10F, Hengsheng Building, No. 10, Zhongyuan Road, Xixiang, Shenzhen, China, 518103 Email: support@fomako.com</p></div>	<p>FoMaKo K820S 4K PTZ Camera User Manual: Features, Setup, and AI Tracking</p> <p>Comprehensive user manual for the FoMaKo K820S 4K PTZ Camera. Learn about its features, specifications, installation, remote control, AI tracking capabilities, and troubleshooting.</p>
<div><p>FoMaKo Live Stream Video Mixer Switcher User Manual V2.0</p><p>FoMaKo 4-Link 1080P/60FPS Live Streaming Video Mixer Switcher Model: UVLIVE ME, KC601 Pro Address: 10F, Hengsheng Building, No. 10, Zhongyuan Road, Xixiang, Shenzhen, China, 518103 Email: support@fomako.com</p></div>	<p>FoMaKo Live Stream Video Mixer Switcher User Manual V2.0</p> <p>Comprehensive user manual for the FoMaKo live stream video mixer switcher, detailing its features, operations, connections, menu functions, and shortcut keys for professional live broadcasting. Covers PTZ control, multi-layer video processing, and network streaming.</p>
<div><p>FoMaKo IP Streaming Camera Quick Start Guide</p><p>FoMaKo 4-Link 1080P/60FPS Live Streaming Video Mixer Switcher Model: UVLIVE ME, KC601 Pro Address: 10F, Hengsheng Building, No. 10, Zhongyuan Road, Xixiang, Shenzhen, China, 518103 Email: support@fomako.com</p></div>	<p>FoMaKo IP Streaming Camera Quick Start Guide</p> <p>A quick start guide for setting up FoMaKo IP streaming cameras, covering video output methods, finding the camera's IP address, and integrating with IP PTZ controllers.</p>
<div><p>FoMaKo 12G-SDI HDMI NDI USB 4K PTZ CAMERA (User Manual V1.0)</p><p>FoMaKo 4-Link 1080P/60FPS Live Streaming Video Mixer Switcher Model: UVLIVE ME, KC601 Pro Address: 10F, Hengsheng Building, No. 10, Zhongyuan Road, Xixiang, Shenzhen, China, 518103 Email: support@fomako.com</p></div>	<p>FoMaKo 4K PTZ Camera User Manual V1.0</p> <p>User manual for the FoMaKo 12G-SDI HDMI NDI USB 4K PTZ Camera, covering features, specifications, installation, remote control, AI tracking, and troubleshooting.</p>
<div><p>FoMaKo NDI/SDI/HDMI/USB 4K PTZ CAMERA User Manual (V1.0)</p><p>FoMaKo 4-Link 1080P/60FPS Live Streaming Video Mixer Switcher Model: UVLIVE ME, KC601 Pro Address: 10F, Hengsheng Building, No. 10, Zhongyuan Road, Xixiang, Shenzhen, China, 518103 Email: support@fomako.com</p></div>	<p>FoMaKo 4K PTZ Camera User Manual V1.0</p> <p>This user manual provides comprehensive details on the functions, installation, and operation of the FoMaKo 4K PTZ Camera. It covers quick start guide, product overview, technical specifications, remote control, network connection, serial communication, maintenance, troubleshooting, and usage examples.</p>