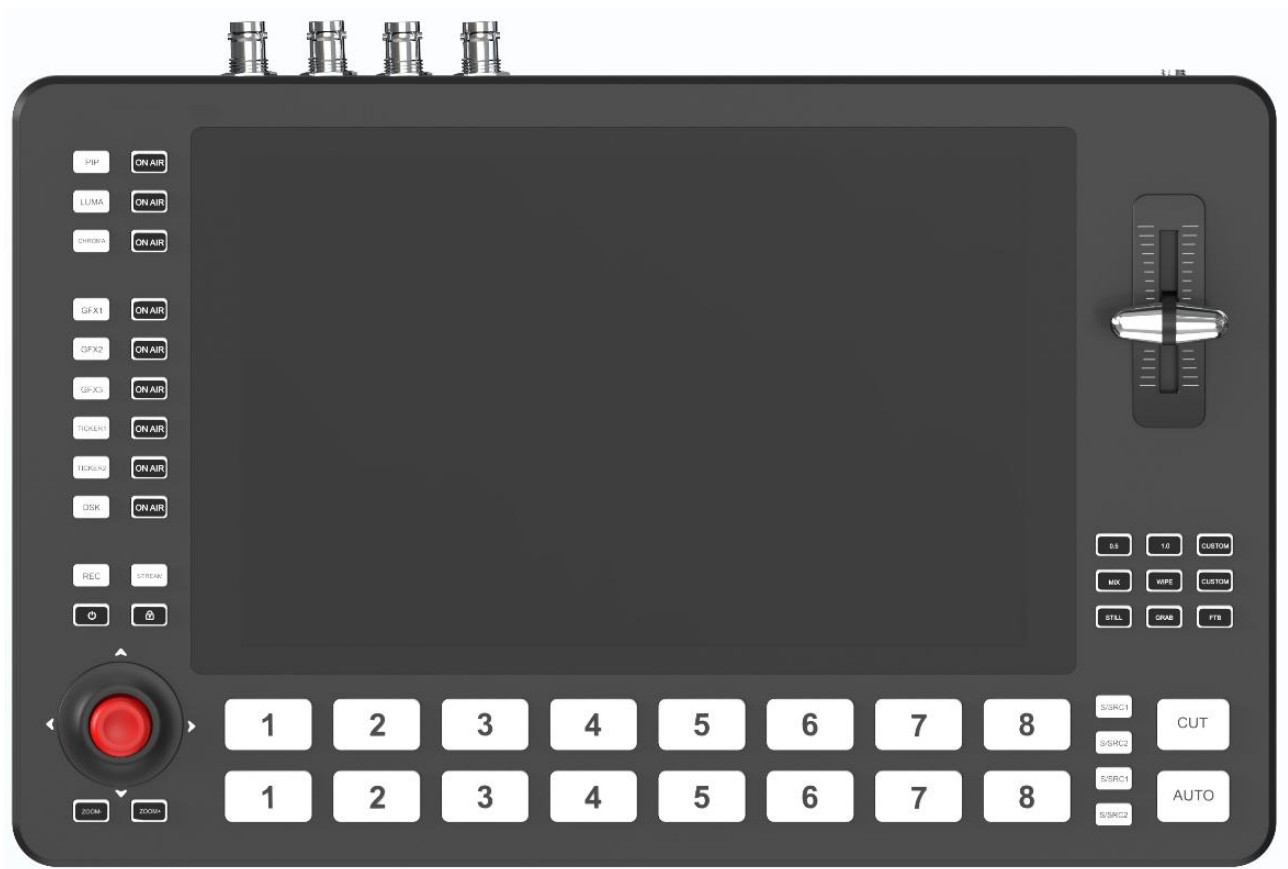


FoMaKo

8CH Professional Audio & Video Switcher



Catalog

1. Product Introduction	1
1.1 Overview	1
1.2 Main Features	1
2. Interfaces	2
2.1 Interface Introduction	2
3. Configuration	4
4. Front Panel	6
4.1 Front Panel Introduction	6
5. Function Operation	7
5.1 Transition Control	7
5.2 Super Source	7
5.3 Switch Function Button	8
5.4 Quick Function Buttons	8
5.4.1 TRANSITION	8
5.5 PTZ Camera control operation	8
5.6 Lock/Power Key	8
5.7 FTB Key	9
5.8 Button Light Status	9
6. Status Page Display	10
7. Main Menu	11
7.1 Home Page	11
7.1.1 Source Settings	11
7.1.2 Transition Effect Settings	12
7.1.3 PTZ Camera Status	12
7.1.4 GFX	12
7.1.5 Push Streaming	12
7.1.5.1 Push Streaming Bitrate Setting	12
7.1.5.2 Push Streaming Address Setting	13
7.1.6 Recording	13
7.1.7 Screenshot	13
7.2 Transition	13
7.2.1 Transition Effect Settings	13
7.2.1.1 MIX	13
7.2.1.2 DIP	14
7.2.1.3 WIPE	14
7.2.2 DIP Color Settings	14
7.2.3 Transition Time Settings	14
7.2.4 Black Field Settings	14
7.2.5 PNG Dynamic Sequence Frame Transition	14
7.2.5.1 Transition Settings	14
7.2.5.2 Custom Transition Effects	14
7.2.6 LUT	15
7.3 Audio	15
7.3.1 PGM Audio Settings	15
7.3.2 8-channel Embedded Digital Audio Settings	15
7.3.2.1 Mixing mode, Volume control & Audio delay	15
7.3.3 2-channel Audio Input settings	15
7.3.3.1 Mixing mode, Volume control & Audio delay	15
7.3.4 Audio Output Settings	16
7.4 GFX	16
7.4.1 GFX1-3	16
7.4.1.1 LOGO Settings	16
7.4.1.2 GIF Settings	17

7.4.1.3 Scoreboard Settings	17
7.4.2 TICKER1-2	17
7.4.2.1 Subtitle Edit	18
7.4.2.2 Subtitles Display	18
7.4.2.3 Subtitles Background	18
7.5 Media	18
7.5.1 File	18
7.5.2 Network Camera	19
7.5.3 Pull Streaming	19
7.5.4 NDI	19
7.5.5 Browser	19
7.6 Keys	19
7.6.1 Luma Key	19
7.6.1.1 Key Source	20
7.6.1.2 Fill Source	20
7.6.1.3 Threshold	20
7.6.1.4 Gain	20
7.6.1.5 Reverse	20
7.6.1.6 Mask	21
7.6.2 Chroma Key	21
7.6.2.1 Key Source	21
7.6.2.2 Pick Color	21
7.6.2.3 Similarity	21
7.6.2.4 Smoothness	21
7.6.2.5 Spill	22
7.6.2.6 Mask	22
7.6.3 DSK Key	22
7.6.3.1 Key Source	22
7.6.3.2 Threshold	22
7.6.3.3 Gain	22
7.6.3.4 Reverse	22
7.6.3.5 Mask	23
7.6.4 Picture-in-Picture	23
7.6.4.1 Source	23
7.6.4.2 Size & Position Selection	23
7.6.4.3 Cropping	23
7.6.4.4 Border	24
7.7 Super Source	24
7.7.1 Edit	24
7.7.1.1 Name	24
7.7.1.2 Background	24
7.7.1.3 Window	25
7.7.1.4 Lock	25
7.8 PTZ	25
7.8.1 Camera Connection	25
7.8.1.1 Connect the camera via the network	25
7.8.1.2 Connect the camera via NDI	25
7.8.1.3 Connect the camera via the RS232 interface	25
7.8.1.4 Connect the camera via the RS422/RS485 interface	25
7.8.2 Camera Settings	26
7.8.2.1 Camera Position Setup	26
7.8.2.2 Speed	26
7.8.2.3 Focus	26
7.8.2.4 Exposure	26

7.8.2.5 White Balance	26
7.9 Interface	27
7.9.1 Input Settings	27
7.9.2 Output Settings	27
7.9.3 Direction Configuration	27
7.9.4 TALLY	27
7.10 System	28
7.10.1 Language	28
7.10.2 Fan	28
7.10.3 Backlight	28
7.10.4 Network	28
7.10.5 Storage	28
7.10.6 Joystick Calibration	28
7.10.7 Time/Date	29
7.10.8 About	29
7.10.9 Reset	29
7.10.10 NDI	29
7.10.11 Version	29
8. Remote Software Control	29
8.1 Connection Software	29
8.1.1 Remote Control With Computers	29
8.1.2 Remote Control With Cellphones	30
8.2 Panel control	30
8.3 Media Settings	30
8.4 Audio Settings	31
8.5 Setting Page	31
9. Warranty Service	33

1.Product Introduction

1.1 Overview

This device is equipped with 4 HDMI inputs (supporting 4Kp60) and 4 SDI inputs. It has 4 USB ports (2×USB3.0 + 2×USB2.0), 4 NDI HX3 input, video media file playback and RTSP/RTMP/SRT pull stream/push stream. Meanwhile, it provides 3 HDMI outputs, and each output port can flexibly configure the output signal source via the menu.

This 8-channel professional audio & video switcher is built on ARM and FPGA embedded hardware platforms. It supports advanced transition effects including PNG sequence frame transitions beyond traditional 2D transitions. It has powerful real-time video playback functions, dual Super Sources and advanced graphic overlay. With comprehensive multimedia features, it is compatible with various PTZ cameras.

In addition, this device supports powerful ISO recording, which can record 8 input signals and 1 PGM output signal simultaneously, and is compatible with multiple storage media. It also integrates broadcast-grade functions such as green screen keying, audio mixing & adjustment, resizable & repositionable Picture-in-Picture, logo overlay and multi-layer compositing.

The video switcher is widely applied in live sports events, virtual studios, education & training, live commerce, church activities, social interviews and other on-site production scenarios.



1.2 Main Features

- Super Source: 2 independent Super Sources are supported. Each Super Source supports up to 4 windows, and the size and position of each window can be adjusted arbitrarily. It also supports the overlay effect of the transparent channel of the PNG background image.

- Advanced Subtitles & Graphic Packaging: 3 GFX layers are supported, which can be configured as static images or PNG dynamic sequence frames, and support lower third and scoreboard overlay. Besides, 2 subtitle layers allow editing text content, font size & color, subtitle background color, background transparency, subtitle length, scroll direction and scroll speed.

- Abundant Advanced Transitions: It includes classic 2D transitions (MIX, DIP), 3D transitions based on X/Y/Z axis, and PNG dynamic sequence frame transitions. Effects such as displacement, rotation, deformation and particle can create strong spatial perception and immersion, ideal for galas, live streaming and promotional videos. Transition parameters can be adjusted to match program rhythm.

- Diversified Input Interfaces: 4×4Kp60 HDMI, 4×3G-SDI, 2×USB3.0 (4K webcam), 2×USB2.0 (webcam), 4×media sources, NDI, video files and pull streams are supported.

- 3 HDMI Outputs: Each output port can be flexibly configured with output the source signal through the menu.

- Multiple Media Sources Input: Still images, PATTERN test mode images, PDF / Browser are supported. Supports PDF page turning and scaling; online/offline browser supports touch click and slide operations.

- ISO Recording: Simultaneously record up to 8 input channels and 1 PGM channel. Recording can be saved to USB flash drive, SD card or built-in high-speed SSD.

- POE Power Supply & 4 Channels Network Streaming: Support NDI output and network streaming, each channel supports customizable output sources. Dual Gigabit Ethernet ports (support POE power supply) have a higher network bandwidth.

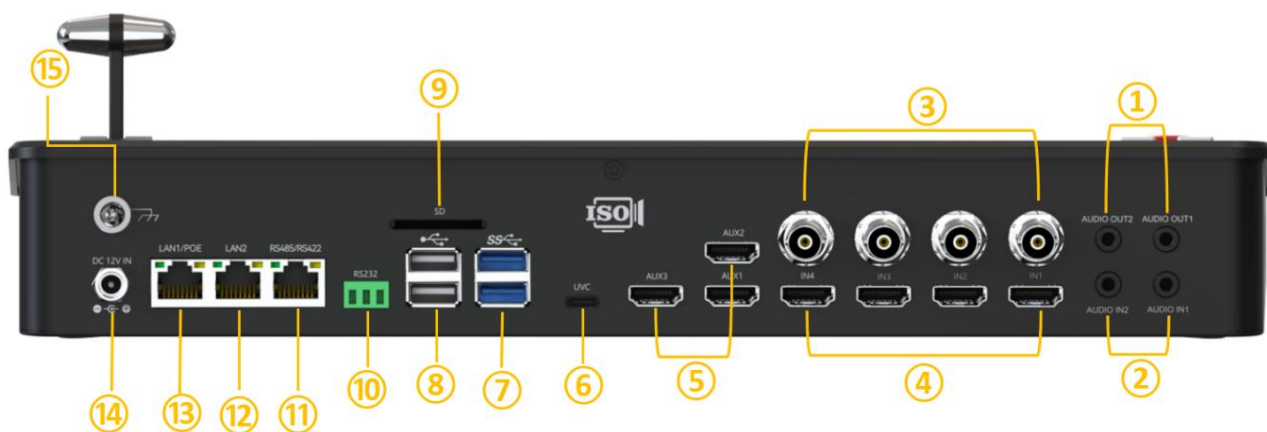
- Upstream key / Downstream key: Supports upstream keys such as Picture-in-Picture, brightness, chroma, etc., as well as downstream keys such as DSK & advanced subtitles and graphic packaging.

- Real-Time Video Playback: Record live footage in real time and support preset-time playback and slow-motion playback.

- PTZ Camera Compatibility: Support multiple protocols including VISCA, PELCO-D, PELCO-P and ONVIF. PTZ cameras can be controlled via network, RS422, RS485 or RS232.

2. Interfaces

2.1 Interface Introduction



1	AUDIO OUT (3.5mm Stereo) x2 Audio Output
2	AUDIO IN (3.5mm Stereo) x2 Audio Input
3	SDI IN x 4 Input
4	HDMI IN x 4 Input
5	HDMI AUX x3 Output
6	USB TYPE-C x1 (for UVC streaming)

7	USB-A 3.0 x2 for video encoding & storage, webcam firmware upgrade (Annotation 1) and so on
8	USB-A 2.0 x2 for video encoding & storage, webcam firmware upgrade (Annotation 1) and so on
9	SD Card Slot x1 for video recording & storage
10	RS232 Port x1 for PTZ camera control
11	RS485/RS422 Port x1 for PTZ camera control
12	LAN2 Port x1 for network streaming and PTZ camera control
13	LAN1/PoE Port x1 for network streaming, PTZ camera control and POE power supply
14	DC 15V IN x1 for Power Input
15	Exterior Grounding Screw

Annotation 1: Please copy the firmware file (.img) to the root directory of a USB flash drive, insert the USB into the device, and the system will automatically recognize the firmware after power-on. Follow the on-screen prompt to complete the upgrade.

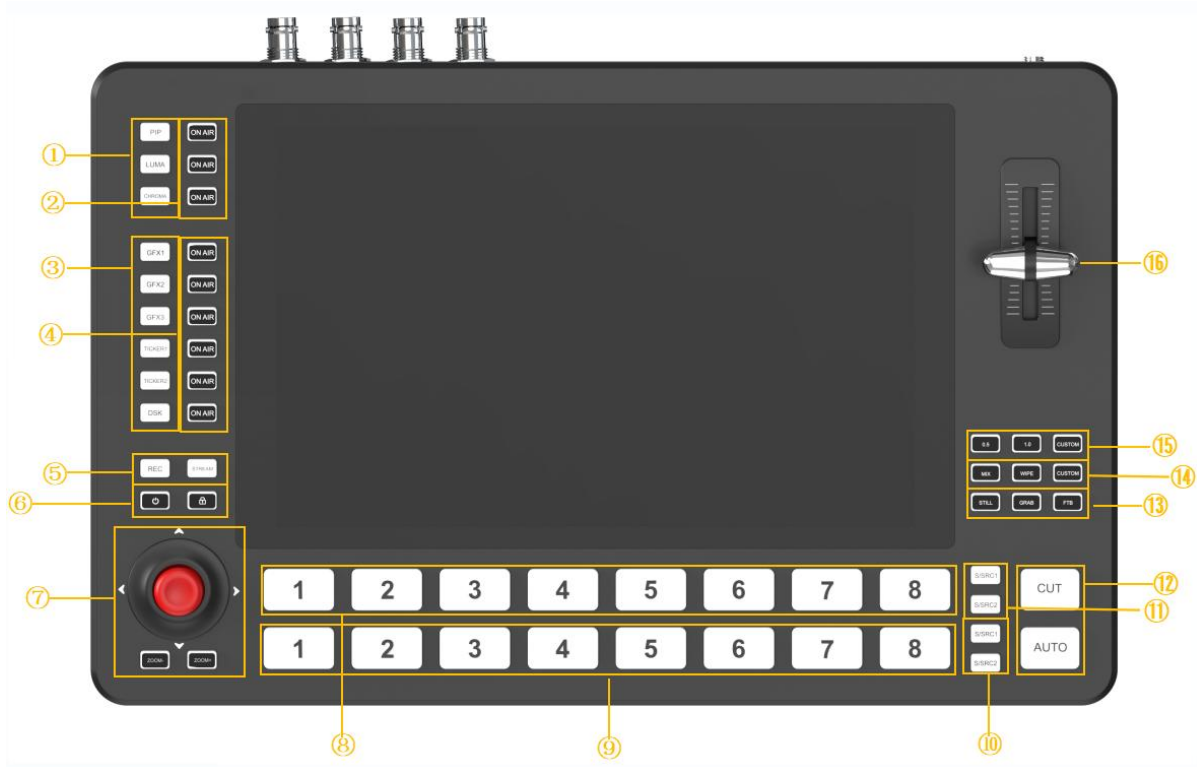
3. Configuration

Specifications	
Video Input	HDMI INx4+SDI INx4+USB3.0x2+USB2.0x2+NDI x4
Video Output	HDMI AUXx3
Audio Input	Line(3.5mm Stereo)x2
Audio Output	Line(3.5mm Stereo)x2
USB	USB3.0x2+USB2.0x2 Supported formats: FAT/EXFAT/NTFS
Control Port	LAN x 2 (1 port supports POE power supply)
SD 卡	Supported formats: FAT/EXFAT/NTFS
UVC Output	USB Type-Cx1
Power Supply	DC 15V x1
Functions	
Transition	T-Bar/AUTO/CUT
Transition Effects	WIPE/MIX/3D Effects/png Sequence Frame Transitions
Screen Layout	Support Multi-screen Monitoring & Single-screen Preview
Key	Image cutout with any color (Menu Settings), image cutout with customized brightness parameters (Menu Settings); One-click quick chroma Key & image cutout key
Layers	15 overlay layers in total: Super Source (5 Layers)+ 3 Up Stream keys (Chroma Key、PIP、Luma Key) + 6 Down Stream keys (3*GFX、2*TICKER、1*DSK) + 1*3D Lut
Audio	Audio mixing, Audio Gain Adjustment, Independent Headphone Audio Monitoring & Independent PGM Audio Control
PTZ	Support VISCA/ PELCO-D/ PELCO-P/ ONVIF and so on via Network or RS422/RS485/RS232PTZ Control
Media	Video, image, PATTREN, PDF, Audio, Webcam, NDI Pull Stream, Browser and so on
Streaming	Support NDI output & Network Streaming, each Channel Supports Customized Output Sources, Dual Gigabit Network Port (POE Power Supply)
LOGO	Multiple Logos with Adjustable Size & Position, Support Lower Third, Support Static Logo Flight-in Effect & Dynamic PNG/GIF
The Largest Data Processing Stream	Physical Interface (HDMI/SDI) x4; Media stream (video files / network streaming / NDI / webcam / images / web pages, etc.)x4;Super Sourcex2
PIP	Customizable size, position and signal source
ISO Recording	Simultaneous Recording up 8 input channels + 1 PGM channel; can be saved on USB flash disk/SD Card/Built-in SSD
Tally	Network Tally, USB Tally
8 Channels Video Input	Support 4*4K-HDMI Input, 4*3G SDI Input, 2*USB3.0 Network Camera, 2*USB2.0 Network Camera, 4*NDI-HX, 4*Video File Player, 4*RTSP/RTMP/SRT Network Streaming, 4*Still Image, 4*PATTERN Test Mode Image, 1*PDF/Browser Advanced Source, Supports PDF page turning and scaling; online/offline browser supports touch click and slide operations.
Super Source	Simultaneously support 2 super sources, max 4 windows per source; each window's size, position & cropcan be adjusted; support transparent PNG background overlay
Up Stream & Down Stream Key	Upstream: PIP/ Luma Key/ Chroma Key; Downstream: DSK/ Advanced Subtitles and Graphic Packaging
Advanced Subtitles & Graphic Packaging	3 GFX layers are supported, which can be configured as static images or PNG dynamic sequence frames, and support lower third

	and scoreboard overlay. Besides, 2 subtitle layers allow editing text content, font size & color, subtitle background color, background transparency, subtitle length, scroll direction and scroll speed
Real-Time Video Playback	Record live footage in real time, support preset-time playback and slow-motion playback.
HDMIx3 Output	Support different frame rates and resolution outputs. Each output interface can be flexibly configured to output source signals.
Supported Formats	
HDMI Input	720p24(23.98), 720p25, 720p30(29.97), 720p50, 720p60(59.94) 1080i50, 1080i60(59.94) 1080p24(23.98), 1080p25, 1080p30(29.97), 1080p50,1080p60(59.94) 2160p24(23.98),2160p25,2160p30(29.97), 2160p50,2160p60(59.94)
SDI Input	720p24(23.98), 720p25, 720p30(29.97), 720p50, 720p60(59.94) 1080i50,1080i60(59.94)1080p24(23.98),1080p25, 1080p30(29.97),1080p50,1080p60(59.94)
USB Input	YUV422/MJPEG: 1080p24(23.98), 1080p25, 1080p30(29.97), 1080p50,1080p60(59.94)
HDMI Output	AUX OUT1:720P/1080p/2160P 60/50/30/25/24 AUX OUT2:1080P60 AUX OUT3:720P/1080P 60/50/30/25/24
USB Output	1080p 60
Push Streaming Output	1080p 60/50/30/25/24
Others	
Power Supply	12~24V
Power Dissipation	≤30w
Size (LDW)	340x235x77mm
Weight	2kg
Temperature	Operating Temperature: 0℃~50℃
Accessories	Power Adapter(15V 3A)x1; USB Cable(A to C)x1

4. Front Panel

4.1 Front Panel Introduction



1	PIP	Turn on/off the PIP of the PVW layer. Short press to turn on, the white light will be on.
	LUMA	Turn on/off the LUMA function of the PVW layer. Short press to turn on, the white light will be on.
	CHROMA	Turn on/off the CHROMA function of the PVW layer. Short press to turn on, the white light will be on.
2	ON AIR	Turn on/off the PIP, LUMA image cutout and CHROMA image cutout functions on the PGW layer. Short press to turn on, the red light will be on.
3	GFX1-3	Turn on/off the Subtitles and Graphic Packaging function of the PVW layer. Short press to turn on, the white light will be on.
	TICKER1-2	Turn on/off the Caption Packaging function of the PVW layer. Short press to turn on, the white light will be on.
	DSK	Turn on/off the DSK image cutout function of the PVW layer. Short press to turn on, the white light will be on.
4	ON AIR	Turn on/off the GFX1-3, TICKER1-2 and DSK image cutout functions on the PGW layer. Short press to turn on, the red light will be on.
5	REC	Turn on/off the recording. The red light will be on when turned on.
	STREAM	Turn on/off the push streaming. The green light will be on when turned on.
6	Power Button	Short press to turn on/off when the device is off; Long press to open the shutdown operation interface, short press to switch the MV layout when the device is off.
	Lock Button	Short press to lock the buttons, the red light will be on when turned on.
7	PTZ/ZOOM-/ZOOM+	PTZ: control the coordinates of the camera

		ZOOM-/ZOOM+: Zoom function of PTZ camera lens
8	PGM:1-8	PGM signal source's indication and directly switching control, when turned on, the red light is on.
9	PVW:1-8	PVW signal source's indication and directly switching control, when turned on, the green light is on.
10	PVW:S/SRC1-2	PVW Super Source1-2 selection and indication, when turned on, the green light is on.
11	PGM:S/SRC1-2	PGM Super Source1-2 selection and indication, when turned on, the red light is on.
12	CUT/AUTO	CUT: Real time switching between PVW and PGM. AUTO: Switching special effects between PVW and PGM.
13	STILL	Still PGM screens, when turned on, the white light is on.
	GRAB	Take a screenshot of the PGM screens.
	FTB	PGM emergency blackout, when turned on, the FTB flashes red light, and the PGM is mute.
14	MIX/WIPE	MIX/WIPE Transition effect switch control, when turned on, the white light is on.
	CUSTOM	Custom transition effects, when turned on, the white light is on.
15	0.5/1.0/CUSTOM	System transition time: 0.5s/1.0s, when turned on, the white light is on. CUSTOM transition time: Customized time, the white light is on.
16	T-Bar	Manual switching between PVW and PGM via T-Bar.

5. Function Operation

5.1 Transition Control

The transition control is composed of keys PVW1-8, keys PGM1-8, CUT, AUTO, 0.5/1.0/CUSTOM and the push rod.

PVW1~8 Keys: Used to control the source selection of the current layer of the preview screen (PVW)

PGM1~8 Keys: Used to control the source switching of the corresponding layer of the broadcast screen (PGM)

CUT Keys: PVW and PGM are switched instantly

AUTO Keys: PVW and PGM are switched automatically according to the transition time setting and the transition effect setting

Push Rod: PVW and PGM are switched manually according to the position of the push rod

0.5/1.0/CUSTOM Buttons: 0.5s, 1.0s and customize the transition duration

5.2 Super Source

When broadcasting on-site, users can quickly and conveniently overlay multiple picture-in-picture (PIP) displays for synthesis by using the Super Source. The software control panel allows for quick selection of preset interfaces or custom settings. All control options are within easy reach, enabling quick selection and saving of presets, as well as convenient adjustment of parameters such as the size, position, borders, and cropping of each picture frame.

Two Super Sources can be set on the PVW and PGM layers respectively. Each Super Source supports up to 4 windows, and the size and position of each window can be adjusted arbitrarily. It also supports the overlay effect of the transparent channel of the PNG background image.

PGM S/SRC1-2 Keys: Turn on/off the Super Source 1/2 screen of the PGM layer

PVW S/SRC1-2 Keys: Turn on/off the Super Source 1/2 screen of the PVW layer

5.3 Switch Function Button

Upstream Keys: Upstream keys essentially mean that these are the keys that are part of the switch, so when switching from anything on PVW to PGM, anything that is an upstream key will be switched over with it.

ON AIR CHROMA/PIP/LUMA: Chroma cutout, Luma cutout, PIP on/off for the PGM layer.

CHROMA Keys: Chroma cutout on/off for the PVW layer.

PIP Keys: PIP on/off for the PVW layer.

LUMA Keys: Luma cutout on/off for the PVW layer.

Downstream Keys: Downstream Keys are independent keys control layers, they will not disappear when the main screen is switched, no matter what you do to the switch, the superimposed downstream Key will remain on the screen. Downstream Keys are great for showing LOGOs on the screen, etc.

ON AIR DSK/GFX1-3/TICKER1-2 keys: Turn on/off the DSK cutout, GFX1/2/3 and subtitles function of the PGM layer.

DSK Keys: Turn on/off the DSK image cutout function of the PVW layer.

GFX1-3 Keys: Turn on/off the subtitles and graphic packaging function of the PVW layer.

TICKER1-2 Keys: Turn on/off the caption packaging function of the PVW layer.

Multimedia Function Keys:

REC Keys: Turn on/off the recording, can record 8 input sources and 1 PGM signal source simultaneously.

STREAM Keys: Turn on/off the push streaming, support up to 4 channels network streaming.

STILL Keys: PGM screen screen still function.

GRAB Keys: Take a screenshot of the PGM screens.

5.4 Quick Function Buttons

5.4.1 TRANSITION

System and Custom Transition Effect Quick Operation Menu

MIX Keys: Used for blending transition effects. Default is on, when turned on, the white light is on.

WIPE Keys: Used for wipe-off transition effects.

CUSTOM Keys: Used for custom transition effects.

System and Custom Transition Time Quick Operation Menu

0.5S/1.0S Keys: Can use system transition time.

CUSTOM Keys: Can use custom transition time.

5.5 PTZ Camera control operation

After connecting the camera, use the five-directional joystick and the ZOOM-/ZOOM+ buttons to control the PTZ camera.

Motion control: After connecting the camera, use the PTZ joystick to control the camera's left-right movement and up-down motion.

ZOOM-/ZOOM+ Keys: Zoom function of PTZ camera lens.

5.6 Lock/Power Key

Lock Key: Short press the lock key, all keys' operation will be locked, including the touch function. After

locking, the light of the lock key will be red. Press again to exit the locked state.

Power Key: Short press to turn on the video switcher, press again to turn off the video switcher.

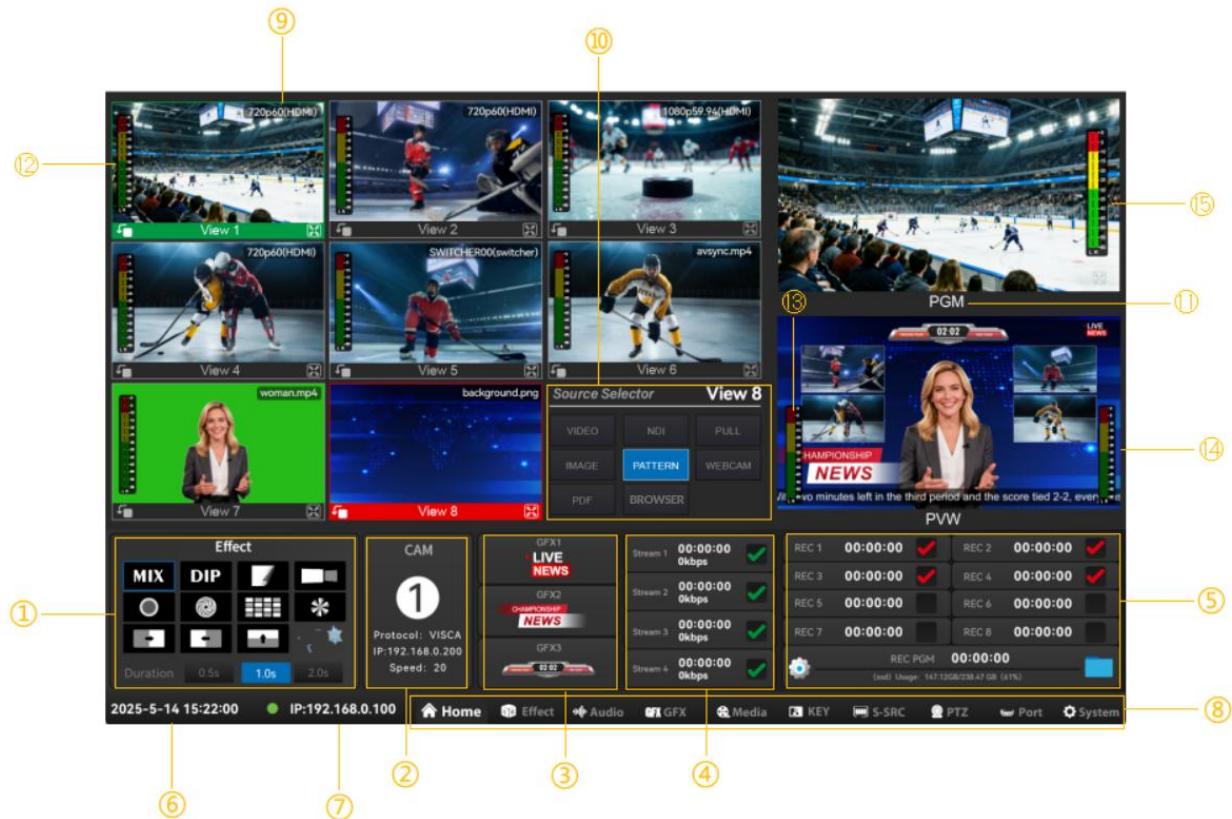
5.7 FTB Key

Press the FTB button, the PGM will output a black frame and enter silent mode, with the FTB light flashing; press again to exit.

5.8 Button Light Status

Button Light	Dark	Light	Flash
LOCK	Button unlock	Button lock	
POWER			
REC	Recording not started	Recording	
STREAM	Streaming is not started	Streaming	
ON AIR		Effects applied to the PGM screen	
PIP	Turn off Picture-in-Picture in PVW	Turn on Picture-in-Picture in PVW	
LUMA	Turn off brightness cutout in PVW	Turn on brightness cutout in PVW	
CHROMA	Turn off chroma cutout in PVW	Turn on chroma cutout in PVW	
GFX1-3	Turn off subtitles and graphic packaging function in the PVW	Turn on subtitles and graphic packaging function in the PVW	
TICKER1-2	Turn off subtitles packaging function in the PVW	Turn on subtitles packaging function in the PVW	
DSK	Turn off DSK cutout in the PVW	Turn on DSK cutout in the PVW	
PGM1~8	This source is not selected	Corresponding source selection	
PVW1~8	This source is not selected	Corresponding source selection	
S/SRC1-2	This source is not selected	Corresponding source selection	
S/SRC1-2	This source is not selected	Corresponding source selection	
CUT	Switching signal source		
AUTO		Automatic transition in progress (red light)	
0.5/1.0		Transition duration setting	
CUSTOM		User-defined transition duration	
MIX		Turn on MIX transition effect	
WIPE		Turn on WIPE transition effect	
STILL		PGM screen still	
GRAB			
FTB			PGM black and mute

6. Status Page Display

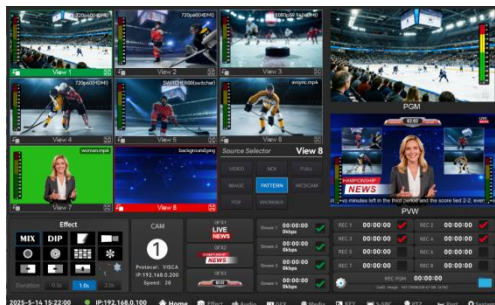


①	Transition duration and special effects display	⑦	IP address display	⑬	MIC1 sound bar graph display
②	PTZ camera position, protocol, IP address and lens movement speed display	⑧	Menu display	⑭	MIC2 sound bar graph display
③	GFX subtitles or graphic display	⑨	Input signal display	⑮	PGM sound bar graph display
④	Streaming route, duration and bit rate display	⑩	Source selection		
⑤	Recording route, duration and used/total memory display	⑪	UMD display		
⑥	Date and time display	⑫	Input source sound bar graph display		

7. Main Menu

7.1 Home Page

The home page displays the status of each interface screen of the video switcher. Users can directly click on the screen to quickly set the selection and zooming of the source image, transition effects, PTZ cameras, graphics, streaming, recording and media functions.



7.1.1 Source Settings

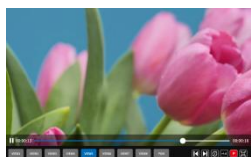
The video switcher has 4*4K60P HDMI signal / 4*SDI signal and 4*media.

In the multi-screen mode on the home page, users can click the icon  to rotate the screen; double-click the View1-8 and PGM layers, or click the icon  to switch to single-screen mode. In single-screen mode, click the icon  to switch back to multi-screen mode.

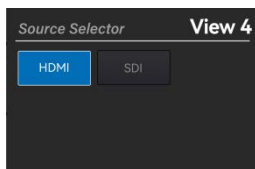
In single-screen mode, users can select different signal sources to display. When VIEW5-8 is playing videos, in single-screen mode, users can select the video through clicking ; click  to choose single-loop, list-loop, or random playback of the video; click  to select the video playback speed; click  to turn on/off the video playing following the PGM function .

Note: If the playback source of View5-8 is playing videos, in multi-screen mode, users can only switch to single-screen mode by clicking the icon .

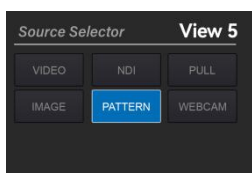
When the video playback speed is selected as x0.2, x0.5, or x0.8, the video only has screen but no sound.



Click VIEW1-4, can switch between HDMI and SDI signal in source selection interface. (HDMI ports support up to 4K signal).



Click VIEW5-7, can switch between video, NDI-HX, pull streaming, image, pattern and webcam in source selector interface.

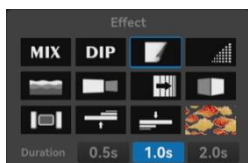


Click VIEW8, can switch between video, NDI-HX, pull streaming, image, pattern, webcam, PDF and browser in source selector interface.



7.1.2 Transition Effect Settings

This video switcher has a wide range of transition effects. It not only offers traditional 2D plane transition effects such as MIX and DIP, but also supports 3D transition effects based on the X/Y/Z three-dimensional spatial axes, as well as PNG dynamic sequence frame transitions. Users can quickly select transition effects and duration by clicking the transition effect bar on the home page.



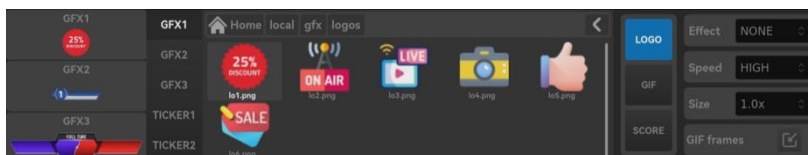
7.1.3 PTZ Camera Status

This video switcher is compatible with various PTZ cameras. On the home page, users can view the current camera position, protocol, IP address and lens movement speed.



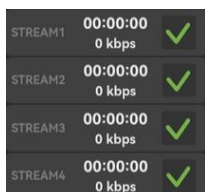
7.1.4 GFX

This video switcher supports three advanced subtitles and graphic packaging functions. Users can view the currently set images on the home page. Clicking the image will enter the GFX menu settings page.



7.1.5 Push Streaming

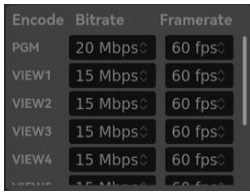
This video switcher supports up to 4 network push streaming channels + 1 NDI channel. Each channel can customize the output source.



7.1.5.1 Push Streaming Bitrate Setting

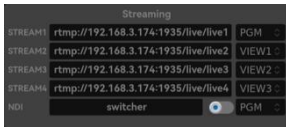
Click the home page, then click the icon  to customize and modify the bitrate and framerate of the push streaming video.

Note: The total frame rate of 9 channels is up to 510 fps.



7.1.5.2 Push Streaming Address Setting

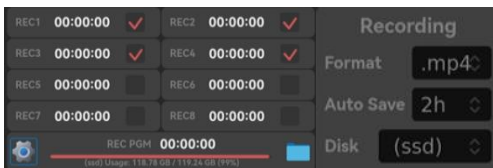
Click the home page, click the icon  to customize and modify the push streaming address and source, modify the NDI name, NDI source, and the NDI enable switch.



7.1.6 Recording

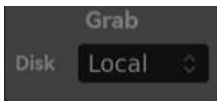
This video switcher can simultaneously record 8 channels input sources and 1 PGM signal source. On the main page, users can view the recording duration & the used/total capacity of the storage device, can turn on/off the recording of a certain channel. Clicking the icon  on the main page, users can set different recording formats, recording duration and recording storage disk. Clicking the icon  on the main page, can quickly enter the media function menu.

Note: When recording by using a USB drive, if the writing speed of the USB drive is insufficient, the recording will automatically stop.



7.1.7 Screenshot

On the home page, click the icon . In the drop-down box of the screenshot storage location, select the target disk. Then click GRAB button, the PGM screenshots will be saved to the corresponding disk.



7.2 Transition

The video switcher has abundant transition effects. It includes classic 2D transitions (MIX, DIP), 3D transitions based on X/Y/Z axis, and PNG dynamic sequence frame transitions. The transition effects switching can be achieved through the AUTO button or T-BAR manual push rod.

7.2.1 Transition Effect Settings

Enter the Transition settings, select the Transition Effect, it includes more than 50 2D & 3D transition effects such as MIX, DIP, WIPE, etc. The default is MIX transition effect.



7.2.1.1 MIX

Select MIX and click the AUTO button to execute the MIX transition effect.



7.2.1.2 DIP

Select DIP and click the AUTO button to execute the DIP transition effect. The DIP colors can be configured, the default immersion color is white.

DIP to Black (fade out):

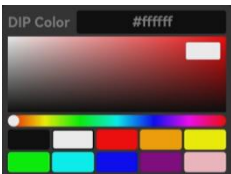


7.2.1.3 WIPE

WIPE is the switching effect from one screen to another. Users can select different WIPE styles through the menu and make transitions with the set transition duration.

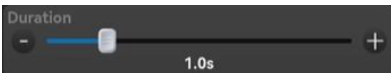
7.2.2 DIP Color Settings

The default DIP color is white. There are ten default colors available for selection. Users can also customize the DIP color by clicking the color picker.



7.2.3 Transition Time Settings

Enter the transition settings, select the transition time, and set the transition time through the duration slider or click +-. The longer the time, the slower the transition speed. The duration can be set from 0.1s to 5.0s, the default value is 1.0s.



7.2.4 Black Field Settings

Enter the transition settings, select FTB, and set the black field duration through the FTB slider or click +-. The longer the duration, the slower the black field speed. The duration can be set from 0.1s to 2.0s, the default value is 1.0s.



7.2.5 PNG Dynamic Sequence Frame Transition

7.2.5.1 Transition Settings

Enter the transition settings, select the built-in PNG dynamic sequence frame transition effect provided by the system, then click the effect and wait for it to load completely to use it.



7.2.5.2 Custom Transition Effects

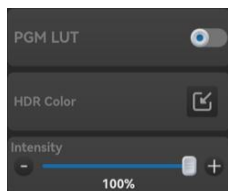
Enter the transition settings, click the icon  to enter the storage space and select the desired files, click the icon , wait for the loading to complete, then use it.



7.2.6 LUT

The LUT function is usually reflected as a color mapping table in image processing, which records the mapping relationship between the original color and the target color. Based on the RGB components of the pixels, it performs table lookup mapping to achieve color conversion.

Users can use the LUT filter in the PGM output screen, can customize the import of LUT files and change the filter strength. The default strength value is 50%.



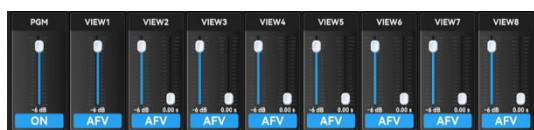
7.3 Audio

Supports 8 channels digital audio, 2 channels independent 3.5mm audio inputs, and 2 channels 3.5mm audio outputs. Each input audio channel can be independently configured with volume, mixing mode, and delay (VIEW1 does not support delay settings). The mixing mode supports on, off, and AFV.

7.3.1 PGM Audio Settings

PGM audio control. This video switcher supports the overlay of 11 audio channels, including 8 embedded digital audio channels, 2 MIC/LINE audio input channels, and 1 special effect music channel.

Enter the audio settings, users can switch on/off the PGM audio, adjust the audio volume, with the volume range from -60dB to 0dB. The default state of PGM sound is on, and the default volume is -6dB.



7.3.2 8-channel Embedded Digital Audio Settings

Enter the audio settings, select VIEW1-8 to set 8-channel embedded digital audio.

7.3.2.1 Mixing mode, Volume control & Audio delay

Users can independently set the mixing mode to ON/OFF/AFV, the default mode is AFV. Clicking the audio button corresponding to the video source, can switch different mixing modes. When the audio mode of a certain channel is set to AFV, the audio of that channel is only effective when the video is in PGM.

Users can adjust the volume of each input audio. The volume range is from -60dB to 0dB, the default value is -6dB. In the menu, audio delay settings for VIEW2-8 can be made to synchronize the audio with the video. The maximum audio delay is 1s, the default value is 0.00s.



7.3.3 2-channel Audio Input settings

Enter the audio settings, select audio in 1 & 2 to set them. Users can connect it to a linear device or to a desktop or a pocket microphone. Users can set the microphone mode, adjust the audio volume and audio delay.

7.3.3.1 Mixing mode, Volume control & Audio delay

Users can independently set the microphone's off/linear/mic mode. The default mode is linear.

Click the audio button of audio in 1/2 to switch between different mixing modes. When the MIC interface is connected to the microphone, select the microphone mode; when connected to a linear device, select the linear mode. The default mode is LINE (linear).

Users can adjust the volume of each audio in. The volume range is from -60dB to 0dB, the default is -6dB. In the menu, users can set audio delay for audio in 1 and audio in 2. The maximum audio delay is up to 1s, the default is 0.00s.



7.3.4 Audio Output Settings

The video switcher has 2 audio outputs for audio monitoring. Users can select one audio source from the main audio source(PGM), 8 embedded audio sources, 2 audio in & MUSIC audio source as the monitoring source. Users can adjust the monitoring volume of the headphones, with the volume range being from -60dB to 0dB. The default headphone source is PGM, the default volume is 0dB.



7.4 GFX

Advanced subtitles and graphic packaging is a function of the video switcher that allows pre-produced or real-time generated text, graphics, animations, etc. to be superimposed on the main video source in real time, achieving visual enhancement and information supplementation. It includes 3 graphic and text packaging functions and 2 subtitle packaging functions.

Click GFX on the homepage to enter the GFX editing interface. In the editing interface, the position of the LOGO or subtitles can be moved.



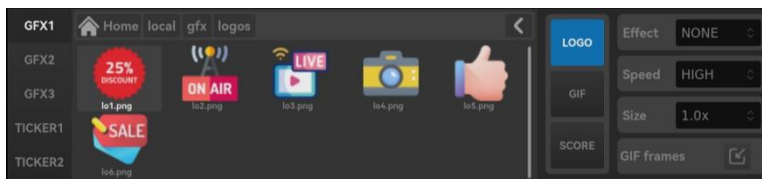
7.4.1 GFX1-3

This video switcher supports 3 GFX subtitles and graphic packaging: it can be configured as static images/PNG dynamic sequence frames. At the same time, these 3 subtitles and graphic packaging also support advanced overlay and control functions such as Lower Third/scoreboard.

7.4.1.1 LOGO Settings

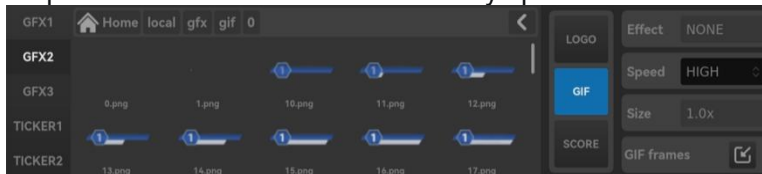
Click GFX to enter the editing interface, click LOGO button, select the LOGO image from the storage device. Click the dropdown box for effects to choose different appearance effects; click on the dropdown box for speed to select different appearance speeds; click on the dropdown box for size to choose the size of the

LOGO display.



7.4.1.2 GIF Settings

Click GFX to enter the editing interface, then click GIF button to select the GIF folder in the storage device. Click the GIF sequence frames' icon , and import the GIF animation effect; click the speed drop-down box to choose different entry speeds.



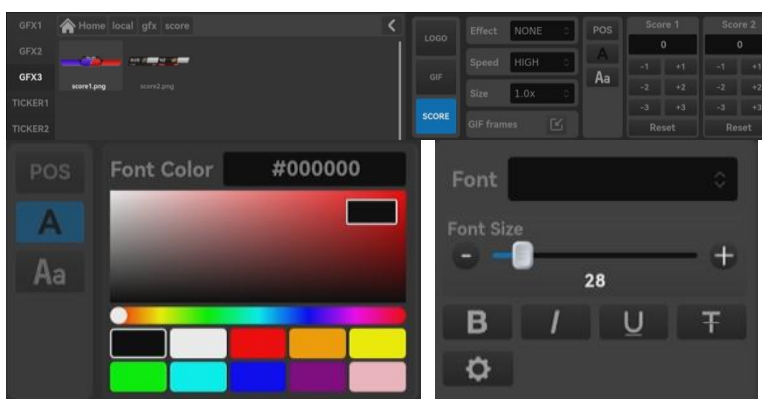
7.4.1.3 Scoreboard Settings

Click GFX to enter the editing interface, click Scoreboard button to select the scoreboard image from the storage device. Click the dropdown box for effects to choose different appearance effects; click the dropdown box for speed to select different display speeds; click the dropdown box for size to choose the size of the scoreboard display.

Click Position to manually adjust the display position of the score; click the input box for scoreboard 1/2 to pop up a soft keyboard to manual input the score, or perform the score's + - by clicking the number module; click Reset button to reset the score to 0.

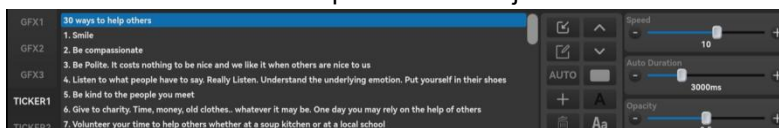
Click the icon  to set the score color, there are ten default colors to choose, or users can customize the color by clicking the color picker.

Click the icon  to edit the font style, size, bold, etc.; click  to select other fonts.



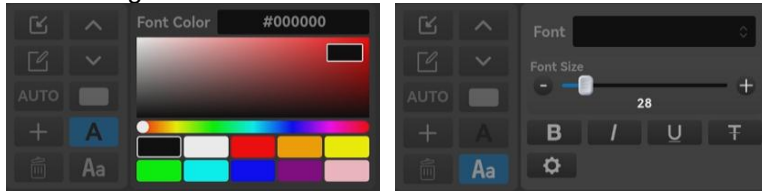
7.4.2 TICKER1-2

This video switcher supports two subtitle packaging options: users can customize and edit the subtitle text, font size & color, subtitle background color, background transparency, subtitle length, subtitle scrolling direction, and scrolling speed, etc. After opening the GFX function editing interface, users can click on the screen to move the subtitle position and adjust the size of the text box.



7.4.2.1 Subtitle Edit

Click  to perform the function of importing subtitles; after importing, click  to modify the content of a single subtitle; click  to add subtitles; click  to delete subtitles; click  to change the font color; click  to change the font style, size, bold, etc.; click  to select other fonts from the local storage.

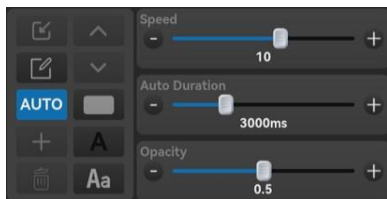


7.4.2.2 Subtitles Display

After importing the subtitle text, click   to choose the subtitle, then click , the subtitles will be displayed line by line in sequence;

By adjusting the slider of delay or clicking +/-, users can set different delays. The shorter the delay, the faster the subtitles will be displayed line by line.

By adjusting the slider of speed or clicking +/-, users can set the speed of the subtitle movement. A negative value means it appears from the right to the left, a value of 0 means it remains stationary. A positive value means it appears from the left to the right; the larger the value, the faster the speed.



7.4.2.3 Subtitles Background

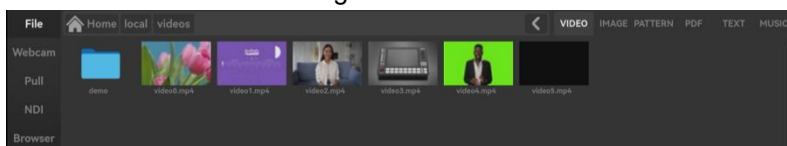
After importing the subtitle text, users can click  to customize the background color of the subtitles.

Users can set the opacity of the subtitle's background by sliding the opacity slider or clicking +/- . The smaller the value, the more transparent the background will be.



7.5 Media

The media module of the video switcher is an integrated input unit used to expand signal sources. It is equipped with file, webcam, pull streaming, NDI and browser functions. It can directly access audio & video materials from local or external storage devices, connect to network camera screens, obtain network live broadcasting streamings, call signals from local LAN NDI devices and display web content. It provides rich and flexible multi-channel signal sources for the video switcher.



7.5.1 File

Enter the media module of the video switcher, click File to perform operations such as importing, exporting, deleting, and applying on local, solid-state drive, and external storage devices' files. Files support

video, images, patterns, PDF, text, and audio. Long press the file of the external storage device to select the operations of deleting or importing to the local/SSD. Long press the file of the local/SSD storage device to select the operations of deleting or exporting.

Click Audio, select the audio files from the local, solid-state drive, or external storage device to playback. Users can set the volume, play, pause, and playback mode of the music.

7.5.2 Network Camera

Connect the camera to the USB port of the device by using a Type A-A data cable. Then, enter the media module of the video switcher, click the network camera, select the video format as the video source output.

7.5.3 Pull Streaming

The video switcher can preset multiple pull streaming video sources. It supports video sources in RTSP and RTMP formats. The video source addresses can be imported via a USB drive (place the pull streaming address in the "pull_url.txt" file on the USB drive) or edited by adding, editing operations to the pull streaming address. Click the Delete button to delete the pull streaming address.

7.5.4 NDI

NDI is an efficient network transmission protocol that enables video transfer between multiple devices without the need for dedicated networking equipment. It allows video signals to be transmitted over the network to multiple devices, facilitating video editing, playback, control, and other functions.

After clicking NDI, it will automatically detect all NDI source devices within the current local area network. Users can select the desired source as the video source to input.

7.5.5 Browser

The device is connected to the network via the network cable. Click "Media - Browser", then click + to add browser address. After adding the address, click the address, can input the website as a video source of VIEW8 channel. Users can also import the browser address via a USB drive (place the browser address in the "browser_url.txt" file on the USB drive).

7.6 Keys

This video switcher supports a variety of upstream and downstream keys, including brightness keys, chroma keys and DSK keys. Keying is a very powerful video production tool that can arrange and organize visual elements from different signal sources on the same video screen.

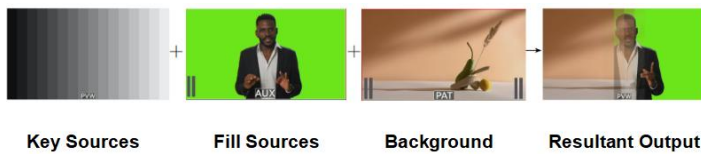
When using the key function, multiple layers of video or graphics will be superimposed on the background layer. Adjusting the transparency of different parts of each layer so that the background becomes visible is called cutout. When applying transparency processing to certain parts, multiple techniques need to be used, which correspond to various key functions available on the switcher.

A key requires two video sources, the Fill source and the Key source. The Fill source is a video image that is superimposed on the background; while the Key source is used to specify the transparent areas in the fill source. The fill source and key source can be selected from external inputs or internal sources of the switcher. Static and dynamic images can both be used as Fill sources or Key sources.

7.6.1 Luma Key

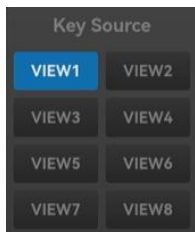
The Luminance Key provides a method to composite text clips on background clips based on the brightness level in the video.

Enter the Luminance Key, select the key source, and set the Luminance Key effect. The Luminance Key works in PVW and PGM. When the Luminance Key function is turned on in PVW, the LUMA key lights up white; when the Luminance Key function is turned on in PGM, the LUMA ON AIR key lights up red.



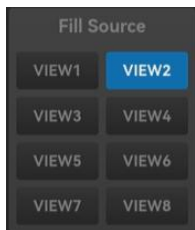
7.6.1.1 Key Source

Users can customize the key source. Enter the Luma Key settings, select Key Source, the Key Source can be VIEW1-8. The default is VIEW1.



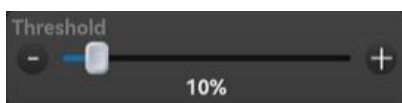
7.6.1.2 Fill Source

Users can customize the fill source. Enter the Luma Key settings, select Fill Source, the Fill Source can be VIEW1-8. The default is VIEW2.



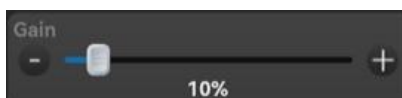
7.6.1.3 Threshold

In Luma key, the threshold is used to set the range for brightness matching. Users can adjust the threshold by sliding the threshold slider or clicking the + - buttons. The threshold range is from 1% to 100%, and the default threshold is 10%.



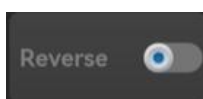
7.6.1.4 Gain

In the Luma key, the gain sets the smoothness of the border when cutting out. Users can adjust the gain by the gain slider or clicking the + - buttons. The larger the value, the smoother the border. The gain range is from 1% to 100%, and the default gain value is 10%.



7.6.1.5 Reverse

In the brightness key, turn on Reverse, The DSK effect will display in reverse mode. The default is off.



7.6.1.6 Mask

In the Luma key, the Mask function adjusts the part of the displayed screen through the mask layer. Users can click on the screen to move the mask layer position and adjust its size.



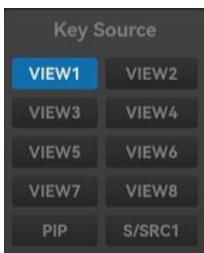
7.6.2 Chroma Key

Chroma Key is a visual effect and post-production technique used to composite (layer) two images or video streams together based on hue (chroma range). The technique has been used in many fields to remove backgrounds from photo or video subjects, especially in news broadcasting, film, gaming, live broadcasting and other industries.

Enter Chroma Key, select the key source, and set the Chroma Key effect. Chroma Key works in PVW and PGM. When Chroma Key is turned on in PVW, the CHROMA key lights up white; when Chroma Key is turned on in PGM, the CHROMA ON AIR key lights up red.

7.6.2.1 Key Source

Users can customize the key source. Enter the Chroma Key settings, select Key Source, the Key Source can be VIEW1-8 and PIP. The default is VIEW1.



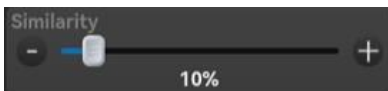
7.6.2.2 Pick Color

Users can customize the selection of the cropping color through the color picker, or directly click on the desired cropping color on the screen through the suction tool.



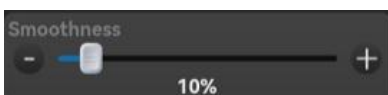
7.6.2.3 Similarity

In the chroma key, the similarity setting is the similarity range with the cutout color. The larger the number, the larger the cutout range. The similarity range is from 1% to 100%, and the default similarity is 10%.



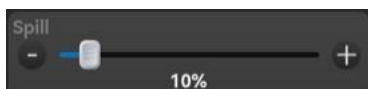
7.6.2.4 Smoothness

In chroma keying, smoothness sets the smoothness of the border when cutting out. The larger the number, the smoother the border. The smoothness range is from 1% to 100%, the default smoothness is 10%.



7.6.2.5 Spill

Spill is the core optimization function in the chroma key image matting system, specifically designed to solve the issue of residual green reflections (green edges) at the edges of foreground objects during green screen shooting, thereby enhancing the naturalness and professionalism of the image matting composition. The Spill can be adjusted through the Spill slider or by clicking + -, the higher values resulting in stronger suppression effects. The default value is 10%.



7.6.2.6 Mask

In the Chroma key, the Mask function adjusts the part of the displayed screen through the mask layer. Users can click on the screen to move the mask layer position and adjust its size.



7.6.3 DSK Key

DSK is a key control function specifically used in the video switcher to superimpose subtitles and graphics on the final program screen. It is the last stage of signal output and is superimposed on all screens and transitions. The DSK key function can be active in PVW and PGM. In PVW, turn on the DSK key function, the DSK key's white light will be on. In PGM, turn on the DSK key function, the DSK ON AIR key's red light will be on.



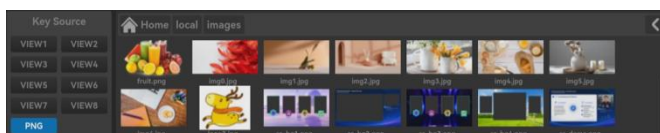
Key Sources

Background

Resultant Output

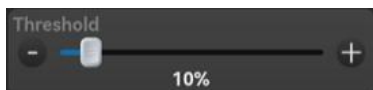
7.6.3.1 Key Source

Users can customize the key source. Enter the DSK Key settings, select Key Source, the Key Source can be VIEW1-8 and PIP image. The default is VIEW1.



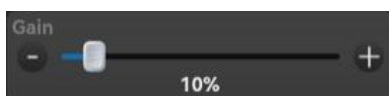
7.6.3.2 Threshold

In DSK key, the threshold is used to set the Luma range. The larger the value, the larger the range of the cropping. The threshold range is from 1% to 100%, and the default threshold is 10%.



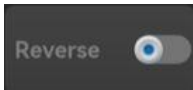
7.6.3.3 Gain

In the DSK key, the gain setting is the smoothness of the border when cutting out. The larger the value, the smoother the border. The gain range is from 1% to 100%, and the default gain value is 10%.



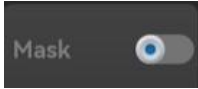
7.6.3.4 Reverse

In the DSK key, turn on Reverse, The DSK effect will display in reverse mode. It is closed by default.



7.6.3.5 Mask

In the DSK key, the Mask function adjusts the part of the displayed screen through the mask layer. Users can click on the screen to move the mask layer position and adjust its size.

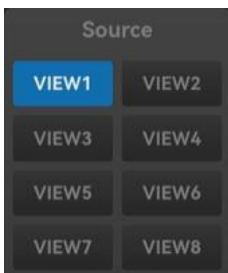


7.6.4 Picture-in-Picture

The picture-in-picture function enables the merging of multiple screens. It can reduce and position a channel signal, and superimpose it on the main screen to display. This function is commonly used in scenarios such as guest connections, dual-camera comparisons, courseware + lecturer, competition replays, etc. It supports adjusting the window size, position and border style. The operation is flexible and does not affect the switching of the main screen. It is the most commonly used split-screen presentation method in live broadcasts, meetings, and program production. The picture-in-picture function is effective in both PVW and PGM. In PVW, tenabling the picture-in-picture function turns on the white light of the PIP key; in PGM, enabling the picture-in-picture function turns on the red light of the PIP ON AIR key.

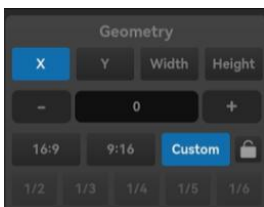
7.6.4.1 Source

Users can customize the Source. Enter the picture-in-picture settings, select Source, the Source can be VIEW1-8. The default is VIEW1.



7.6.4.2 Size & Position Selection

Users can click on the screen to adjust the size ratio and position of Picture-in-Picture 1. The position can be adjusted by long-pressing the picture-in-picture to move it. The size ratio can be selected as 16:9, 9:16, or CUSTOM; the size can be selected as 1/6, 1/5, 1/4, 1/3, 1/2, or CUSTOM. The default ratio and size are 16:9 and 1/6.



7.6.4.3 Cropping

Users can use the cropping function to select the part of the picture that they want to display in the picture-in-picture. Enter the picture-in-picture settings, click Crop, manually set the cropped screen and its size.



7.6.4.4 Border

In the picture-in-picture menu, users can adjust the border width by sliding the slider or clicking the + - buttons to set the border width, and set the border color through the color picker.



7.7 Super Source

This video switcher is equipped with two super sources. Each super source can support up to 4 windows. The size and position of each window can be adjusted freely and support cropping. It also supports the overlay effect of the transparent channel of the PNG background image. This feature enables you to obtain 5 completely independent layers, 4 picture-in-picture displays and 1 background image, allowing you to assign the signal to any video input! This enables users to still use the keying function for other tasks when using the picture-in-picture feature of the super source in multi-camera program production.



7.7.1 Edit

Enter the Super Source module, click  or  to enter the editing page, users can customize various combinations of the Super Source.



7.7.1.1 Name

Enter the Super Source editing page, click the corresponding editing icon for the name to edit the name of the Super Source.

7.7.1.2 Background

Users can select the background through channels 1-8, or click the picture, click the Import button, and choose a picture from the storage device to apply it.

Turn on the top-styling function, the background layer will be placed above the window layer. It is turned on by default.

7.7.1.3 Window

Users can directly click on the screen window to select the one they want to edit, or click on window 1/2/3/4 to choose the window. After selecting a window, they can customize and adjust its position, size, aspect ratio, input source, border size and color. They can also separately crop the window screen and control the display or close the window.

7.7.1.4 Lock

When the users click a window, and turn on the lock function, the editing of the remaining windows will be prohibited.

7.8 PTZ

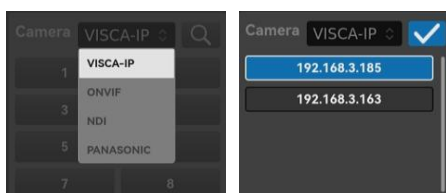
This video switcher is compatible with various PTZ camera control requirements and supports multiple protocols such as VISCA/PELCO-P/PELCO-D/ONVIF/NDI. It can control cameras through network ports or physical interfaces such as RS232/RS422/RS485. Using the five-direction keys, users can quickly and conveniently control the movement of the cameras. At the same time, in the camera menu, users can set the camera's parameters such as focus, exposure, and white balance of the camera.

7.8.1 Camera Connection

7.8.1.1 Connect the camera via the network

The PTZ camera and the video switcher should be connected to the same local area network.

Enter the settings, click the camera position number, click the drop-down box of the camera, select VISCA-IP/ONVIF, click Search, automatically search and display all the camera IP addresses within the local area network, select the IP address of the camera to be connected, click ☒ to set, then control the camera movement through the five-direction keys, up to 8 camera positions can be saved. Users can also manually set the IP address and port protocol for connection.



7.8.1.2 Connect the camera via NDI

The PTZ camera and the video switcher should be connected to the same local area network.

Enter the Settings - Media - NDI, select the NDI of the camera, then select the window (VIEW5/6/7/8) where the NDI picture will be displayed; Enter the PTZ camera settings, click the camera position number, click the drop-down box of the camera, select NDI, click Search, display the name of the corresponding window for NDI, click ☒ to set, then control the camera movement by using the five-direction keys.

7.8.1.3 Connect the camera via the RS232 interface

The RS232 port of the PTZ camera is connected to the RS232 port of the device via an RS232 data cable.

Enter the camera settings, click the camera position number, select the protocol PELCO-D /PELCO-P /VISCA, select the interface RS232. Then click the Save button to control the camera movement by using the five-direction keys.

7.8.1.4 Connect the camera via the RS422/RS485 interface

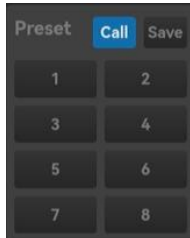
The RS422/RS485 ports of the PTZ camera are connected to the RS422/RS485 ports of the device via RS422/RS485 data cables.

Enter the camera settings, click the camera position number, select the protocol PELCO-D /PELCO-P /VISCA, select the interface RS422/RS485. Then click the Save button to control the camera movement by using the five-direction keys.

7.8.2 Camera Settings

7.8.2.1 Camera Position Setup

After connecting the camera, click Save. Users can save up to eight camera positions. Once saved, click Call, the PTZ camera will automatically move to the saved position.



7.8.2.2 Speed

Enter the camera settings, users can customize the lens movement speed and zoom speed. The default value is 8.

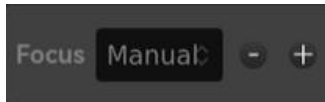
Note: The PELCO-D/P protocol does not support changing the camera's zoom speed.



7.8.2.3 Focus

Enter the camera settings, select focus to set automatic or manual focusing.

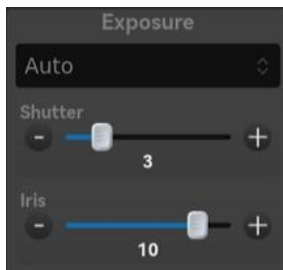
Note: The PELCO-D/P protocol does not support changing the camera's focus mode.



7.8.2.4 Exposure

Enter the camera settings, select exposure. The exposure mode can be set to automatic, manual, shutter priority and iris priority. The default shutter speed is 3. The default iris is 10.

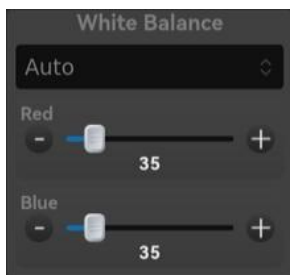
Note: The PELCO-D/P protocol does not support changing the camera's exposure mode.



7.8.2.5 White Balance

Enter the camera settings, select white balance, set it to be automatic, manual or outdoor mode. Users can manually set the red gain and blue gain. The gain range is 0-255. The default gain value is 35.

Note: The PELCO-D/P protocol does not support changing the camera's white balance mode.



7.9 Interface

This video switcher is equipped with multiple input and output interfaces, and can be flexibly configured through the menu, supports horizontal/vertical display settings.

7.9.1 Input Settings

Users can customize and modify the priority display paths for the four input signals.

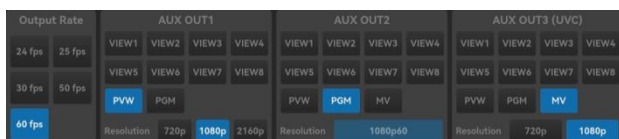
By default, the HDMI signals have the priority.



7.9.2 Output Settings

Users can customize modify the signal sources and output frame rates of the three output interfaces.

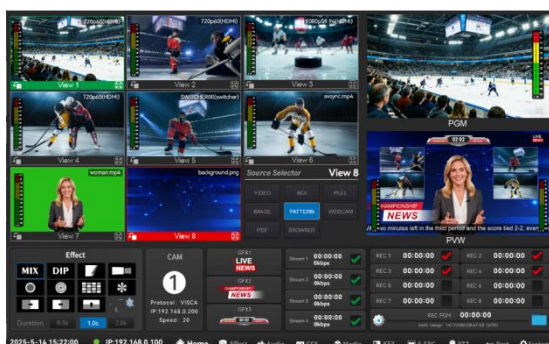
Note: AUX OUT2/3 cannot be set to output MV simultaneously.



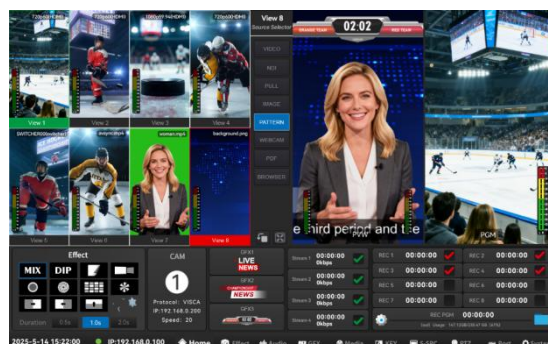
7.9.3 Direction Configuration

Entering the interface module, users can customize the horizontal or vertical display of the switcher.

Horizontal mode schematic diagram:



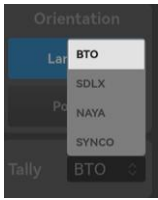
Vertical mode schematic diagram:



7.9.4 TALLY

TALLY is an auxiliary function of the video switcher. It uses indicator lights to inform the cameraman, host and technical team of the current signal status in real time. It serves as an "unspoken language" for multi-camera collaborative production, ensuring smooth live broadcasts and precise coordination among personnel.

Connect the TALLY device to the video switcher, enter the interface module, select different TALLY protocols, and set according to the instructions of the corresponding TALLY lights. Then, the PGM main output indicator + PVW preview indicator will be displayed. Note: Currently, it only supports 1-4 channels.



7.10 System

7.10.1 Language

Enter the system settings, select language to be Chinese or English.



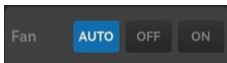
7.10.2 Fan

Enter the system settings, select the fan mode. The default is automatic mode.

Automatic mode: The fan speed is controlled according to the temperature of the switcher. The higher the temperature, the faster the speed.

Off mode: Turn off the fan.

On mode: The fan is always on during operation.



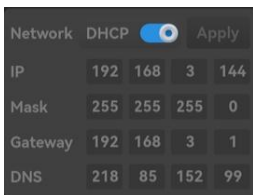
7.10.3 Backlight

The backlight controls the screen brightness. The value range is from 1 to 100. The higher the value, the brighter the screen. The default value is 80.



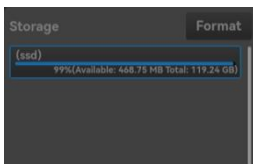
7.10.4 Network

Enter the network settings, automatically obtain the network IP, or configure it manually.



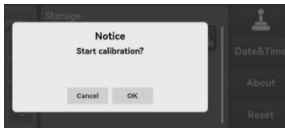
7.10.5 Storage

Enter the settings to check the usage status of the storage medium, click Format to convert the storage device to the exFAT format.



7.10.6 Joystick Calibration

Enter the settings, click Joystick Calibration, and calibrate the five-way key and the fader according to the system prompts.



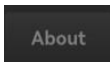
7.10.7 Time/Date

Enter the settings, select Time/Date to modify the year, month, day, hour and minute.

Select Date and Time				
Year	Month	Day	Hour	Minute
2098	11	30	22	58
2099	12	31	23	59
2000	1	1	00	00
2001	2	2	01	01
2002	3	3	02	02

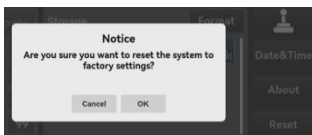
7.10.8 About

Enter the settings, click About to check the system information and update lot, scan the QR code to view the help information.



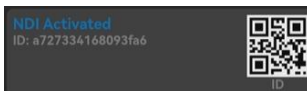
7.10.9 Reset

Enter the settings, select Reset, click OK, the switcher will perform the reset operation. After the reset, all configurations will be cleared and restored to the default state.



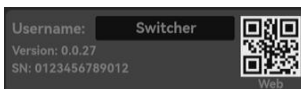
7.10.10 NDI

Enter the settings to check the ID number & whether the NDI is activated.



7.10.11 Version

Enter the settings, click the version to check the switcher's serial number, version date, our official webpage QR code.



8. Remote Software Control

8.1 Connection Software

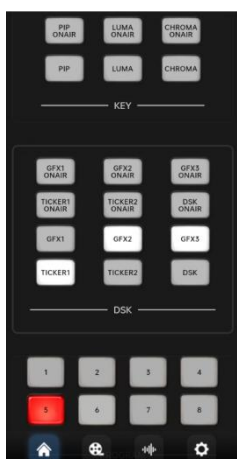
8.1.1 Remote Control With Computers

Automatically obtain or manually set the switcher's network IP address, ensuring that the computer and switcher are connected to the same local area network. On the computer, open a browser, enter the switcher's IP address, and press Enter to connect, accessing the upper-level computer homepage, which is the switcher page.



8.1.2 Remote Control With Cellphones

Ensure that the mobile device and switcher are on the same local area network. In the mobile browser, enter the switcher's IP address and open it to connect to the upper-level computer. Alternatively, go to the device settings module, select Network - Remote, and scan the QR code in the Remote section with your phone to connect to the upper-level computer.



8.2 Panel control

The switcher's dashboard includes buttons, a fader, a joystick, and options for selecting streaming and recording routes. Click the button to control the corresponding function on the switcher and set the transition time; move the fader to perform the fader transition operation; and move the joystick to control camera lens movement.

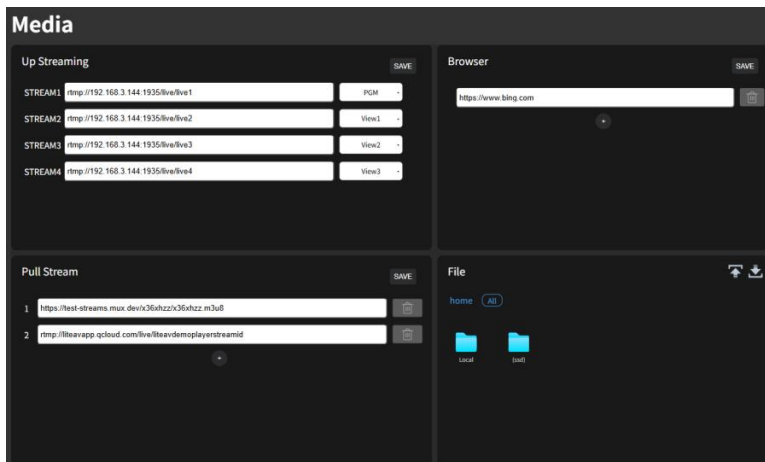


8.3 Media Settings

Enter the media page of the up streaming, users can edit and modify the push streaming address and

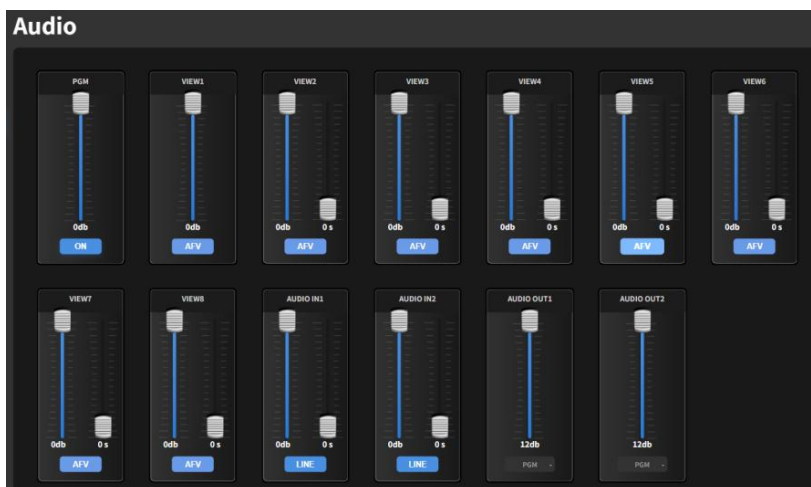
streaming source; can perform addition, modification and deletion operations on the browser address; can perform addition, modification and deletion operations on the pull streaming address; In the file module, users can select files to download or upload.

Note: Files can only be uploaded as images and videos, and the size cannot exceed 1G.



8.4 Audio Settings

Enter the audio page of the host computer to set the mode, volume and delay for the audio of the PGM/8-channel signal source/2-channel microphone; and set the volume and audio monitor source for the 2-channel headphones.



8.5 Setting Page

Enter the setting page of up streaming to set the language, network, date&time, and user name; click "Upgrade" to select the update software to upgrade the device; click "Reset" to reset the device; click "Exp logs" to obtain the log information of the device.

Setting

Language

English

Network

DHCP

☒

Apply

IP

192

168

3

144

Mask

255

255

255

0

Gateway

192

168

3

1

DNS

218

85

152

99

Data&time

Sync

USER

Switcher

Set

Version

0.0.27

Upgrade

SN

0123456789012

Reset

Exp logs

9. Warranty Service

If there is any problem with the product, please contact our service center.



Warning

Failure to follow the safety instructions may result in fire, electric shock, damage, or other Injury.

- Do not mix this product with other incompatible products.
- Do not place the device near high-temperature equipment to avoid hazards.
- Do not use wireless functions, including Bluetooth, during thunderstorms; operating wireless transmitting devices in lightning conditions increases the risk of lightning strikes.
- Charge the device promptly after use; do not leave the battery in a discharged state for extended periods.
- If not used frequently, charge the product at least once every 3 months to prevent reducing the battery's lifespan.
- If the battery life is exhausted, please contact the company's after-sales service.
- Do not replace the battery yourself, as using incompatible batteries or improper handling may lead to hazards.



DEALER



REPAIR CENTER

Please provide proof of purchase or warranty card during repairs to obtain the appropriate warranty service.

Warranty will be voided if the serial number, date code label, product label is removed, or if the device is disassembled without authorization.

The company is not responsible for any incidental or consequential damages resulting from misuse or misunderstanding.



Made in China