NEXIS

User Manual

SM551A

5 IN 1 OUT Multi-Window Switch





Version:V22.00

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1. Introduction

This product is a real 4K60 multi-viewer switcher with seamless switching(*when single-window mode) and and scaling function, it supports 3 HDMI inputs, 2 Display Port inputs and 1 HDMI output with 3.5mm audio out. The resolution of both inputs and output can up to 4K@60hz 4:4:4, the bandwidth can up to 18Gbps. Users can use the front panel push buttons, IR remote control, and RS232 codes to control the unit. In general, this product is a very practical and friendly use real 4K60 multi-viewer switcher. It can be widely used in games, professional conferencing, radio and television projects, security monitoring field, and so on applications.

2. Features

- Support 8 working modes/layouts
- Support HDMI2.0, and the resolution up to 3840*2160@60Hz
- Support 4K60 inputs and 4K60 output, pixl to pixl display without losses
- Support seamless switching even when different resolutions inputs
- Support the front panel push-button, IR remote
- Support USB-A upgrading

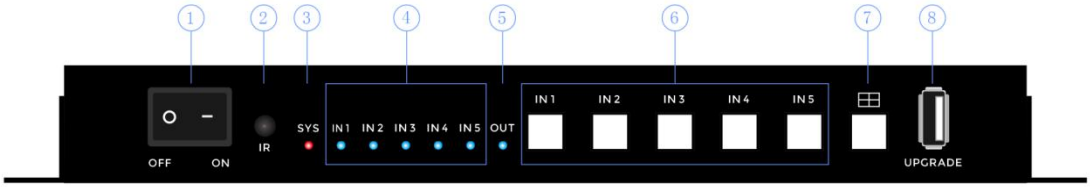
3. Specifications

Video	
Input port	1 x HDMI2.0; 3 x HDMI1.4
Input resolution	HDMI2.0: 640x4808, 800x6008, 1024x7688, 1280x7688, 1280x8008, 1280x10248, 1360x7688, 1366x7688, 1440x9008, 1400x10508, 1600x12008, 1680x10508, 1920x12008, 720x4808 (480p), 720x5766 (576p), 1280x7205 (720p30), 1280x7206 (720p50), 1280x7208 (720p60), 1920x10802 (1080p24), 1920x10803 (1080p25), 1920x10805 (1080p30), 1920x10806 (1080p50), 1920x10808 (1080p60), 3840x21605(2160p30),3840x21606 (2160p50), 3840x21608 (2160p60)
Output port	1 x HDMI2.0
Output resolution	HDMI2.0: 1920x10806 (1080p50), 1920x10808 (1080p60), 3840x21605 (2160p30) , 3840x21606 (2160p50) , 3840x21608 (2160p60) 1 = 23.98 Hz, 2 = 24 Hz, 3 = 25 Hz, 4 = 29.97 Hz, 5 = 30 Hz, 6 = 50 Hz, 7 = 59.94 Hz, 8 = 60 Hz, 9 = 75 Hz
Audio	
Input port	3x HDMI 3XDP
Input audio signal	RAW PCM, 16 bit, 32/44.1/48KHz sps; PCM 2.0
Output port	1 x HDMI2.0;1 x Analog Audio

Output audio signal	RAW PCM, 16 bit, 32/44.1/48KHz sps; PCM 2.0	
Control		
Front control	IN1: Input 1 IN2: Input 2 IN3: Input 3 IN4: Input 4 IN5: Input 5	Single-view mode
	田: Default input 1 to input 4	Quad-view mode
IR	All the functions of the button can be realized through the remote control, and it also supports fast switching.	
RJ45	DB9, serial port control	
Data		
Operating temperature	0 to +45° C (32 to + 113 ° F)	
Storage temperature	-20 to +70° C (-4 to + 158 ° F)	
Humidity	10% to 90%	
Static Protection	Human body discharge mode: ±8kV (air gap discharge)/ ±4kV (contact discharge)	
Power adapter	12 V 1.5 A DC	
Power consumption	10W（Max）	
Product size	Without the ears	
Net	kg	

4. Panels

Front panel



① Power switch

② IR --- Infrared receiver

③ Power --- Power LED indicator

④ 1-5 --- Input source indicator

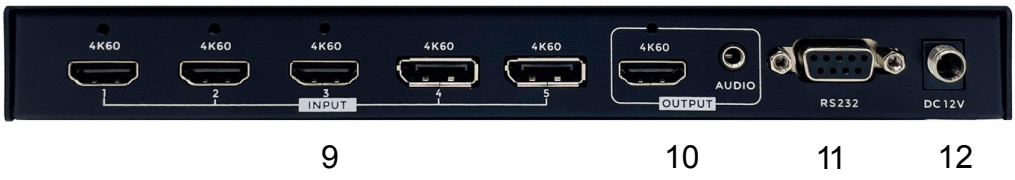
⑤ OUT --- Output signal indicator

⑥ IN1-IN5 -- Input 1 to 5, for single-view mode

⑦ Directly switch to the four-view mode, default input 1 to input 4

⑧ USB port for upgrading

Back panel



⑨ INPUT signals

⑩ OUTPUT port

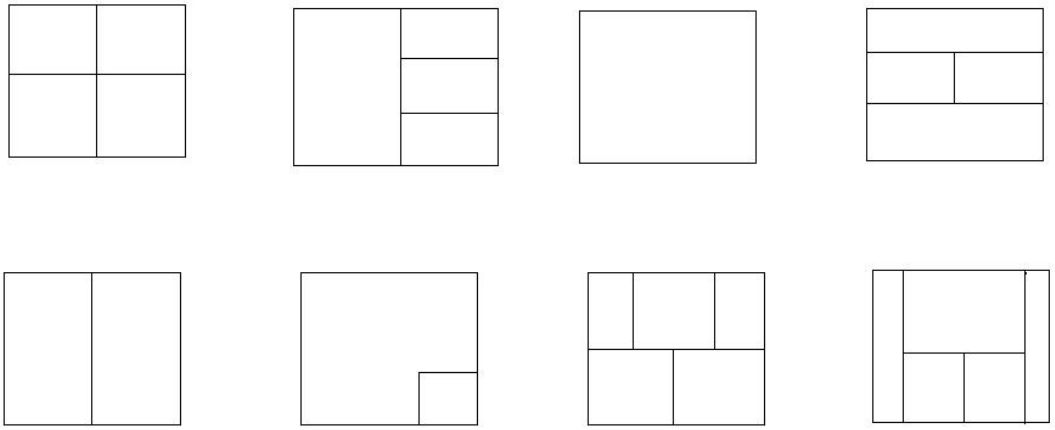
⑪ Serial port DB-9

⑫ DC-12V power adapter

5. Connection diagram



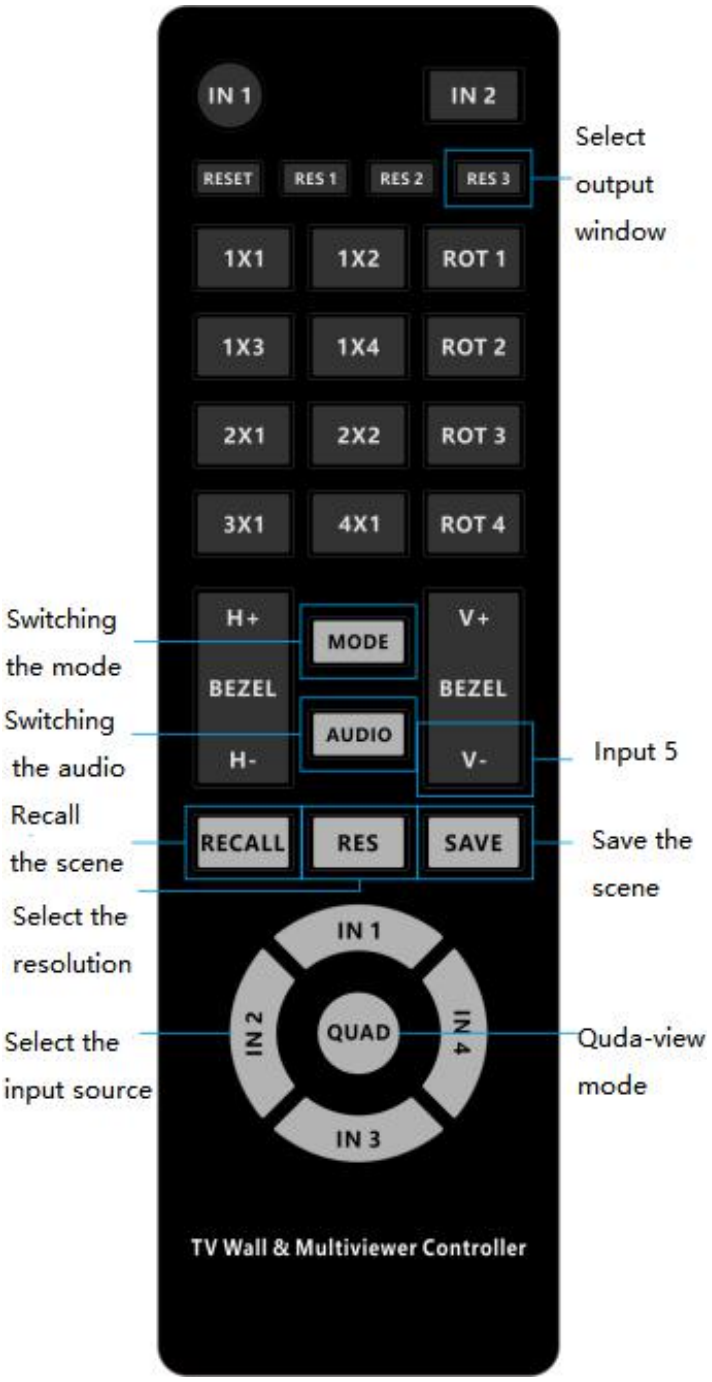
6. Modes



7. Infrared remote controller

RESET: Press 6 times continuously to reset

Lock/ unlock the screen: Press (RES3＋RECAL) 3 times continuously to lock, another 3 times to unlock



8. RS232 control command

RS232 cable with straight-through
connection(USB-RS232 can be used directly to control)
Communication protocol:
Baud rate: 115200
Data bit: 8
Stop bit: 1
Check bit: None
All control commands are sent in hexadecimal format

Function	Control command	Description
Reset	EB 90 00 12 00 ff 23 00 00 00 00 00 00 00 00 00 00	Reset to quad-view mode, and the output resolution to 1080P60
Adjust the output resolution	EB 90 00 12 00 ff 23 01 00 00 00 00 00 00 00 00 00 00	Output resolution is 1920x1080@60
	EB 90 00 12 00 ff 23 14 00 00 00 00 00 00 00 00 00 00	Output resolution is 1920x1080@50
	EB 90 00 12 00 ff 23 02 00 00 00 00 00 00 00 00 00 00	Output resolution is 1920x1080@30
	EB 90 00 12 00 ff 23 03 00 00 00 00 00 00 00 00 00 00	Output resolution is 1920x1200@60
	EB 90 00 12 00 ff 23 04 00 00 00 00 00 00 00 00 00 00	Output resolution is 1360x768@60
	EB 90 00 12 00 ff 23 05 00 00 00 00 00 00 00 00 00 00	Output resolution is 1280x720@60
	EB 90 00 1200 ff 23 06 00 00 00 00 00 00 00 00 00 00	Output resolution is 1024x768@60
	EB 90 00 12 00 ff 23 07 00 00 00 00 00 00 00 00 00 00	Output resolution is 2560x1600@60
	Adjust the output resolution to	Output resolution is 2560x1600@50
	EB 90 00 12 00 ff 23 09 00 00 00 00 00 00 00 00 00 00	Output resolution is 3840x2160@50
	EB 90 00 12 00 ff 23 0A 00 00 00 00 00 00 00 00 00 00	Output resolution is 3840x2160@50
	EB 90 00 12 00 ff 23 0B 00 00 00 00 00 00 00 00 00 00	Output resolution is 3840x2160@30
	EB 90 00 12 00 ff 23 0C 00 00 00 00 00 00 00 00 00 00	Output resolution is 3840x2160@25
	EB 90 00 12 00 ff 23 0D 00 00 00 00 00 00 00 00 00 00	Output resolution is 3840x2160@24
	EB 90 00 12 00 ff 23 0E 00 00 00 00 00 00 00 00 00 00	Output resolution is 4096x2160@60
	EB 90 00 12 00 ff 23 11 00 00 00 00 00 00 00 00 00 00	Output resolution is 4096x2160@30
	EB 90 00 12 00 ff 23 12 00 00 00 00 00 00 00 00 00 00	Output resolution is 2560x1080@60

	EB 90 00 12 00 ff 36 01 00 00 00 00 00 00 00 00 00 00	Output resolution is 2560x1440@60
	EB 90 00 12 00 ff 36 00 00 00 00 00 00 00 00 00 00 00	Output format is DVI
	EB 90 00 12 00 ff 2E 00 00 00 00 00 00 00 00 00 00 00	Output format is HDMI
Recall the scene	EB 90 00 12 00 ff 2E 01 00 00 00 00 00 00 00 00 00 00	Recall the scene 1
	EB 90 00 12 00 ff 2E 02 00 00 00 00 00 00 00 00 00 00	Recall the scene 2
	EB 90 00 12 00 ff 2E 03 00 00 00 00 00 00 00 00 00 00	Recall the scene 3
	EB 90 00 12 00 ff 2E 04 00 00 00 00 00 00 00 00 00 00	Recall the scene 4
	EB 90 00 12 00 ff 2E 05 00 00 00 00 00 00 00 00 00 00	Recall the scene 5
	EB 90 00 12 00 ff 2E 06 00 00 00 00 00 00 00 00 00 00	Recall the scene 6
	EB 90 00 12 00 ff 2E 07 00 00 00 00 00 00 00 00 00 00	Recall the scene 7
	EB 90 00 12 00 ff 2E 08 00 00 00 00 00 00 00 00 00 00	Recall the scene 8
	EB 90 00 12 00 ff 2E 09 00 00 00 00 00 00 00 00 00 00	Recall the scene 9
	EB 90 00 12 00 ff 2F 00 00 00 00 00 00 00 00 00 00 00	Recall the scene 10
Save the scene	EB 90 00 12 00 ff 2F 01 00 00 00 00 00 00 00 00 00 00	Save the scene 1
	EB 90 00 12 00 ff 2F 02 00 00 00 00 00 00 00 00 00 00	Save the scene 2
	EB 90 00 12 00 ff 2F 03 00 00 00 00 00 00 00 00 00 00	Save the scene3
	EB 90 00 12 00 ff 2F 04 00 00 00 00 00 00 00 00 00 00	Save the scene 4
	EB 90 00 12 00 ff 2F 05 00 00 00 00 00 00 00 00 00 00	Save the scene 5
	EB 90 00 12 00 ff 2F 06 00 00 00 00 00 00 00 00 00 00	Save the scene 6
	EB 90 00 12 00 ff 2F 07 00 00 00 00 00 00 00 00 00 00	Save the scene7
	EB 90 00 12 00 ff 2F 08 00 00 00 00 00 00 00 00 00 00	Save the scene 8
	EB 90 00 12 00 ff 2F 09 00 00 00 00 00 00 00 00 00 00	Save the scene 9
	EB 90 00 12 00 ff 32 00 00 01 02 03 00 00 00 00 00 00	Save the scene 10
Recall the display modes	EB 90 00 12 00 ff 32 01 00 01 02 03 00 00 00 00 00 00	Mode 1: One -view
	EB 90 00 12 00 ff 32 02 00 01 02 03 00 00 00 00 00 00	Mode 2: Dual- view （left &right）
	EB 90 00 12 00 ff 32 03 00 01 02 03 00 00 00 00 00 00	Mode 3: Dual- view（PIP，Upper

		left）
	EB 90 00 12 00 ff 32 04 00 01 02 03 00 00 00 00 00 00	Mode 4: Dual- view（PIP，Lower right）
	EB 90 00 12 00 ff 32 05 00 01 02 03 00 00 00 00 00 00	Mode 5: Triple-view（One big & two small, the two small ones with scaling)
	EB 90 00 12 00 ff 32 06 00 01 02 03 00 00 00 00 00 00	Mode 6: Triple-view（One big & two small, the two small ones with original sizes)
	EB 90 00 12 00 ff 32 07 00 01 02 03 00 00 00 00 00 00	Mode 7: Triple-view（PIP，bottom left & right）
	EB 90 00 12 00 ff 31 00 01 02 03 00 00 00 00 00 00 00	Mode 8: Quad-view (2x2 equal split)
Window signal switching (Remark 1)	EB 90 00 12 00 ff 31 **00 00 00 00** 00 00 00 00 00 00	Win1~4 correspond to input 1~4 respectively
	EB 90 00 12 00 ff 31 **01 01 01 01** 00 00 00 00 00 00	Win1~4 all correspond to input 1
	EB 90 00 12 00 ff 31 **02 02 02 02** 00 00 00 00 00 00	Win1~4 all correspond to input 2
	EB 90 00 12 00 ff 31 **03 03 03 03** 00 00 00 00 00 00	Win1~4 all correspond to input 3
	EB 90 00 12 00 ff 2A 00 00 00 00 00 00 00 00 00 00 00	Win1~4 all correspond to input 4
Lock	EB 90 00 12 00 ff 2A 01 01 01 01 00 00 00 00 00 00 00	Lock the windows
Unlock	EB 90 00 12 00 ff 30 00 00 00 00 00 00 00 00 00 00 00	Unlock the windows
Multi-screen audio channel switching	EB 90 00 12 00 ff 30 0100 00 00 00 00 00 00 00 00 00	Switch to channel 1
	EB 90 00 12 00 ff 30 02 00 00 00 00 00 00 00 00 00 00	Switch to channel 2
	EB 90 00 12 00 ff 30 03 00 00 00 00 00 00 00 00 00 00	Switch to channel 3
		Switch to channel 4

Remark 1: The bold part on the right can be changed to 00/01/02/03 to modify the signal displayed in the corresponding window. The number of the window is from left to right and from top to bottom, corresponding to win1, win2, win3, win4. , If there are only two windows, it corresponds to win1 and win2.

9. After Sales

9.1 Warranty Information

The Company warrants that the process and materials of the product are not defective under normal use and service for 2 (2) year following the date of purchase from the Company or its authorized distributors.

If the product does not work within the guaranteed warranty period, the company will choose and pay for the repair of the defective product or component, the delivery of the equivalent product or component to the user for replacement of the defective item, or refund the payment which users have made.

The replaced product will become the property of the Company.

The replacement product could be new or repaired.

Whichever is longer, any replacement or repaired of the product or component is for a period of ninety (90) days or the remaining period of the initial warranty. The Company shall not be responsible for any software, firmware, information, or memory data contained in, stored in, or integrated with the product repaired by the customer's return, whether or not during the warranty period.

9.2 Warranty limitations and exceptions

Except above limited warranty, if the product is damaged by over usage, incorrectly use, ignore, accident, unusual physical pressure or voltage, unauthorized modification, alteration or services rendered by someone other than the Company or its authorized agent, the company will not have to bear additional obligations. Except using the product properly in the proper application or normal usage