## **4K60Hz HDMI QUAD SCREEN MULTIVIEWER**



## AGVS-0401K6

## **USER MANUAL**

VER 2.0 (E.25)

ANGUSTOS LLC, VER E.25

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# 1. OVERVIEW

AGVS series 4K60Hz Quad screen Multiviewer is designed to display 4 channel 4K60Hz video sources on one 4K@60Hz display and the position and size of the 4 input windows can be adjusted arbitrarily. It supports custom output resolution for LED displays with non-standard resolutions. Which can be controlled by front panel buttons, IR remote control, WebUI and RS232 third party device control.

# 2. FEATURES

- 1. 4 x HDMI 2.0 input, 1x HDMI 2.0 output, all up to 4K@60Hz 4:4:4.
- 2. Multiple display layouts include quad-view, triple-view, dual-view and full-view.
- 3. 4 input windows position and size can be adjusted freely (Super Canvas™ Mode).
- 4. Custom output resolution for non-standard output resolution requirement.
- 5. Seamless switching between all inputs
- 6. Support EDID management and learning.
- 7. HDMI audio de-embedding output.
- 8. Controlled by front buttons, IR remote control, WebUI and RS232 3rd party control.

## **3. PACKAGE CONTENTS**

- 1 x 4K60Hz Quadview Multiviewer (AGVS 4K60 Series)
- (2) 1 x AC Power Cord
- ③ 1 x Remote control (no battery included)

# 4. FRONT PANEL



Menu	Function		
IR	Receive signals from the IR remote control.		
1	Press the button to select input 1 on full screen.		
2	Press the button to select input 2 on full screen.		
3	Press the button to select input 3 on full screen.		
4	Press the button to select input 4 on full screen.		
	Switch between the Quad-view mode and Dual-view mode.		
Scenes	Recall scenes from scene 1, scene 2 and scene 3.		
Audio	Switch audio from 4 HDMI inputs.		
Resolution	Switch output resolution from 11 options.		
Power	Power on/off switch.		

# 5. BACK PANEL



Menu	Function		
Input 1	IDMI input interface 1, resolution up to 4K60hz		
Input 2	IDMI input interface 2, resolution up to 4K60hz		
Input 3	HDMI input interface 3, resolution up to 4K60hz		
Input 4	IDMI input interface 4, resolution up to 4K60hz		
Output	HDMI output interface, resolution up to 4K60hz		
Audio	HDMI audio de-embedding output via this 3.5mm analog audio jack.		
RS232	Third party central control via this RS232 interface.		
RJ45	WebUI control via this RJ45 interface.		
DV12V	Power supply interface, DC 12V 2A		

# 6. REMOTE CONTROL OPERATION



Menu	Function			
H1	Select input 1 on full screen			
H2	Select input 2 on full screen			
H3	Select input 3 on full screen			
H4	Select input 4 on full screen			
A1	Select 3.5mm audio output from HDMI input 1			
A2	Select 3.5mm audio output from HDMI input 2			
A3	Select 3.5mm audio output from HDMI input 3			
A4	Select 3.5mm audio output from HDMI input 4			
L1	L1 Press the button once to switch input 1 to window 1. Press the button twice to switch input 2 to window 1. Press the button three times to switch input 3 to window 1. Press the button four times to switch input 4 to window 1.			
L2	Press the button once to switch input 2 to window 2. Press the button twice to switch input 3 to window 2. Press the button three times to switch input 4 to window 2. Press the button four times to switch input 1 to window 2.			
L3	Press the button once to switch input 3 to window 3. Press the button twice to switch input 4 to window 3. Press the button three times to switch input 1 to window 3. Press the button four times to switch input 2 to window 3.			
L4	Press the button once to switch input 4 to window 4. Press the button twice to switch input 1 to window 4. Press the button three times to switch input 2 to window 4. Press the button four times to switch input 3 to window 4.			
	Quad-view display			
	Dual-view display			
M1	Recall scene 1			
M2	Recall scene 2			
M3	Recall scene 3			

# 7. WEB GUI GUIDE 7.1 CONNECTION

1<sup>st</sup> Step: Connect the RJ45 Ethernet port with control computer.



2<sup>nd</sup> Step: Obtain the Multiviewer IP address.

Click the tool "Device IP Address.exe" to obtain the IP address in following interface.

Note: If the user changed the device IP address, they need to click menu '**Search**' to obtain a new IP address or reopen the tool "Device IP Address.exe".

ID		IP Address	Device Type
1	2	192.168.3.99	Videowall Controlle
2		192.168.3.69	Multiviewer
3		192.168.3.228	Modular Matrix
4		192.168.3.63	Modular Matrix
5		192.168.3.76	Modular Matrix
6		192.168.3.55	Videowall Controlle
			3

**3<sup>rd</sup> Step:** Manually set the control computer IP address, which needs to be in the same network segment as the Multiviewer.

	Connect using:	Internet Protocol Version 4 (TCP/IPv4) Properties
Organize • Disable this network device Diagnose this connection Rename this connection Cha	🕎 MediaTek Wi-Fi 6 MT7921 Wireless LAN Card	General
Verwork kohle urphoged CTU_Sedays Resurce PCle Cot Family Disable Sharts	Configure This connection uses the following items:	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Dagnoor © Indoge Connections Contex Shorts: © Contex © Preventex © Preperties	Certe for Morosoft Networks     Pie and Prince Sharing for Morosoft Networks     Pie and Prince Sharing for Morosoft Networks     Pie Constant Schedule     Pie Constant Schedule     Pie Constant Network Adapter Multiplexer Protocol     Pittal	C the appropriate a standard C Obtain an IP address: IP

**4**<sup>th</sup> **Step:** Click **"To WebGUI"** in **"Device IP Address"** to enter login interface as below. Input password **'admin'** and click **'Login'** to enter Web GUI page.



## 7.2 MULTI-VIEW SETTNGS

#### Source List

The input source channels are listed on the left-hand side of the manager. Each channel number corresponds to the input port number on the back of the unit.

If a valid input signal is detected, the upper left corner will light up the green mark.



#### **Creating Inputs**

In the figure above the highlighted square represents quad-view display on the output. To map an input source to a window, simply drag and drop the channel icon into it.

#### Adjust video window position and size

Place the mouse on the window, press and drag the window to the appropriate position and then release the window position.

Place the mouse in the lower right corner of the window and drag when the mouse changes to a two-way arrow to change the window size

① Clear	Clear all input signal windows.
② Lock Inputs	Lock an input window and then the user can open 3 more windows on it.
③ Quad-view	Quickly start a quad-view display on a output
④ PIP	Quickly start a PIP layout as below
(5) Save	Save current display layout as a preset
6 Recall	Recall the saved preset
⑦ A1-A4	Click 'A1/A2/A3/A4' to select the output audio from HDMI input 1/2/3/4.

#### **Menu Functions**

# Ouad-view

#### PIP

The bottom window is fixed on full screen. The user can only adjust size&position of the top 3 windows.



#### Save

Click **'Save'** and then **'Confirm'** in the pop up menu to save current display layout. And the user can modify the preset name. There are 8 presets in total.

	Multiview Settings	Basic Settings	System Settings	
Sources Presets	Clear Lock Inputs Quad-view PIP	Save Recall A1 A2 A3 A4		-
Input 1		Θ. □Cχt	Pat	⊗ - □ x
Input 2	In Pos:(0,0) Size(1920,1080)	Presets ID: 1 Name: Preset 1	Input 2	
Input 3	In	Confirm 2	Input 4	® - □ x
Input 4	Paci(0.1080) Size(1920,1080)		Poc[1920.1080] Size:[1920.1080]	

#### Recall

#### Click 'Recall' and select the preset you want to recall, then click 'Recall'

1		Multiview Settings			
Sources Presets	Clear	Lock Inputs Quad-view PIP Save	Recall A1 A2 A3 A4		
Preset 1	- F		S ⊚ - □0xii <mark>3ut</mark>		⊚ - □ x
Preset 2	2				
Preset 3					
Preset 4					
Preset 5					
Preset 6		Input 1		Input 2	
Preset 7					
Preset 8					
	Pos	s:(0,0) :e:[960,540]	Pos.[96 Size:[9]		
			® - ⊔ x <mark>&gt;</mark>		⊎ - ⊔ x
		Input 3		Input 4	
	Pos Size	s:[0,540] e:[960,540]	Posi[96 Size:[9	60,540] 160,540]	

In the upper right corner of the window, there are 4 icons with the following functions.



X	Close the video window.
	Maximize the video window within the boundaries.
	Minimize the video window to original size.
0	Window fine-tuning position

#### Window Position Fine-tuning

Set the video window position by input the position parameters as below.

Positi	ior	n Fine-tuning				Х
>	<	1016	Y	195	+	
W	V	2217	Н	680		
		Confirm		Cancel		

X	Horizontal start (pixel)	
Y	Vertical start (pixel)	
w	Window width (pixel)	
Н	Window height (pixel)	

0

## 7.3 INPUT/OUTPUT SETTINGS

Multiview Settings			Basic Settings					System Settings	
Output	1	1		2			3	4	
	Renam	Rename		Pattern		R	Resolution	Status	ן
Output	output	output		Disable 🗸		38	40x2160@60 🗸	•	J
Input	1		2		3		4	5	
	Rename	Pa	attern		EDID		Resolution	Status	
Input 1	Input 1	D	isable	~	3840x2160(	@60 <b>~</b>	3840x2160	•	
Input 2	Input 2	D	isable	~	3840x2160	@60 <b>~</b>	3840x2160	•	
Input 3	Input 3	D	isable	~	3840x2160(	@60 <b>~</b>	3840x2160	•	
Input 4	Input 4	D	isable	~	3840x2160	@60 <b>~</b>	3840x2160	•	
All			isable	v	3840x2160(	@60 <b>~</b>			

#### utput Settings

Output channel name can be modified by the setting.

Select output test images from the drop-down menu.

If a valid output signal is detected, the dot will be in green.

Select the output resolution from the drop-down menu, up to 4K60Hz.

For the custom resolution settings, please refer to 8.1

#### **Input Settings**

1 Rename	nput channel name can be modified by the setting.			
2 Patterns	Select input test images from the drop-down menu.			
③ EDID	EDID management and learning. Please refer to 8.2 for setting details.			
④ Resolution	It will auto recognize the input resolution.			
⑤ Status	If a valid input signal is detected, the dot will be in green.			

### 7.4 SYSTEM SETTINGS



Input password 'admin' and click "Confirm" to enter the 'System Setting' interface as below.

#### AGVS Series User Manual

Multiview Settings     Basic Settings     System Settings       Network Configuration:     IP Address:     192.168.3.60       IP Address:     255.255.255.0       Gateway Address:     192.168.3.1       Mac Address:     102.168.3.4C	
Network Configuration:           IP Address:         192.168.3.60           Subnet Mask Address:         255.255.255.0           Gateway Address:         192.168.3.1           Mac Address:         102.168.3.4C	
Network Configuration:         IP Address:       192.168.3.60         Subnet Mask Address:       255.255.255.0         Gateway Address:       192.168.3.1         Mac Address:       102.168.3.4C	
IP Address:192.168.3.60Subnet Mask Address:255.255.255.0Gateway Address:192.168.3.1Mac Address:10C.B7:2C:E6:63:AC	
Subnet Mask Address:     255.255.255.0       Gateway Address:     192.168.3.1       Mac Address:     1C:B7:2C:E6:63:AC	
Gateway Address:     192.168.3.1       Mac Address:     1C:B7:2C:E6:63:AC	
Mac Address: 1C:B7:2C:E6:63:AC	
Confirm	
Output Background Color:	
Color Setting	
	$\equiv$
3	
PIP Transparency Setting	
Version Information:	
4 Firmware Version: 1.0	
Web Version: V1.2.0	

#### 1. Network Configuration

The user can set the IP address, Subnet mask address, Gateway address and Mac address. Click **'Confirm'** to save the settings.

Note: After the IP address is changed, please reboot the device and reconnect it.

#### 2. Output Background Color

The user can set the outputs background color. Default background is black and the user can set any RGB combination colour value.



#### 3. PIP Transparency

Set the transparency of the PIP windows with 5 level options.



#### 4. System Information

Show the Firmware version and Web Version.

# 8. ADVANCE FUNCTIONS

## **8.1 CUSTOM OUTPUT RESOLUTION**

The user can custom the output resolution under 4096x2160@60, 7680\*2160@30, 5760\*3240@30, 7680\*1080@60. Click **'Basic Setting'** and then **Output Resolution**, select **'Custom Resolution'** from the drop-down menu and custom the resolution in the interface below right.

Resolution	Custom Resolution		х
3840x2160@60 🗸		Horizontal	Vertical
3840x2160@60	Active Pixel:	6400	1536
3840x2160@30	Front Porch (nivel):	176	8
1920x1080@60	Hone Foren (pixel).		
1920x1200@60	Sync width (pixel):	88	10
1920x1440@60	Total Pixels:	6800	1600
2048x1152@60	Total Fixels.		1000
2560x1080@60	Polarity:	+ 🗸	+ 🗸
2560x1440@60	Pofroch Pato(Hz)		30
2560x1600@60	Reliesti Rate(nz).		
4096x2160@30	Pixel Clock(Hz):	326.40(MHz)	
4096x2160@60			
1920x1080			Confirm
Custom Resolution			

For example, custom an output resolution 6400x1536. Fill in active pixels& total pixel.

Horizontal Active pixel	6400
Vertical Active pixel	1536
Horizontal Total Pixels	6800=Horizontal Active Pixels (6400) + 400
Vertical Total Pixels	1600=Vertical Active Pixels (1536) + 64

Note:

Horizontal Total Pixels  $\approx$  Horizontal Active Pixels + any number from 400~560 Vertical Total Pixels  $\approx$  Vertical Active Pixels + any number from 50~100 The user can modify other parameters according to the needs of the project.

Click **'Confirm'** to save the customized resolution. Then the user can select this customized resolution in the output resolution drop-down box.

## 8.2 EDID SETTINGS

The user can select the EDID in the drop-down menu of the corresponding input. It also support EDID learning and customization.

#### Out (Learn EDID from the output display)

Selecting **'Out'** in the EDID drop-down menu to complete the EDID learning. For example, by clicking **'Out'** in the EDID drop-down menu of input 1, then input 1 learns the resolution of the output display.

#### AGVS Series User Manual

Multiview Settings		E	Basic Settings				System Settings
Output							
	Rename	e Pat		tern Res		Resolution	Status
Output	output		Disable 🗸		38	40x2160@60 🗸	
Input							
mput		P.U.		5010			
	Rename	Pattern		EDID		Resolution	Status
Input 1	Input 1	Disable	~	3840x2160	@60 🗸	3840x2160	
Input 2	Input 2	Disable	~	3840x2160	0@60	3840x2160	
Input 3	Input 3	Disable	~	3840x2160 1920x1080	0@30	3840x2160	
Input 4	Input 4	Disable	~	1920x1200	0@60	3840x2160	
All		Disable	~	2048x1152	2@60		
				2560x1080	0@60		
				2560x1440	0@60		
				2560x1600	0@60		
				4096x2160	0@30		
				4096x2160	0@60		
				Out	I		

#### User (Custom an EDID)

Selecting '**User**' in the EDID drop-down menu, the following setting interface will pop up. The default EDID is 3840 x2160, so the horizontal & vertical active pixels are 3840 & 2160 by default.

EDID		х
Load EDID Custom EDID		
○ Basic	Horizontal	Vertical
Total Pixels:	4400	2250
Active Pixel:	3840	2160
Blanking:	560	90
Start:	264	18
Width:	88	10
Sync Polarity:	+ 🗸	+ •
Pixel Clock(10KHZ):	59400	Timing Mode
		Write

(1) If the user need to custom a non-standard EDID less than 3840x2160@60Hz.

Click **'Load EDID'-'Basic'**, and fill in the horizontal and vertical active pixels in the pop-up interface as below. Finally click **'Write'** to finish the setting.

EDID		х
1 Load EDID Custom EDII	D	
2 Basic Advanced	_	
	Horizontal	Vertical
3 Active Pixel:	2280	1080
Pixel Clock(10KHZ):	59400	Timing Mode 4 Write

2 If the user need to custom an EDID with horizontal pixel more than 3840, the user can load external EDID as shown below.

For example, custom an EDID 3880X1194.

Click **'Load EDID - 'Advanced'**, then select a **'3880X1194.bin'** file from your computer and open it. Finally click **'Write'** to finish the setting.



## 9. SYSTEM DIAGRAM



## **10. SPECIFICATION**

#### 4K60Hz 4x1 HDMI QUAD SCREEN MULTIVIEWER AGVS-4K60 Series

	Inputs	4 x HDMI				
1/0	Outputs	1 x HDMI				
	Audio Output	1 x 3.5mm				
	Input resolution	4096x2160@60Hz, 4:4:4, backwards compatible				
	Output resolution	3840X2160@60Hz, 3840X2160@30Hz, 1920X1200@60Hz, 1920X1080@60Hz, 1920X1440@60Hz, 2048X1152@60Hz, 2560X1080@60Hz, 2560X1440@60Hz, 2560X1600@60Hz, DCI 3840X2160@30Hz, DCI 3840X2160@60Hz. Custom output resolution under 4096x2160@60Hz, 7680*2160@30, 5760*3240@30, 7680*1080@60.				
Others	Display mode	Quad-view, Triple-view, Dual-view, Full-view mode				
Control Method	Front Panel Buttons	<ul> <li>1/2/3/4: Short press the number button 1/2/3/4 to select input</li> <li>I: Quad-view mode or Dual-view mode</li> <li>Scenes: Select preset scenes from M1, M2 and M3.</li> <li>Audio: Press the button to select audio from 4 HDMI inputs</li> <li>Resolution: Press the button to select output resolution.</li> <li>ON/OFF: Power on/off switch.</li> </ul>				
	IR	1 x IR remote control				
	Web	Browser WebUI control				
	RS232	Command for third party control system				
Power	Power	DC 12V 2A				
Power	Power consumption	22W				
Environment -	Operating Temperature	-20°C ~ 60°C				
	Operating Humidity	10~90% RH				
Physical	Dimensions	280x127x35 mm ( LxWxH )				
Physical	Weight	1Kg				