

### MODULAR VIDEO WALL CONTROLLER 3D/4K PIXEL-TO-PIXEL LARGE SCALE SOLUTION



# **VD2** USER MANUAL



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### **1. Product Features**



- Customize Output Resolution by Module
- EDID Management
- 3D Splicing and Switching
- Pixel-to-Pixel Splicing of Multi-channel 4K Inputs
- Visualization Software
- IPAD Control
- Projection Edge Blending
- Display up to 8 Layers by Single Port

### 2. Project Introduction



#### 3. Hardware Overview



#### 3.1 Input Slots

VD2 provides 3 input option slots

Flexible configuration with any input module combination. With a wide range of options available including DVI-M, HDMI, Display port, VGA, DVI, Dual Link DVI, SDI, CVBS, HDBaseT, YPbPr/YCbCr, IP, Fiber, suitable for more application requirements.



VD SERIES Input Module Group		
Input	nput Quantity Description	
		Support 2K input, compatible with HDMI/DVI/VGA/YPbPr/CVBS
		(With adapter)
	Λ	Support max. 1920x1200@60fps
DVI-IVI	4	Support customized input resolution in EDID management
		Support Input Crop and OSD
		Support auto adjust for analog signal
		Support HDMI 1.3 / DVI 1.0 input, HDCP compatible
	4	VESA Standard. Support max.1920x1200@60fps
001-0	4	Support customized input resolution in EDID management
		Support Input Crop and OSD
		VGA-VESA Standard
		Support max.1920x1200@60fps
VGA	4	Support customized input resolution in EDID management
		Support Input Crop and OSD
		Support auto adjust
	4	Support HDMI 1.3 / DVI 1.0 input, HDCP compatible
		VESA Standard. Support max.1920x1200@60fps
HDMI		Support customized input resolution in EDID management
		Support Input Crop and OSD
		SMPTE Standard. Support 480i   576i   720P   1080i   1080P
	4	SD-SDI   HD-SDI   3G-SDI Standard.
601		Support deinterlacing
SDI		Support Long-line automatic equalization(100m)
		Support Input Crop and OSD
		SMPTE Standard. Support 480i   576i
CVBS	4	Support Input Crop and OSD
		Support HDMI 1.4b / HDMI 1.3 / DVI 1.0, HDCP compatible
HDMI 4K	2	Support 3840x2160@30fps in max
		Support Input Hot Backup
4K@60fps	2	Support DisplayPort 1.2 / HDMI 2.0, HDCP 2.2 compatible
HDMI/DP	3	Support 3840x2160@60fps in max



	2	Support webcams / Ethernet streaming within 2k resolution
IP		Support H.264 & H.265 streaming from IP camera or other stream
		Support HDBaseT signal within 2K resolution
HDBaseT	4	Support 1920x1200@60fps in max
		Support Input Crop and OSD
Duallink		Support Dual-link DVI (24+1) and DP 1.1a
	2	Support max. 3840x2160@30fps or 3840x1200@60fps
DVI/DP		Support Input Crop and OSD
	2	Support DP1.1, HDCP compatible
DP1.1a 4K		Support 3840x2160@30fps in max
		Support UDPoseT and UDM 1.4
HDBaseT+	2+2	
HDMI 4K		Support 3840x2160@30fps in max
		Support Input Crop and OSD
		Support 4 channel Fiber input, HDCP compatible
	4	Support 10km transcend in single mode and 300m transcend in
		multi-mode
Fiber		VESA Standard. Support max.1920x1200@60fps
		Support customized input resolution in EDID management
		Support Input Crop and OSD
		SMPTE Standard. Support 480i   576i   720P   1080i   1080P

#### 3.2 Output Slots and Expandable I/O Slots

To meet varied projects, both input & output Module are compatible with flexible

I/O Slot, which offering more possibilities. The Slot config are different based on

model.

VD2 provides 2 output option slots



VD SERIES Output Module Group			
Output	Quantity	Description	
		Output format support SMPTE 720P 1080P	
		Support max.1920x1200@60fps	
		Support customized output resolution (Bandwidth optimization)	
DVI	4	Horizontal resolution maximum 3840 pixels	
		Vertical resolution maximum 1920 pixels	
		Support 8 layers configuration	
		Compatible with VGA adaptor for analog signal	
		Support HDMI1.3 / DVI 1.0	
		Support customized output resolution (Bandwidth optimization)	
HDMI	4	Horizontal resolution maximum 3840 pixels	
		Vertical resolution maximum 1920 pixels	
		Support 8 layers configuration	
Dual-Link	2	Support Dual-Link DVI	
DVI	2	Support 3840x2160@30fps or 3840x1200@60fps in max	
	2	Support HDMI 4K 1.4b / HDMI 1.3 / DVI 1.0	
HDMI 4K		Support 3840x2160@30fps in max	
	4	Support 4 channel Fiber input, HDCP compatible	
		Support 10km transcend in single mode and 300m transcend in	
		multi-mode	
Fiber		VESA Standard. Support max.1920x1200@60fps	
		Support customized input resolution in EDID management	
		Support Input Crop and OSD	
		SMPTE Standard. Support 480i   576i   720P   1080i   1080P	
	4	Support HDBaseT signal within 2K resolution	
HDBasel		Support 1920x1200@60fps in max	
90° Rotate Output	2	Support 1920x1200@60fps in max	
		Support (0°-90°-180°-360°) Rotation	
Any		Support 1920x1200@60fps in max	
Rotation	2	Support (0°-360°) Rotation in any degree	
Output			



H.264 Preview Module	2	Support H.264 preview by net port The default IP for H.264 preview is:192.168.1.210 Default streaming rtsp://192.168.1.210:554/main Support input preview by HDMI out
DVI Preset Module	2	Output card Preview Preview the content of 8 outputs in single port
HDMI 2.0	1	Support 3840x2160@60fps in max with downward compatibility Support 8 layers free roaming

#### 3.3 Control Slots

Comm. Board
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#### 4. Operations

4.1 Installing Multiview Controller Software



Right click discussion install software as administrator.



#### 4.2 Connect the Device

Set up the device like below and ensure the IP of the computer and device is on the same network segment. Default IP on VD is 192.168.1.200. Default IP on H.264

#### Preview net port is 192.168.1.210. Please note to avoid IP conflict.

Display	Internet 방사있었죠 4 (TCP/IPv4) Proper General You can get IP settings assigned auton this capability. Otherwise, you need to for the appropriate IP settings.	tiles natically if your network supp ask your network administra	x xorts stor	
Input Source		Qbtain an IP address automatical Uge the following IP address: IP address: Subnet mask: Default gateway: Obtain DNS server address autom Use the following DNS server add Preferred DNS server: Alternate DNS server:	192 . 168 . 1 112 255 . 255 . 255 . 0  natically resses: 	
Γ		Vajidate settings upon exit	Adyance	ed
			OK (	ancel

VD System Setup



#### 4.3 Log in the Software

Double click the icon on the desktop. The log in interface will pop out. The user name is Admin, and there is no password. Simply enter into the software by click "Login". (Support user management to set password and authority)

🄁 Login		×
Vser Name:	Admin	~
Password:		
Language:	English	~
	Login	

#### 4.4 Homepage



1	Main Function: Select subsidiary content
2	Sub - Menu Functions Select:
	Parameters and functions setting
3	Scene: Load the scene to recall settings
4	Video Wall Setting:
4	Individual control for different screen wall
5	Input Source: Input Source list
6	Output Layout:
	Configure the output layout according to the screen design

#### 4.5 Main Function



1	Switch Matrix Mode:
I	Turn the device to matrix mode
2	Connect:
2	Communicate with device via LAN or serial cable.

# **SPROLINK®**

	The default IP:192.168.1.200
	Layer Management:
	New: Build a new layer, the layer can be loaded on the
З	monitor directly.
5	Close: close the layer
	Clear: clear all the layers
	Lock: lock the selected layer
	Layer Operation:
4	Layer order configuration. Move the chosen layer
	forward on top or backward on bottom.
	Save and Load:
	Open: Load scene (less than 10 of the scene can
	directly load by the shortcut. Support 128 scene in max)
5	Save: Save the present setting on specific scene.
	Refresh: Refresh the scene, periodic refreshing, scene
	Tour Edit: Edit the scene or content name.
	Load: Load the saving scene (read the scene after replacing the PC)
	Video Preview:
6	Need to select IP input card to preview the input and output
	layout.
7	Wall Echo:
	Need to select H.264 preview input card to realize output preview
ß	View :
0	Status Bar and List Columns open or close
9	About:
	Device information or software version

### 4.6 Setup Introduction





1	Input Setting: Rewrite the input EDID
2	Input Splitting: Crop the input signal
3	Layout Plan: Layout setting and output parameters
4	Screen-wall Setting: Setting the video wall location
	individually
5	Output Setting: Setting the output resolution and added the new
	customized resolution
6	Out-port Mapping:
	Config the output port to any location(output port swap)
7	Unmap Outputs: Reset all the output port
8	Set Active Area: Set the output window active area
9	Reset Active Area: Cancel the active area
10	Image Test: Test pattern, Background setting, OSD setting
11	Device Reset to Factory Mode:
	Reset device inputs, outputs and control
12	Preview Card Setting:
	Set the quality and quantity for streaming preview
13	IP Card Setting:
	Select IP input card and setting the IP card parameters
14	Sync Setting:
	Set the Sync mode is sync with back panel
15	License: Device working status



#### 4.7 Management Tools



1	Save Script:						
1	Save the present setting, including layout and resolutions						
2	Load Script : Load the script						
3	User Management : Set the password and user authority						
4	<b>Port Set:</b> Set the protocol and configuration for RS232						
5	Power On: Turn on the screen by RS232 control						
6	Power Off: Turn off the screen by RS232 control						
7	Network Camera: Configure for IP camera						
8	Batch Processing: Batch processing the script files						





1	Maximum Unit: Make the layer to maximum unit
2	Full Screen : Make the layer full screen
3	Restore : Restore the layer to previous setting
4	Close layers : Close the layer
5	Layer property : Right click the layer and set the layer property

#### 4.8 Project Operation

**Project Information:** 

Led screen pixel size: 11928\*1344

Requirement: Apply 8 sender cards to realize the pixel by pixel display.

4.8.1 Installation and Connection:

Copy the Multiview software to PC, double click to install the software. The

operation system support: Windows XP, Windows Server 2003, Windows 7/8,

Windows Sever2008, Windows 10.

#### 4.8.2 Connection

Click Login



Device default IP address: 192.168.1.200; IP of the control PC should be in the same

IP segment (E.g. 192.168.1.100)

Select NET connection, Set IP address then connected.

Select RS232 serial connection, default baud rate is 115200.



#### 4.8.3 IP address modify

Click advanced, the dialogue box will pop-up. Input the IP address, then click

Modify, the new IP will take effect after rebooting the device.

MetConnect	C	)SecalPert	Connect		
Desice P		SerialPart		CardoudRate	Connec
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109	OUDP				
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			and detailed	<ul> <li>Jetrocka</li> </ul>	tions:
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Sert. IP addres 1 197.168.1	c: Subset m .260 255 255.3	55.0 14-0	8-15-30	-ic. Make	n de
Seri. IP addreo t 193.168.1	c: Sabet m .360 255 355.3	55.0 14-0	8-15-30	-ec Mater	w de
Seri. Paddreo 1 192.168.1	e: Sabeet m .383 255.355.3	55.0 (4-0	8-15-30	-9C Multine	w de
Seri. Paddreo : 193.166.1	e: Sabad m .201 255,355,3	55.0 (4-0	8-15-30	-HC Multive	w de
Seri. Peddreu : 193.166.1	c: Sabet m 380 255 355 3	55.0 14-0	8-15-30	-9C Make	w de
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#### 4.8.4 Output layout setting

Screen size is 11928\*1344, with 8 sender cards in total, 7 pieces 1512\*1344 and

1 piece in 1344\*1344, the parameters setting as following picture.

1. Output resolution setting: set the output resolution to 1512\*1344 (sender card maximum loaded setting)

	C United Scheduler Management County	Residence Transitions	endramen 114 5		
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2. Select all the output ports, change the resolution to 1512\*1344 and add application, the signal status will prompt success.

rt Los							
eri	Name	Resolution	Signal state	current rotation			
15	Outpett	1512 x 1344 @604x		Not supported ro			
2	Owner?	1512 = 13++ @00Hz		Net supported ro			
23	Ostpets	1512 + 13H @6(Ht		sat supported /0			
31	0-stoch	1552 a 1344 @60Hz		Aut supported /stan			
28	Corrected scalad citis	1512 + 1344 @6(Ht)		DOUDLY			
2	Corrected output cits	1552 a 1344 @60Hz		normal			
42	09068	1912 # 19H \$60HE		has supported as a			
	042410	1912 # 1344 @60HE		Net stapperiod ris			
1							
1 lect o	6 United Invet	Note: Check the div	wael to madify re	solution. Green: Solotto	n Blues Sixo	cess: Red: Fail	JPR
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3. Set the output layout, enter the splicing setting and select the resolution as

1512\*1344, select the large screen combination as 1\*8, align the grid line to 2\*16,

# SPROLINK<sup>®</sup>

then select the synchronization mode to synchronize to an input port. After that,

select the 4K HDMI interface as the sync source, then applies the splicing settings.



4. The output layout as the following picture shown.

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#### 4.8.5 EDID Input Setting

1. Add an input resolution as 1512\*1344 for Pixel to Pixel Display

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Corper Service		
	3 - Home Puels         1           3 - Home Puels         1           3 - Home Puels         1           4 - Home Puels         1           5 - Home Puels         1           5 - Home Puels         1           6 - Home Puels         1           5 - Home Puels         1           1 - Home Puels         1	
	Section 2 Sectio	
	Reset drawnal Reset All Apple Class	
Summa List		

2. Select the input interface (need to change the input resolution) and change the resolution to 1512 \* 1344, then click application (some PC) need to re-plug the signal or restart the computer to take effect).

Set.	108790	Resolution	Signal state	Apply states	30 mode	
21	HEME Ports	2460 x 3480 @68Hz	HOM		ep Sapport	
21	HEME Port?	2900 x 3080 @694s	HOME		ND Sapport	
Z )	HEMI Fort2	2900 x 2080 @504z	12		tto Support	
24	HEME Forse	2900 × 2060 @58Hz	(c)		to Sapport	
25	HEMGHE PortS	3940 x 3080 @584s	t		to Sapport	
4.5	HEMENE Ports	3840 x 3080 @6843	1		to tapport	
1 reet e	Titchesk Tweet	Nan Child Becks	net to mattly resca	Car. Qireci Teli Doplay i	and, the taxes, he	nalure
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- 4.8.6 Three Ways for Layers Configuration
- a. In the monitor, left click to drag a signal.
- b. Select the signal source, then drag the signal to the corresponding output.
- c. Click the main function to add new:



- 1. According to the project that 8 layers should be added to the screen.
- 2. Set the image size and position. Right click to choose property, set all the images

parameters to 1512\*1344.





#### As the following picture shown:

Barnill BEG	Sourcell EESS	Souros [1] 🗖 🖬 🗑 🖬	Souvell BEER	Souros [1] EEEE	Souvell] EEER	Source [1] EESA	Souvell] EEEE
FindowID: 3	Findow1D 2	FindowID 3	FindowID 4	Findow10.6	Fisdow ID 6	FindowJD. 7	FisdowID 0
Signal Source MIMI For	1 Signal Source MIMI Fort	Signal Source MINI Forth	Signal Segree 2000 Forth	Signal Source MDM Forth	Signal Source HIMI Forth	Signal Sugrae HIMI Forti	Signal Source HUMI Forth
Histarchy level: 1	Historchy Issal 2	Histarchy Level 3	therarchy level 4	Hisrarchy level 5	Hisrarchy level 6	Hisrarchy level T	Hisrarchy level 5
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Finder Size CI51201344	Pindow Size CI512013445	Finder Size (151201344)	Findow Sign (151201344)	Findse Sine (151201344)	Findow Sigs (151241344)	Finder Size Ci512013440	Findow Size (1512#1344)

3. Drag the corresponding signal source to the monitor (or choose the monitor,

then double click the signal source).



4. Save the setting.

Click Save, set the scene ID and customize the scene name, hit save to confirm.

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5. Adjust the layers if there are some signals or screen size need to be changed,

and save to other scenes.



6. Switch between different scenes.

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4.8.7 H.264 Preview Streaming

Turn on Live Preview if the VD is equipped with H.264 Preview module.





XIAMEN SPROLINK SCIENCE & TECHNOLOGY CO., LTD

Vinit 301,No.1734,Gangzhong Road, Xiamen Free Trade Zone,China.

🔀 sales@sprolink.com 🌔 +86 592 556 5698 🏻 🌐 www.sprolink.com