

AVDSP Series

Split Panel User Manual

Document No: RGB-RD-UM-V320E001

VSP 320



RGBlink Science & Technology Co., Ltd.

The pictures and data in the user manual are consult only, if there is fluctuation, according to the real object please!

Content

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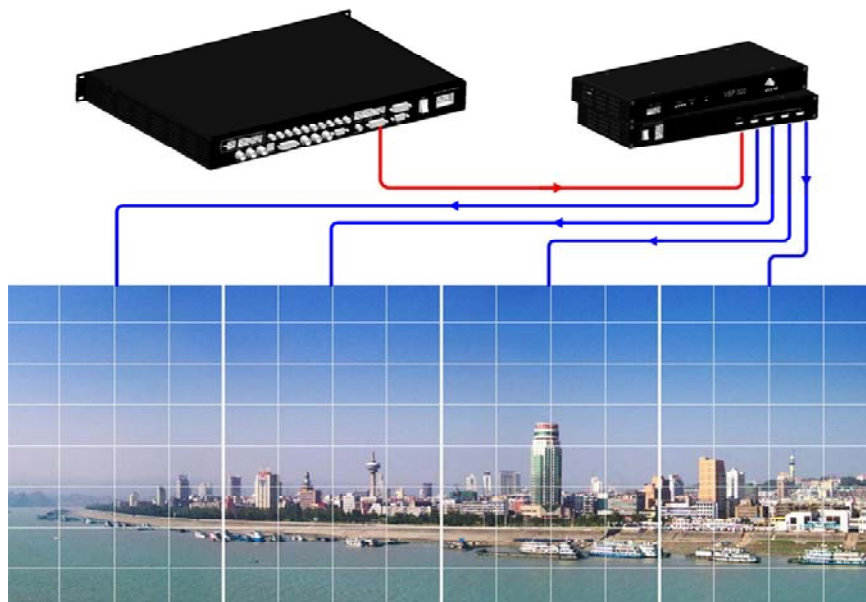
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1.0 Function Description

VSP 320 has one DVI input and four DVI output, it can be as a distribution device or split screen device. The input signal source include: HDMI (HDMI interface, DVI protocol) and PMC (as a module on the video processor). So it can be used as a independent device, and also can be used as a module. As a distribution device, the max input resolution can support 1280*1024*60Hz (VESA); As a split screen device, the max supported input resolution is 1024*768@60 , 1024*768@75 and 1280*768@60.

VSP 320 can control by toggle switch or RS232 communication. Toggle switch can implement horizon 4 sections, horizon 2 section, vertical 4 sections, vertical 2 section four split screen mode. And it also can be used a module of AVDSP, implement many split screen modes which control by I2C. The control modes priority is I2C, RS232 and then toggle switch.



Remark: This legend is only used to describe how the video processor will work with VSP320, please refer to video processor user manual for detail operation of video control.

2.0 DVI Interface

Table 3 is the position definition of DVI output and its image segment.

Table 3 the relation of DVI interface and output image.

	DVI1	DVI2	DVI3	DVI4
Split 4 section	Top left	Top right	Down left	Down right
Horizon split 2 section	Semi-left	Semi-right	Semi-left	Semi-right
Vertical split 2 section	Semi-top	Semi-down	Semi-top	Semi-right
Horizon split 4 section	left1	Left2	Left 3	Left 4
Vertical split 4 section	top1/4	Mid-top1/4	Mid-down1/4	down1/4

Remarks:

- 1) The DVI interface near the power interface is signal input.
- 2) DVI1~DVI4 are the four DVI output.
- 3) This Connection does not support hot-plugging.

3.0 Toggle switch and LED indication

3.1 Toggle switch

When resolution is 1024X768@60, please refer to the following table for the detail default setting:

Mode	Toggle switch	1	2	3	4
Mode 1	directly	on	on	on	On
Mode 2	4 section	on	on	on	off
Mode 3	Horizon 2section	on	on	off	On
Mode 4	Vertical 2section	on	on	off	off
Mode 5	Horizon 4section	on	off	on	On
Mode 6	Vertical 4section	on	off	on	off

Remark: Users can change the DIP switch setting by host computer. Users can refer to Page 8 for the details.

3.2 LED Indication

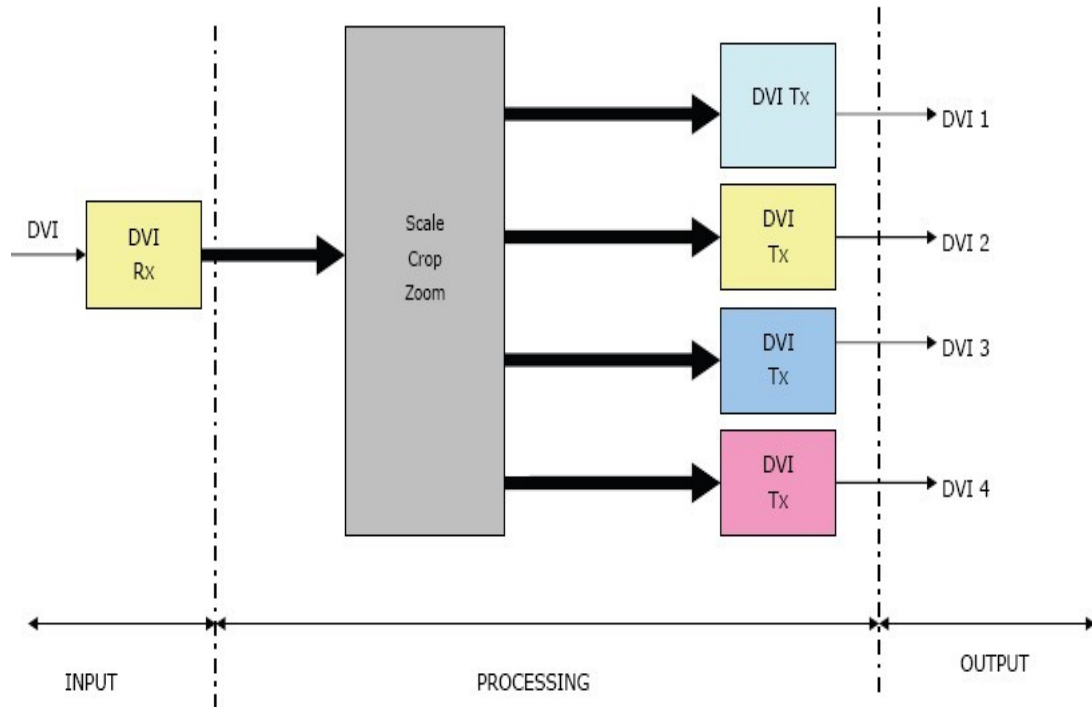
Table 1 LED Indication

Number	Function	Indication	Remark
1	Indicate if the work state of the equipment is normal	light- normal; flicker- abnormal;	
[2..4]	Work state or equipment error	Ordinary work state: "000"-directly; "001"-split 4 section screen "010"-horizon split 2 section; "011"-vertical split 2 section; "100"-horizon 4 section screen; "101"- split 4 section screen, input test data. other-reserve Error indication: "000"-no DVI input "001"-DDR SRAM unable to initialization other-reserve	

Remark:

LED extinguish is 0, LED light up is 1

4.0 Function block diagram




5.0 Specification/parameters

DVI Input	
Number of Inputs	1
Connector	HDMI Type A
Supported Standards	1024×768×60Hz, 1280×768×60Hz
Signal Level	TMDS pwl, single pixel input, 165MHz bandwidth
Standard	DVI 1.1
DVI Output	
Number of Outputs	4
Connector	HDMI Type A
Supported Standards	4096×768×60Hz 2×2048×1152×60Hz 2×1024×1536×60Hz 1024×3072×60Hz 5120×768×60Hz 2×2560×1152×60Hz 2×1280×1536×60Hz 1280×3072×60Hz and user define
Signal Level	TMDS, 165MHz bandwidth
Function	
Router	1 in 4 out
Splitter	Support 4 pictures splite by any modes
Extras	
Communication	RS232
Power Supply	85-264V 2A IEC-3
Working Environment	0°C~45°C
Stored Environment	10% to 90%
Product Warranty	1year

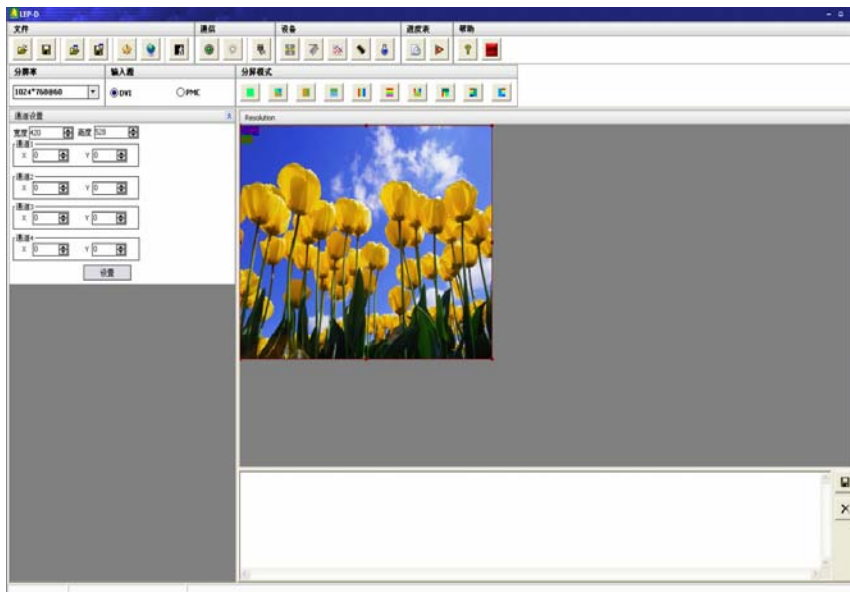
6.0 Communication Software Guideline (RS232)



Run AVDSP 1.1.0.2 software  inside CD, and install AVDSP Console into dedicated directory. After install, double click AVDSP 1.1 icon on the desk. AVDSP Console will auto detect AVDSP series devices in the chain, and open their console seperately.

The steps to run VSP 320 with console as following:

After console detect VSP 320, it will open its software as shown in next Picture.

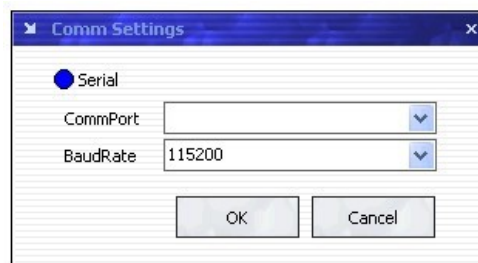



● Communication Establish

Software default Port connection, Users need to click the button  to close

Port for the first time, Set the Port by  button with serial communication.

Users need to select between serial port and baud rate.



After Port setting, click button  to start Port connection. After connect

successfully, the bottom of left corner will display .

- **Synchronize**



Click the Sync button, can synchronize configuration data inside hardware by software. At the same time, could read EPROM data from equipment.

- **input source**

VSP 320 contains one DVI input, four DVI output, it can be used as Video distributor or sub-screen device. Two input Video source: HDMI (HDMI interface with DVI protocol) and PMC (used as an output module of VSP 618 Video processor) .



- **Resolution**

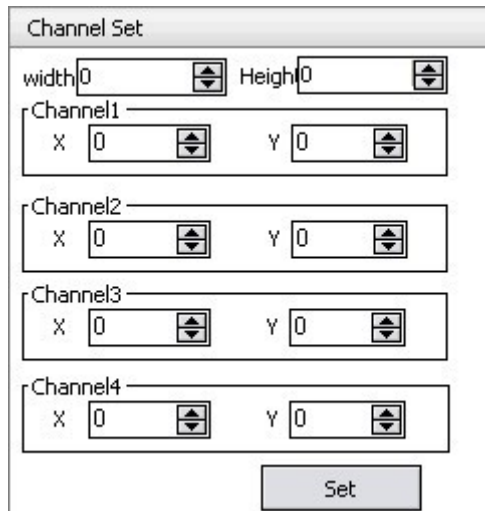


, fill in the input resolution in the drop-down menu.

- **Channel Setting**

Users can adjust displacement of each port output image through "Channel Setting".

Remark: Users change the width and height parameter is not suggested.



4. Select split panel modes



, Router mode




, Split into 4 panels mode




, Split Horizontal direction into 2



, Split Vertical direction into 2


 , Split into 4 in Horizontal direction

 , Split into 4 in Vertical direction


 , Split top Horizontal into 4

 , Split bottom Horizontal into 4

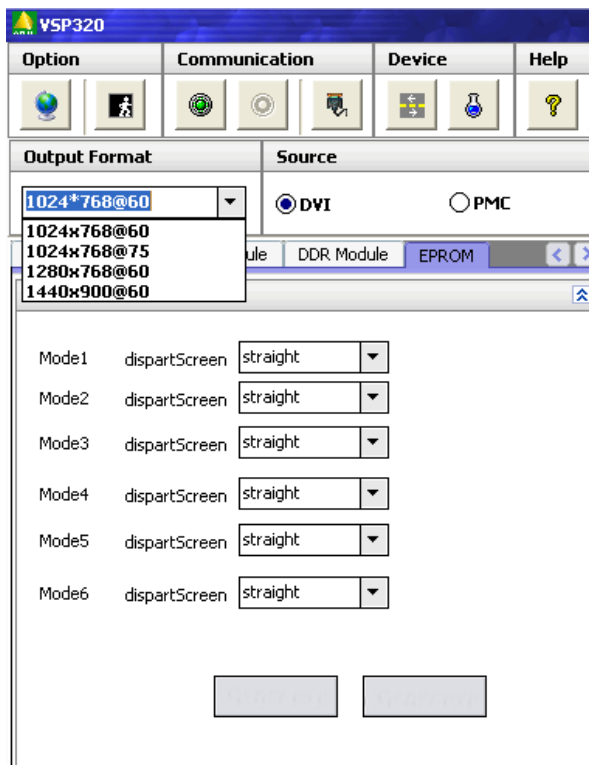
 , Split left Vertical into 4

 , Split right Vertical into 4

● Save to EPROM

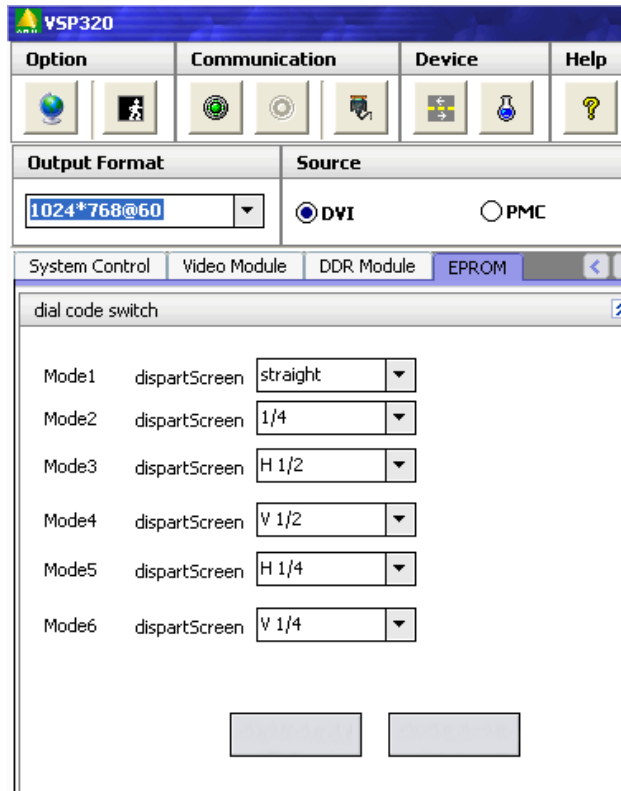
 User can change the factory default settings by following operation.

Firstly, select input resolution which from DVI input, users can select resolution device supports from 1024*768*60Hz, 1024*768*75Hz, 1280*768*60Hz and 1440*900*60Hz.




Users can set all working modes of VSP 320 from drop-down menu of splite mode, click "Save to EPROM" after all the parameters setting. If the command output very quickly in the log window, the save operation is successful. Otherwise, please turn off the power and restart VSP320 to do save operation again.

System default settings shown as the figure:



Remark:

- 1.If you need to change the output resolution, you can just select the desired resolution in the drop-down menu, with the above steps can be set up.
2. When EPROM under the resolution saved successfully. Users can view the set

by sync operation .

3. System status, system control, input and output, parameter setting under the advanced setting is set only by certification engineers, users do not need to set up.