

VSP 168S Quick Start



- Max 2048×1152/2560×816 input/output resolution
- Seamless switching between inputs
- Multiple cascade for sync mapping
- 3G/HD/SD SDI compatible input
- One LED sending card install slot
- Picture in picture
- Remote control by RS 232
- 1U rack mount structure for 2 VSP 168S
- 2U rack mount structure for 4 VSP 168S

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Product Introduction

VSP 168S is a 4 inputs seamless switcher and scaler. VSP 168S supports all common video and graphic inputs, including 1 CVBS, 1 VGA, 1 DVI, 1 3G-SDI (Option). VSP 168S meets high end presentation requirement as its qualified image quality and advanced video processing ability, take multiple cascade mapping for example.

VSP 168S comes with a compact 1/2U frame and a LED sending card install room, so it is the most compact LED video processor which user can find only in the LED display application market. There are two kinds of rack mount structures available as option. One is 1 unit for two VSP 168S to be installed, and another is 2 unit size for up to 4 pieces VSP 168S.

VSP 168S supports following main functions: max output resolution up to 2048×1152 or 2560×816, quick user config scale operation, seamless switching for the inputs, auto input detect, multiple cascade mapping.



1U rack mount structure for 2 VSP 168S



2U rack mount structure for 4 VSP 168S

Packing Configuration

Power Cord



USB Cable



DB9 to RJ11
Cable



DVI to HDMI
Cable



SDI Cable



USB Disk



Screw Driver



Antistatic Bag



Certification

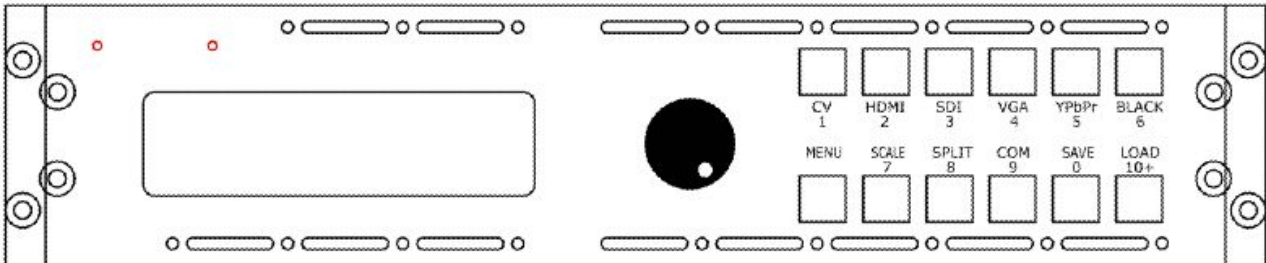


Note: The color of the screw driver is randomly when packing.

Chinese Standard, American Standard or European Standard power cord is option.

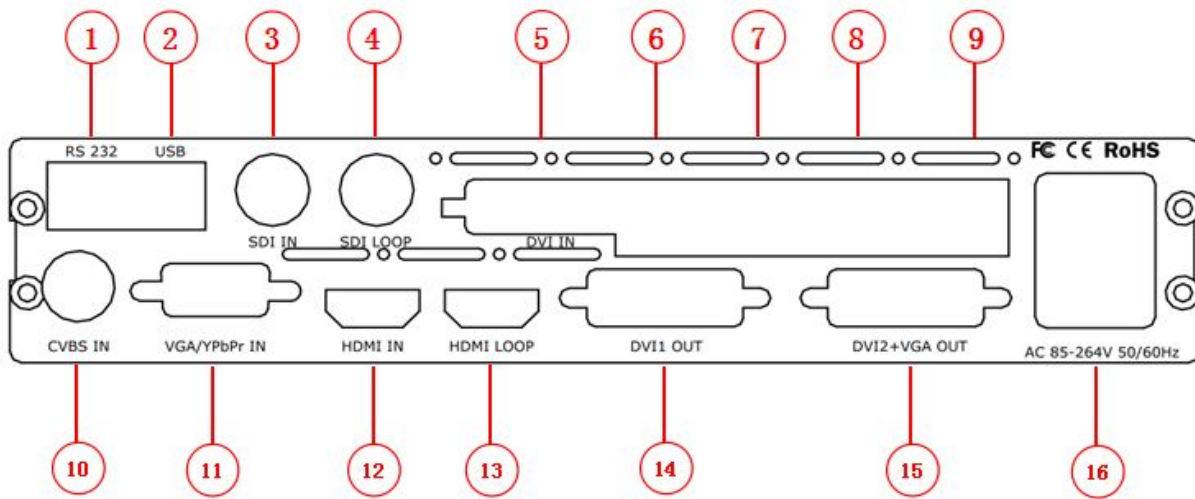
Hardware Orientation

Front Panel



Button Instruction			
CV	CVBS signal source button	SPLIT	Split button
HDMI	HDMI signal source button	COM	Cascade button
SDI	SDI signal source button	SAVE	Save button
VGA	VGA signal source button	LOAD	Load button
YPbPr	YPbPr signal source button	0~9	Number button, use for scale and custom setting
BLACK	Black button	LCD Panel	Show operation menu items
MENU	Menu button	Knob	Confirm and adjust LCD menu
SCALE	Scale button		

Back Panel



Input Interface	
3	3G-SDI input BNC port
4	SDI Loop Out BNC port
10	CVBS Input BNC port
11	VGA Input DB15 port
12	HDMI Input HDMI-A port
13	HDMI Loop Out HDMI-A port

Other Interface	
1	RS232 Interface
2. 6	USB Interface USB-B
5	DVI input port of sending card
7	Power supply port of sending card
8. 9	10/100M port RJ45 of sending card
16	Power IEC-3

Output Interface	
14	DVI Output DVI-I
15	DVI+VGA DVI-I Output

Operating Instruction

Content

- How to Do Customized Output Resolution
- How to Realize Single Image Switching
- How to Set up the PIP
- How to Set up the Size and Position of the Single Image
- How to Set up Image Zoom
- How to Realize the Freeze and the Live Image Switching
- How to Use Black Out
- How to Realize the Screen Size Setting
- How to Realize the Text Overlay Setting
- How to Save the Parameter
- How to Load the Saved Parameter

How to Do Customized Output Resolution

1. Push [MENU] button to enter the menu items, turn the knob and go to <OUTPUT FORMAT>, push the knob and confirm to go into the <OUTPUT FORMAT> menu.
2. Push the knob and go into <CUSTOM> menu.
3. Turn the knob on each digital position, and change the value of the digital by the digital buttons on the front panel.
4. After the digital, push the knob will add *, means before the * is the horizontal size. Same operation for vertical size.
5. After the digital, push the knob will add @, means before the @ is the vertical size, and after the @ is the refresh rate. Only digital 50 or digital 60 supports for the refresh rate. Use the digital buttons to finish the settings.
6. After input all the values, push the knob to enable VSP 168S to output this resolution. VSP 168S will take 5 to 10 seconds to enable this output resolution.

How to Realize Single Image Switching

1. Boot the system default CV1 to the current input source, if need seamless switching other source such as VGA, push VGA button.
2. CV1 button light turns off after pushing VGA button. VGA button light is on if the VGA signal is effective and stable. And if the VGA signal is invalid or no input, DVI button light will flash.

Note: Seamless switch means signal switch will not appear any flash point, black, shaking or delay.

How to Set up the PIP

Enable the PIP function, the operations are as follows:

1. Push [MENU] button to enter the menu items.
2. Turn the knob and choose <OUTPUT>.
3. Push the knob to confirm, turn the knob again, choose <PIP>.
4. Push the knob to confirm, turn the knob, choose ON and confirm, then start PIP mode.

LAYOUT: Can choose PIP layout, the corresponding results are as follows:

PIP L+T



PBP L+R



PBP T+B



SWAP IMAGE: It can set PIP to swap exchange, when choose ON, it can realize the IMAGE A and IMAGE B exchange.

ALPHA: Can set the image transparency, the regulating range is among 0 to 16.

SELECT: Can choose to set the size or position of IMAGE A or IMAGE B Individually

How to Set up the Size and Position of the Single Image

1. Push [MENU] button to enter the menu items.
2. Turn the knob, choose <OUTPUT>.
3. Push the knob to confirm, turn the knob again, choose <SCALE>.
4. Push the knob to confirm, and enter to the <SCALE> items, turn the knob, user can adjust the following items by knob or number buttons.
5. If image quality distorts by improper operation, it can be recover by reset.

How to Set Image Zoom

The image can be zoom in horizontal or vertical separately, to meet the special effects required.

Push the [MENU] button to go into the menu items, turn the knob and choose <INPUT>, push the knob to confirm. Turn the knob, and choose "ZOOM", show the menus as following:

V UP--Zoom in vertical and the image will be zoom in to the top direction from its bottom.

V DOWN--Zoom in vertical and the image will be zoom in to the down direction from its top.

V UP/DOWN--Zoom in vertical but in both top and down direction from its middle.

H LEFT--Zoom in horizontal and the image will be zoom in to the left direction from its right.

H RIGHT--Zoom in horizontal and the image will be zoom in to the right direction from its left.

H LIFT/RIGHT--Zoom in horizontal but in both left and right direction from its middle.

CENTER--Zoom in 4 corner direction from center.

RESET--If image quality distorts by improper operation, it can be recover by reset.

How to Realize the Freeze and the Live Image Switching

1. Push the [MENU] button, turn the knob and choose <OUTPUT>.
2. Turn the knob, choose <DISPLAY MODE>, choose <MODE>, push the knob to confirm.
3. Turn the knob, choose FREEZE, to freeze the current live image.
4. Turn the knob again, choose LIVE, the current freeze image is switched to live image.

Note: In PIP mode, the Image A and Image B can be freeze or live at the same time.

How to Use Black Out

Black out description:

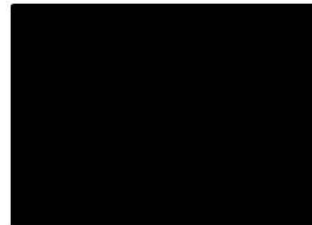
Black signal realizes one-key-touch to a black screen.

VSP 168S black provides effect processing when output, Black switching with fade in fade out effect.

The operation is as below:

Push [BLACK] button, and the output turns to BLACK screen with fade in fade out effect.

As shown below:



How to Realize the Screen Size Setting

VSP 168S supports the screen parameters to meet the requirement where user want to switch between scale screen size and full display size (like monitor). This is only enable for a single display window. Following is an example of a screen size is 1408 x 832.

Operator can define the VSP 168S output resolution from standard output resolution list or customized the output resolution which is higher than 1408 x 832. For this application 1440x900 is an example:

Push the [MENU] button to go into the menu items, turn the knob and choose <OUTPUT>, push the knob to confirm, then turn the knob and choose <SCREEN>, push the knob and goes into the screen menus as following:

H SIZE--Horizontal pixels, turn knob or use the digital button to input the value 1408.

V SIZE--Vertical pixels, turn knob or use the digital button to input the value 832.

H POS--Horizontal position, default value is 0, set the value as the way of H SIZE and V SIZE.

V POS--Vertical position, default value is 0, set the value as the way of H SIZE and V SIZE.

MODE-- Mode option, choose SCREEN SIZE.



How to Realize the Text Overlay Setting

1. Push [MENU] button, turn the knob, choose <OUTPUT>.
 2. Turn the knob, choose <TEXT OVERLAY> and enter <TEXT OVERLAY>, push the knob to confirm.
 3. Turn the knob, choose <TEXT OVERLAY> mode, choose ON, TEXT OVERLAY function open.
 4. Push MENU, return to <TEXT OVERLAY>, turn the knob, LCD display shows menu options, select 13 modes in <PRESET>, or select <BLEND>, which includes two modes:

Mode 1: Graphic content locate at the top and is non-transparent, background transparency is controlled by double-picture transparency.

Mode 2: Graphic content is controlled by double-picture transparency, the background is completely transparent. Turn the knob and choose the mode.
 5. Push the [MENU] button, return to <TEXT OVERLAY>, turn the knob, choose ABOVE/BELOW to select the layer position for IMAGE B.
 6. Push the [MENU] button, return to <TEXT OVERLAY>, turn the knob, choose BLEND LEVEL, and set the image display transparency, regulating range between 0~16.
 7. Push the [MENU] button, return to <TEXT OVERLAY>, turn the knob, choose the color value:

RED: The value range of color RED that to be set, regulating range between 0~255.

GREEN: The value range of color GREEN that to be set, regulating range between 0~255.

BLUE: The value range of color BLUE that to be set, regulating range between 0~255.
 8. At the same time, user can view the effect through the screen, to get a better setting.
- Note:** All the above settings are available only for IMAGE B.

How to Save the Parameter

VSP 168S provides 10 save modes. After setting, push [SAVE] button to enable the save function. Turn the knob, select the location that need to save, for example, save to SAVE2, choose SAVE2, push the confirm, and save the parameter finished.

Note: The operation is same as MENU→ SAVE SETUP → SAVE TO.

How to Load the Saved Parameter

VSP 168S provides 10 load modes. Push [LOAD] button to enable the LOAD function. Turn the knob, select the location that need to load, for example, load from SAVE1, choose SAVE1 and confirm, and load the parameter finished.

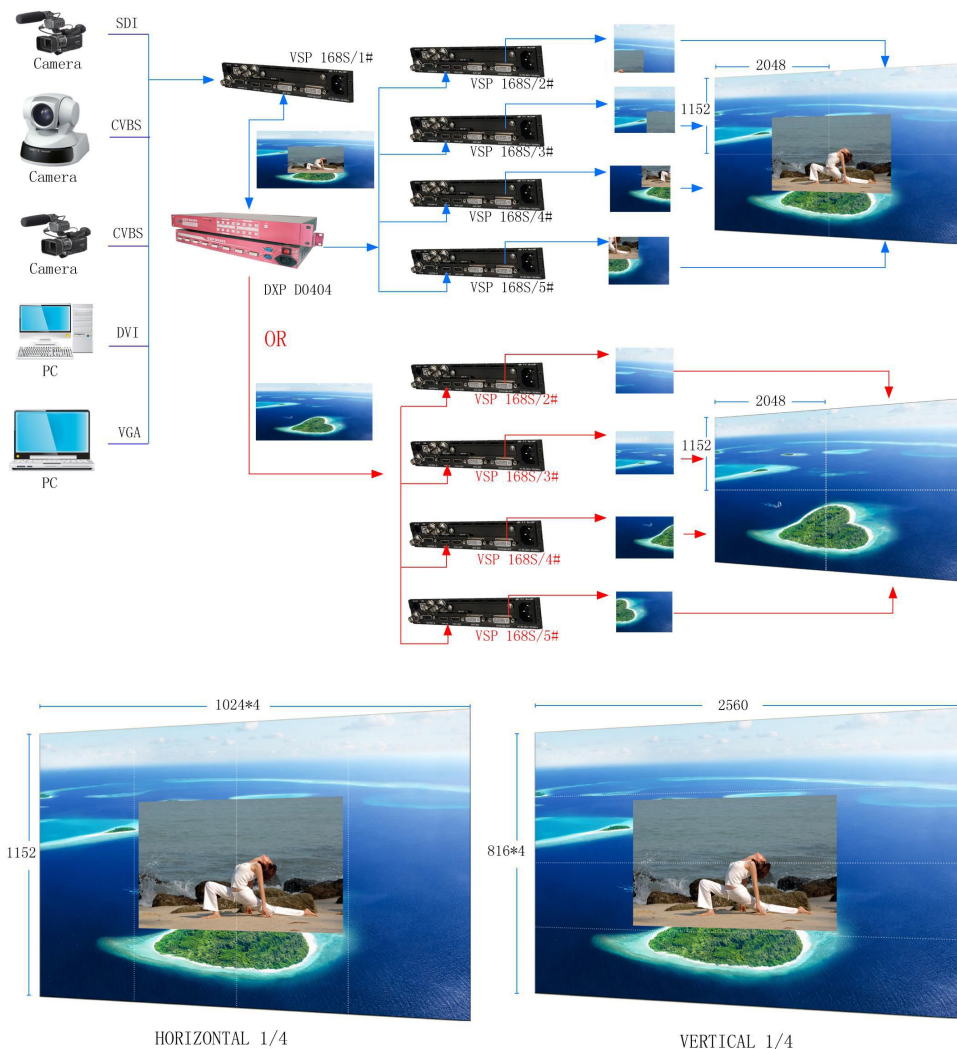
Note: The operation is same as MENU→ SAVE SETUP → LOAD FROM.

Product Application

Multiple mosaic and LED Display beyond normal control resolution mosaic

Project 1: Set VSP 168S/1# as PIP mode, and divides signal to VSP 168S/2# to VSP 168S/5# for cascade by using DVI matrix (DXP D0404). The split modes, including "FIELD GLYPH", "HORIZONTAL 1/4", "VERTICAL 1/4" and "IRREGULAR" can be achieved.

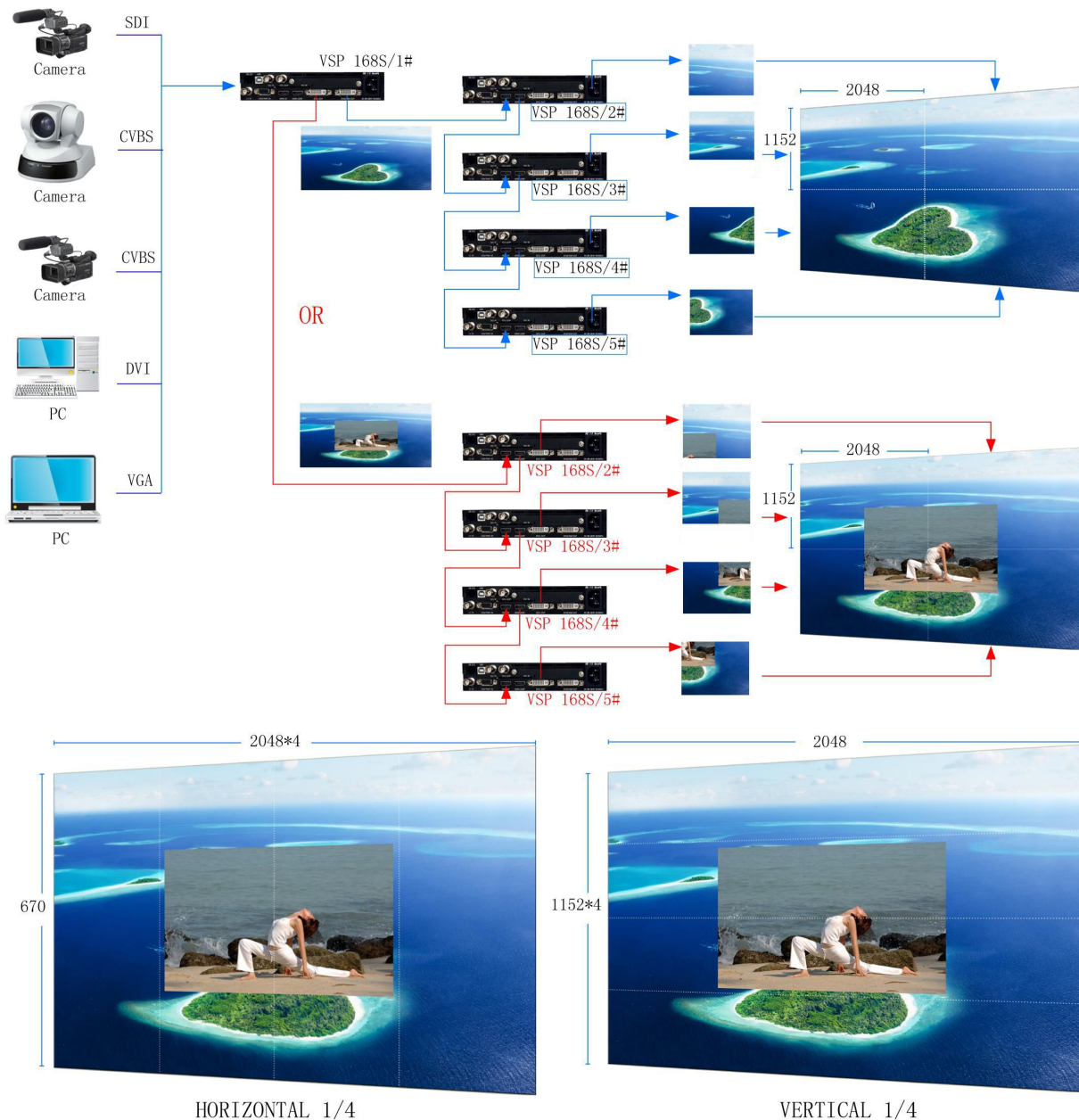
Project 2: VSP 168S/1# divides signal to VSP 168S/2# to VSP 168S/5# for cascade by using DVI matrix (DXP D0404).



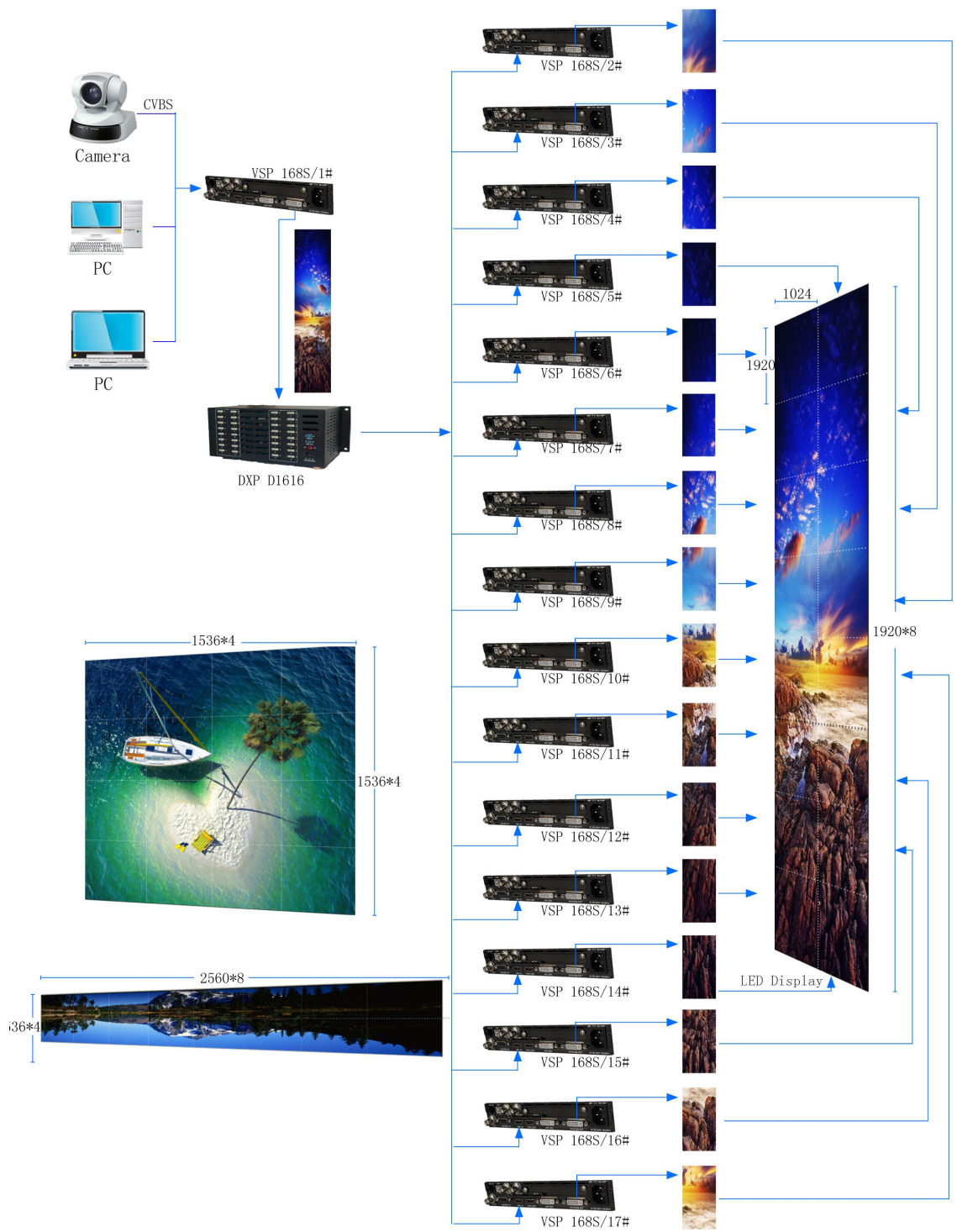
Project 1: Format conversion the front-end signal source with VSP 168S/1#, connect DVI output interface to the HDMI input interface of VSP 168S/2#, and output to the next VSP 168S by HDMI loop. The same method, connect the other VSP 168S for cascade. The quantity of VSP 168S depends on the size of LED display.

Project 2: Format conversion the front-end signal source with VSP 168S/1#, and set PIP mode, output to the HDMI input interface of VSP 168S/2#, then output to the next VSP 168S by HDMI loop. The same method, connect the other VSP 168S for PIP cascade. The quantity of VSP 168S depends on the size of LED display.

Here we use 4 sets of VSP 168S for cascade, the split modes includes "FIELD GLYPH", "HORIZONTAL 1/4", "VERTICAL 1/4" and "IRREGULAR".

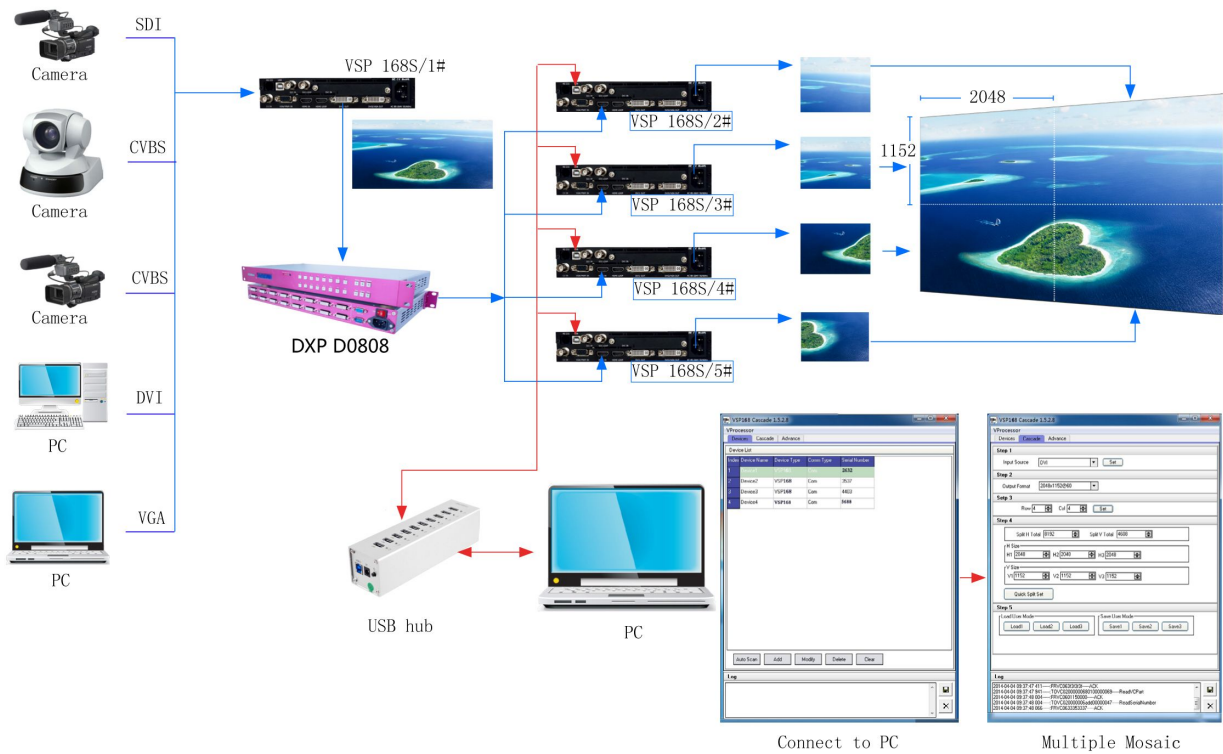


Project Description: The project is divide VSP 168S/1# signal to VSP 168S/2# to VSP 168S/17# for cascade by using DVI matrix (DXP D1616), and then output to LED display. This project can achieve super resolution cascade and custom resolution cascade, also can switch among different signals.



VSP 168S can also cascade through the upper computer.

Connect the USB interface of VSP 168S to USB hub, then connect USB hub to the upper computer, and open the split function for cascade through computer.



Contact Information

Warranty:

All video products are designed and tested to the highest quality standard and backed by a full 3 years parts and labor warranty. Warranties are effective upon delivery date to customer and are non-transferable. RGBlink warranties are only valid to the original purchase/owner. Warranty related repairs include parts and labor, but do not include faults resulting from user negligence, special modification, lighting strikes, abuse(drop/crush), and/or other unusual damages.

The customer shall pay shipping charges when unit is returned for repair.

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