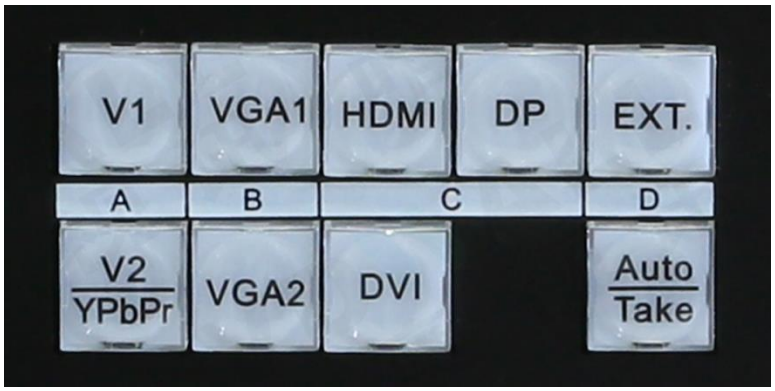
LVP615 operation application instruction

Contents

1. Signal switch keys



1.1 LVP615 has 9 channels input ports, **V1, VGA1, VGA2,HDMI, DP, V2 / YPbPr, DVI** and **EXT**, if you want LVP615 outputs which vide source press relative signal key;

1.2 These input ports be divided to 4 groups A B C D (the source from same group can't select as PIP source, and don't have seamless and fade in / out switch function);

A group: V1 and V2 / YPbPr;

B group: VGGA1 and VGA2;

C group: HDMI, DP and DVI;

D group: EXT;

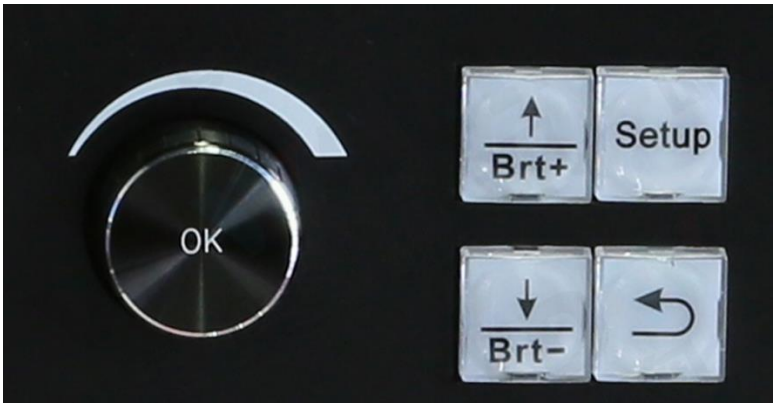
1.3 V2 / YPbPr means V2 and YPbPr share the same input port, when you want to use which one, you can configure which one first in user setup menu;

1.4 EXT is extended input port, which can be Video, SDI or DVI input port, (**LVP615 is Video port, LVP615S is SDI port, LVP615D is DVI port**);

1.5 Auto / Take is quick switch and Auto adjustment button, (when you open **Preselect Take switch** function the button is available for quick switch; Auto when you connect VGA video source then the video on LED screen not in the

correct location you can press the button to adjust the video location and let it in correct location);

2. User setup configuration keys



2.1. **Setup:** press the key to enter user setup menu;

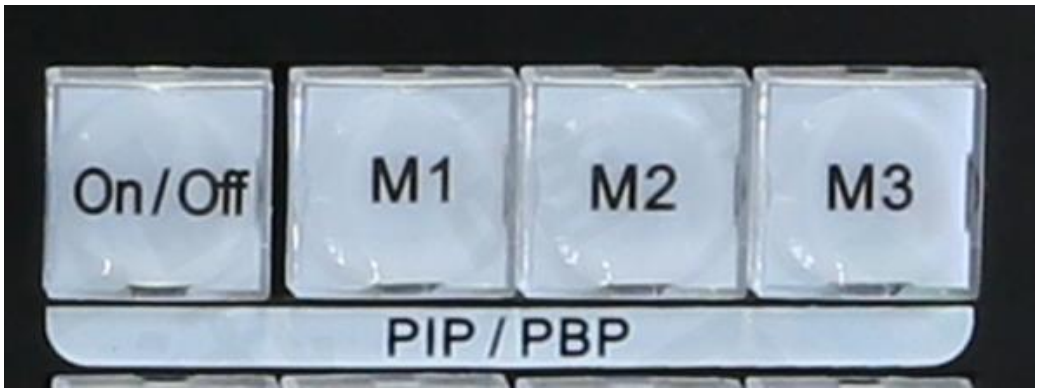
2.2. **Brt+:** after entering user setup menu, press the key to select next one setup option (when exit user setup menu press the key to increase brightness);

2.3. **Brt-:** after entering user setup menu, press the key to select last one setup option (when exit user setup menu press the key to decrease brightness);

2.4. **OK:** when configure parameter value rotate OK to change parameters, after changing parameters press OK to save parameters;

2.5. After entering user setup menu press the key to return;

3. PIP /PBP function keys



3.1. **On / Off:** PIP switch, press it to open or off PIP function;

3.2. **M1 M2 M3:** PIP memory keys, before setting PIP parameters select a mode first for saving parameters, every mode can save different parameters;

3.3. **After saving mode, when we use PIP function can switch different mode quickly;**

4. Function keys

4.1. **C / F:** press the key to select signal switch effect for example seamless switching, Fade in / out switching and blend switching;

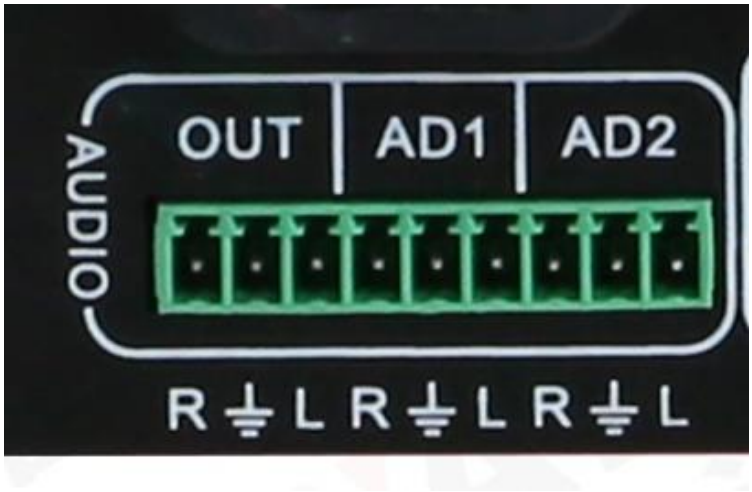
4.2. **Bypass:** press the key to open or off part / full output, for example when it is open, LVP615 only outputs part video of input source, when it is off LVP615 outputs full video of input source (it is available after setting output width and height);

4.3. **Freeze:** press the key to open or off output video freeze function;

4.4. **Mosaic:** splicing switch, when you use several LVP615 together can drive very large LED screen;

5. Power switch and socket

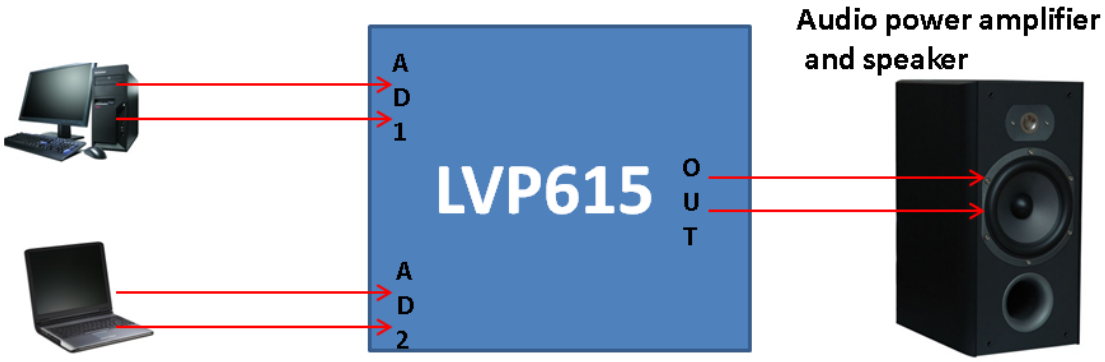
6. Audio ports



6.1. **Out:** audio output port, connect audio amplifier input port;

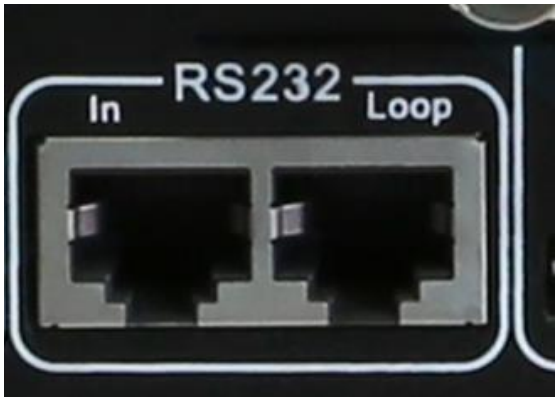
6.2. **AD1 and AD2:** two channels audio input ports;

6.3. **R :** right audio channel, Ground, **L:** left audio channel;



6.4. Audio connector: connect audio cable to the connector then plug the audio connector to LVP615's audio port;

7. PC software control ports and WiFi antenna



7.1. **RS232:** In port connects PC RS232 port (Loop connect next LVP615 can achieve one PC to control servera LVP615s);

7.2. **RF:** WIFI antenna;

7.3. **LAN:** local area network control port, connect network rourter;

7.4. **USB:** connect PC USB port to achieve PC software control;

8. Signal source input port

8.1. LVP615 has 9 channels input ports, V1, VGA1, VGA2,HDMI, DP, V2 / YPbPr, DVI and EXT, connect relative video source to relative input port;

9. Video output ports

9.1. 2 DVI output ports, used for connect sending card or some display device with DVI input port;

9.2. VGA connect monitor for monitor LVP615 output video source;

9.3. DVI Loop used to connect next LVP615 or another processor's DVI input port

(the output video source from DVI input port, it means the DVI Loop copy the video source from LVP615's DVI input port then output, when we use Mosaic function will need the DVI Loop port);

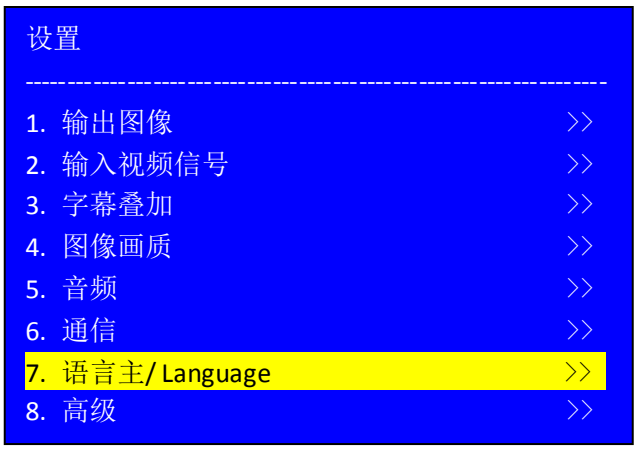
10. Sending card slot

10.1. Every LVP615 can put in 2 common sending cards (common sending card normally has 2 RJ45 output port);

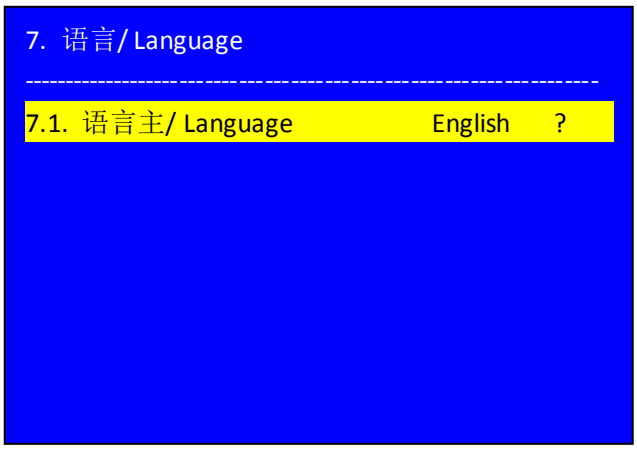
11. Setting language

11.1. After opening LVP615 then you can see the interface as below;

11.2. Press Setup key to enter setup menu, press Brt- key to select 7. 语言/ Language then press OK to enter language configuration menu;

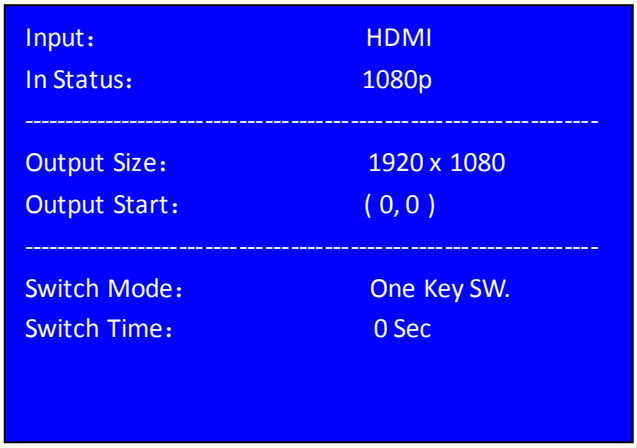


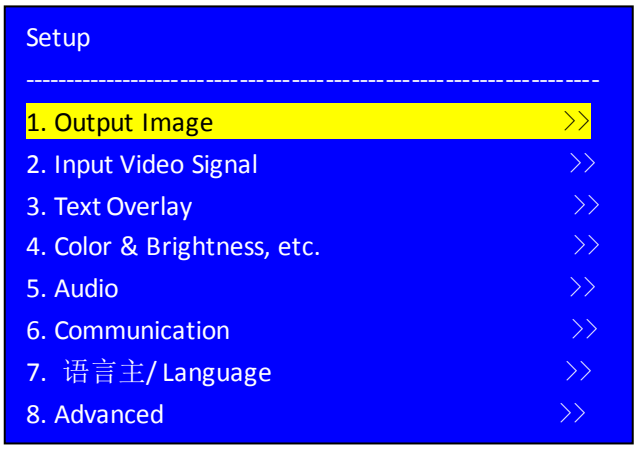
11.3. After entering language configuration menu, rotate OK to select English or Chinese then press OK to confirm, press return key to exit setup menu;



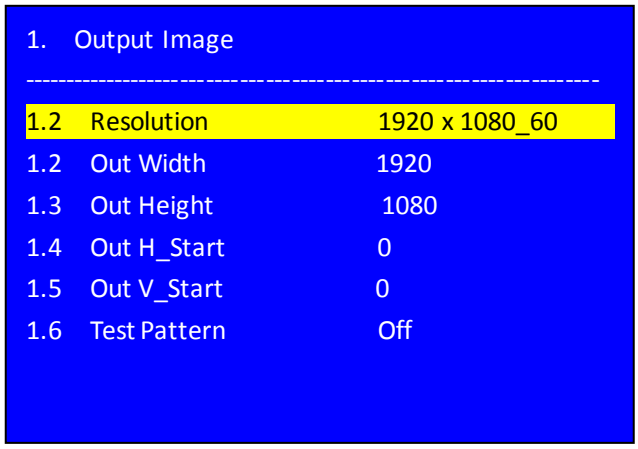
12. Setting output resolution

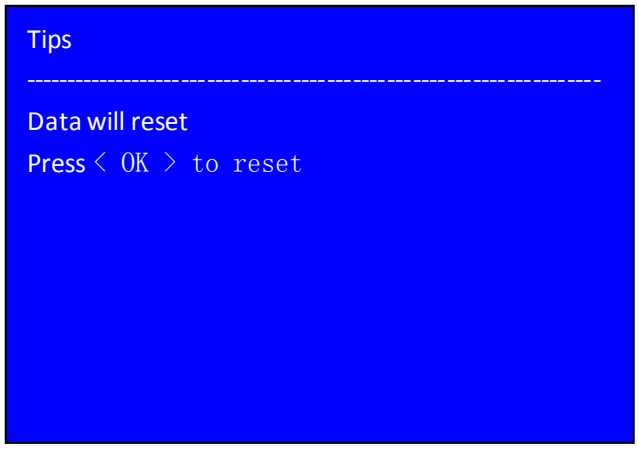
12.1. After opening processor press Setup key to enter setup menu, press Brt- to select 1.Output Image, press OK to enter output image setup;





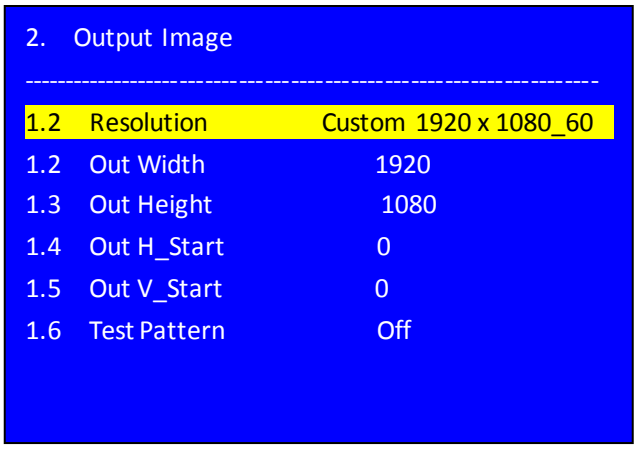
12.2. After entering output image setup menu, press Brt- key to select 1.2 Resolution, rotate OK to select correct output resolution for LVP615, then press OK to enter confirmation menu press OK to confirm(Note: the output resolution you select must be bigger than the resolution of actual LED screen or equal);



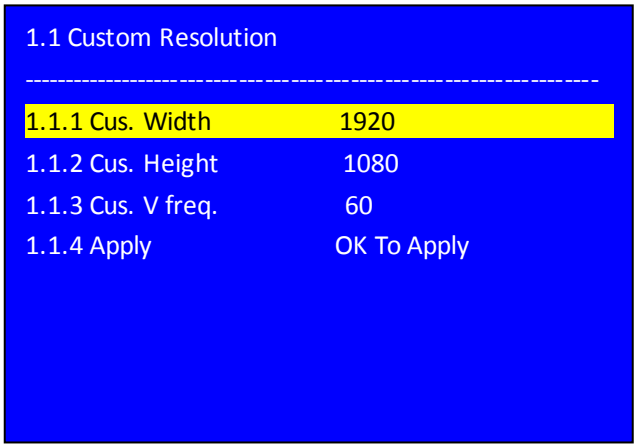


13. User defined output resolution

13.1. When select 1.2 Resolution rotate OK to select Custom 1920 x 1080_60, then press OK to enter custom resolution configuration menu;



13.2. press Brt- or Brt+ key to select setup option , rotate OK to change parameters, after configuring custom resolution parameters select 1.1.4 Apply then press OK to save parameters;



the conditions of resolution customization：

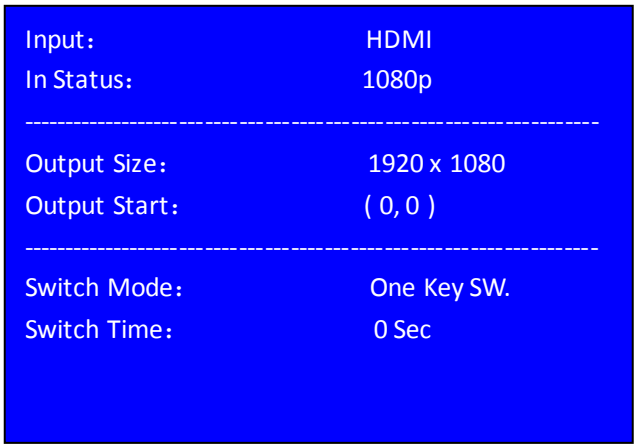
1 the biggest width must be less than 3840，the biggest height must be less than 1920;

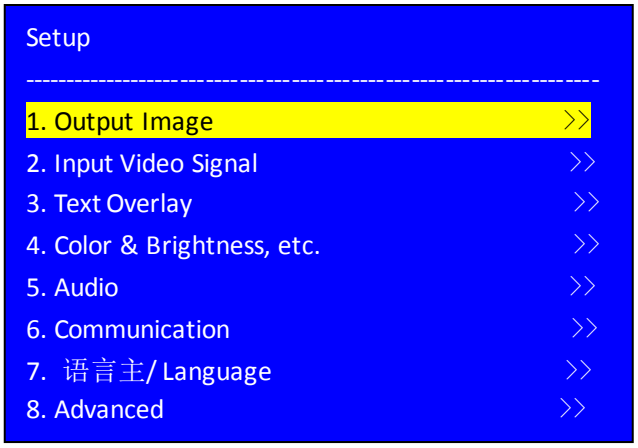
2 custom V FREQ between 23—80Hz，normally use 60Hz；

3 total pixel must be less than 240 thousand pixels；

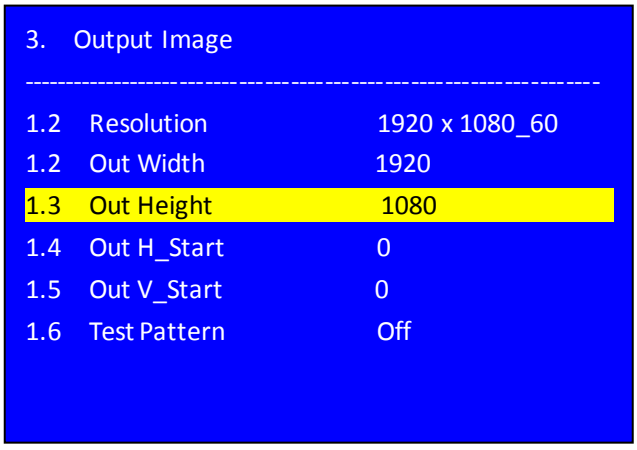
14. Setting output width and height

14.1. After opening processor press Setup key to enter setup menu, press Brt- to select 1.Output Image, press OK to enter output image setup;



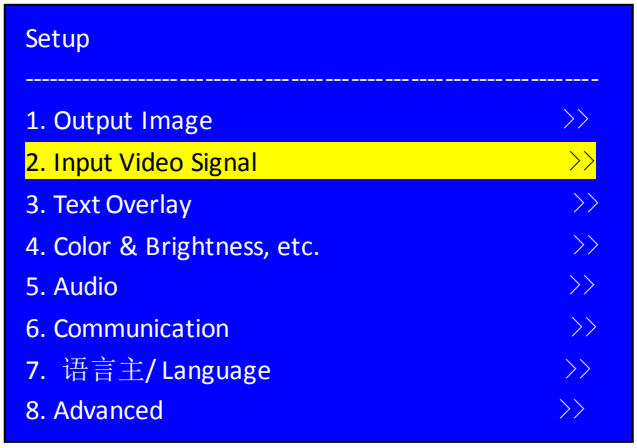


14.2. After entering output image setup menu, press Brt- or Brt+ key to select setup option, rotate OK to change parameter value, then press OK to confirm (the output width and height must be as same as the width and height of actual LED screen, out _H or _V start normally keep 0, change it means move the location of output video);

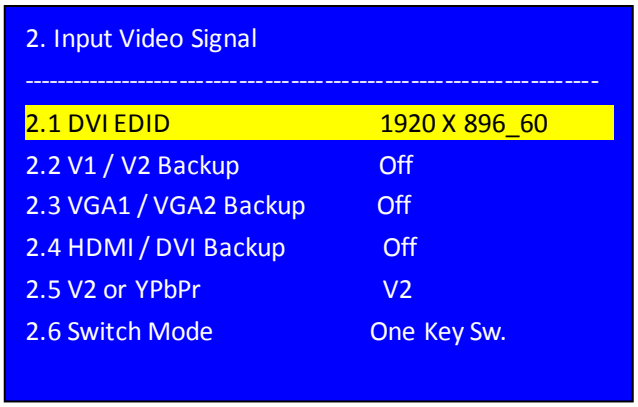


15. Setting DVI EDID

15.1. After entering user setup menu, press Brt- or Brt+ key to select setup option 2. Input Video Signal then press OK to enter input video signal setup;

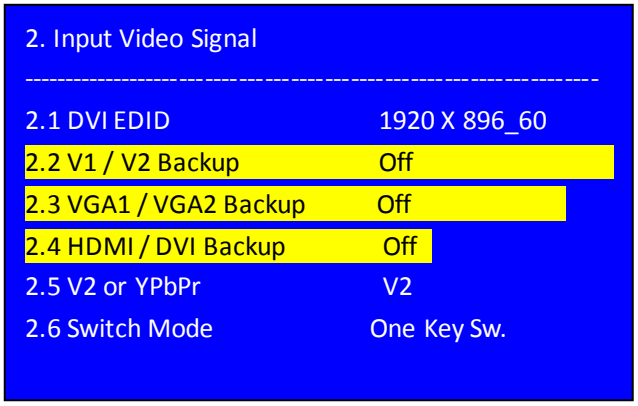


15.2. press Brt- or Brt+ key to select setup option 2.1 DVI EDID, select the EDID resolution you need(you also can custom the resolution, after setting the DVI EDID resolution when PC graphic card open extended mode then connect the cable to LVP615's DVI input port, PC will output the DVI EDID resolution, custom the resolution please refer custom output resolution);



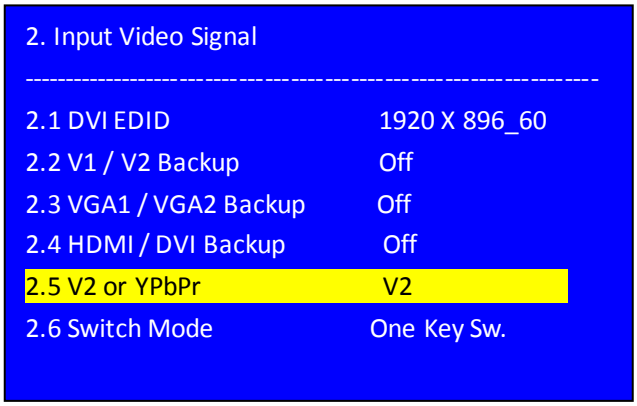
16. setting signal hot spare

16.1. after entering input video signal setup menu, press Brt- or Brt+ key to select hot spare setup option, rotate OK to On or Off every group hot spare, press OK to save (for example you have connected input source HDMI and DVI to LVP615, at present is DVI source output if some problem happens the DVI source lost LVP615 will automatically switch video source to HDMI);



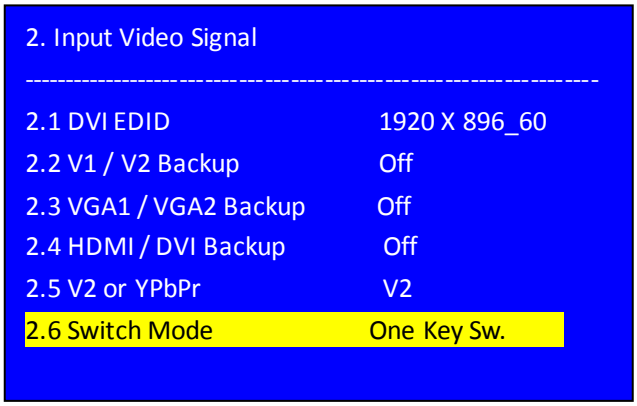
17. Input channel V2 / YPbPR configuration

17.1. after entering input video signal setup menu, press Brt- or Brt+ key to select setup option 2.5 V2 or YPbPR, rotate OK to select input channel (for example we configure it to V2 it means V2 / YPbPR input port V2 will be available);



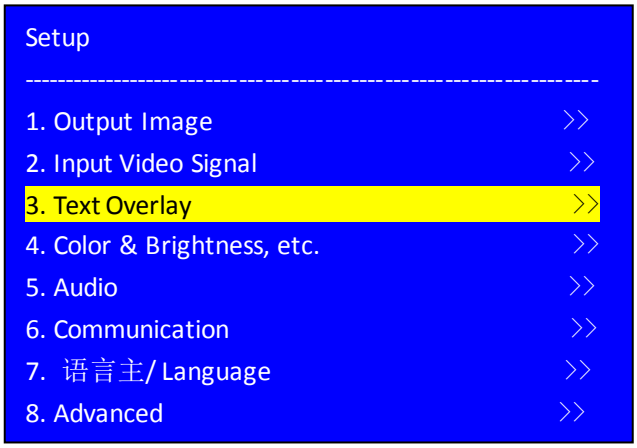
18. Preselect input quick switch

18.1. after entering input video signal setup menu, press Brt- or Brt+ key to select setup option 2.6 Switch Mode, rotate OK to select Pre. +Take SW then press OK to open preselect input quick switch function (after opening the function preselect a input source LVP615 can achieve quick switch between present output video and preselect video, after preselecting video source press Auto / Take key to switch signal source);

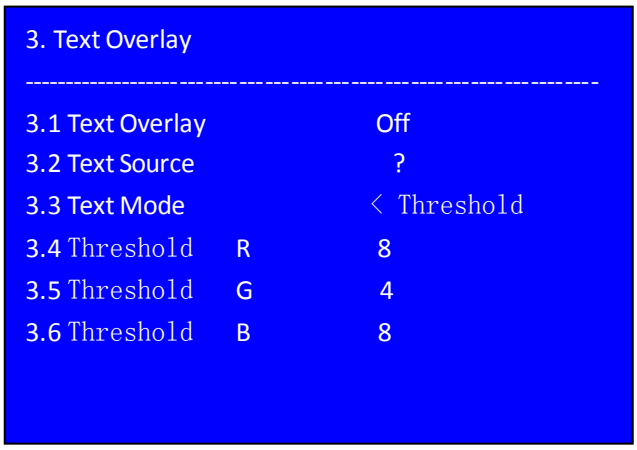


19. Setting HD text

19.1. After entering user setup menu, press Brt- or Brt+ key to select setup option 3. Text Overlay then press OK to enter text overlay setup;



19.2. press Brt- or Brt+ key to select setup option, rotate OK to change parameters, 3.1 Text Overlay to open or Off HD text function, 3.2 Text source to select the text source from which input port, 3.3 Text Mode to select HD text Mode (〈 threshold and 〉threshold) normally we use 〈 threshold mode);

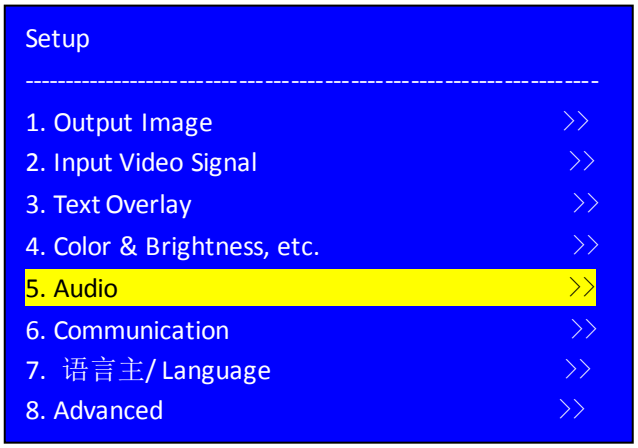


19.3. There are two Text modes 〉Threshold and 〈Threshold, normally the Text

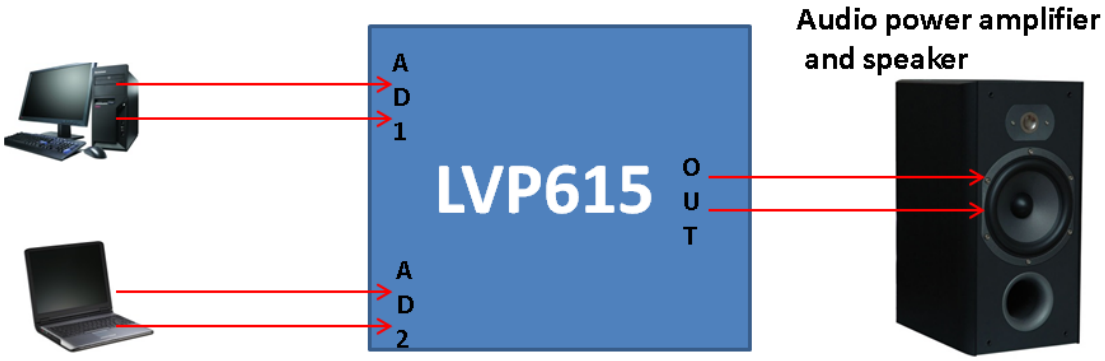
signal is a PPT from computer, when the background of PPT is white choose ＜Threshold，set Threshold (R G B) to be 16，because the threshold value from black to white are 0 to 255,it means threshold value 0-16 will be left and 16-255 will be lost；when the background of PPT is black choose ＞Threshold，set Threshold (R G B) to be 240，it means threshold value 240-255 will be left and 0-240 will be lost；

20. Setting Audio

20.1. After entering user setup menu, press Brt- or Brt+ key to select setup option 5. Audio then press OK to enter audio setup;

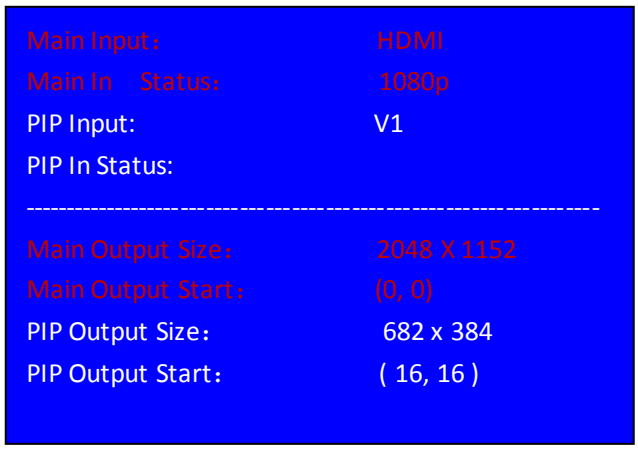


20.2. Press Brt- or Brt+ key to select setup option, rotate OK to select input video source, as the interface as below means the audio to AD1 from DVI, the audio to AD2 from VGA1 (the audio and VGA1 video are synchronized from same laptop);

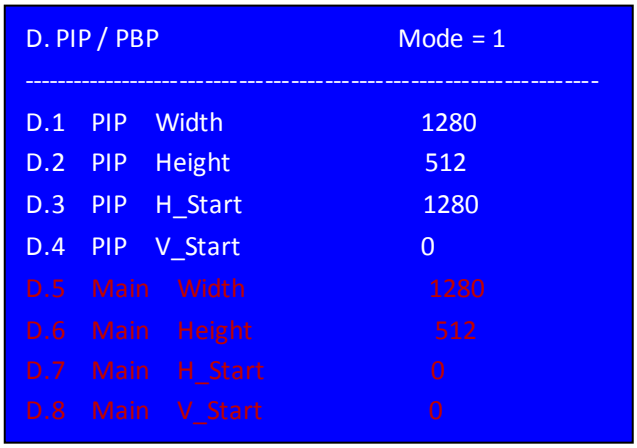


21. Setting PIP/POP

21.1. After opening LVP615 press On / Off key to open PIP / POP function, then press signal key to select a video source for PIP / POP window;



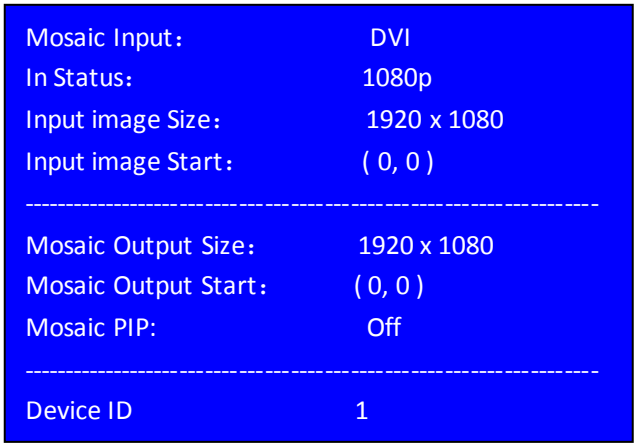
21.2. Press Setup key to enter PIP setup menu, press Brt+ or Brt- key to select setup option, rotate OK to change parameter, press OK to save parameters (before setting parameters you can press M1 M2 M3 to select a mode to save these parameters);



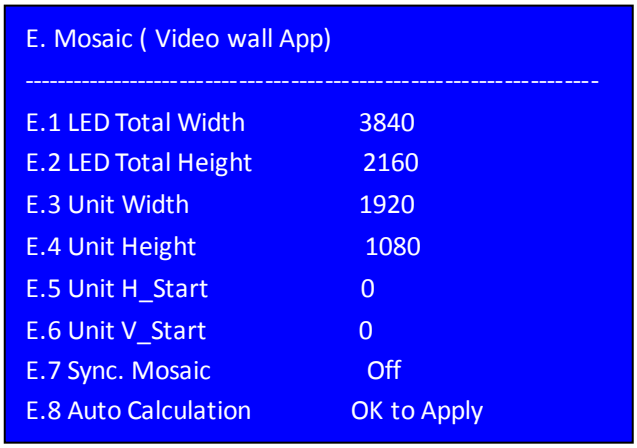
21.3. The size of PIP and Main window depend the width and height you set, the PIP and Main window location depend the H_Start and V_Start you set, (normally the PIP and Main window must in the area of actual LED screen, the video source of Main and PIP window can't from same signal group);

22. Setting splicing (Mosaic)

22.1. First the processor must select DVI source as input, then press Mosaic key to open splicing function;



22.2. Press Setup key to enter Mosaic setup menu, press Brt+ or Brt- key to select setup option, rotate OK to change parameter, press OK to save parameters;



22.3. In menu the LED Total Width and LED Total Height must be as same as your actual LED screen, at present the resolution of LED screen is 3840 x 2160;

22.4. In menu the Unit width and Unit height must be as same as the actual LED screen the unit LVP615 connected;

22.5. After set these parameters of last two steps, press Brt+ or Brt- key to select setup option E.8 Auto Calculation, press OK to calculate input parameters automatically;

22.6. After last step press press Brt+ or Brt- key to enter input parameter setup

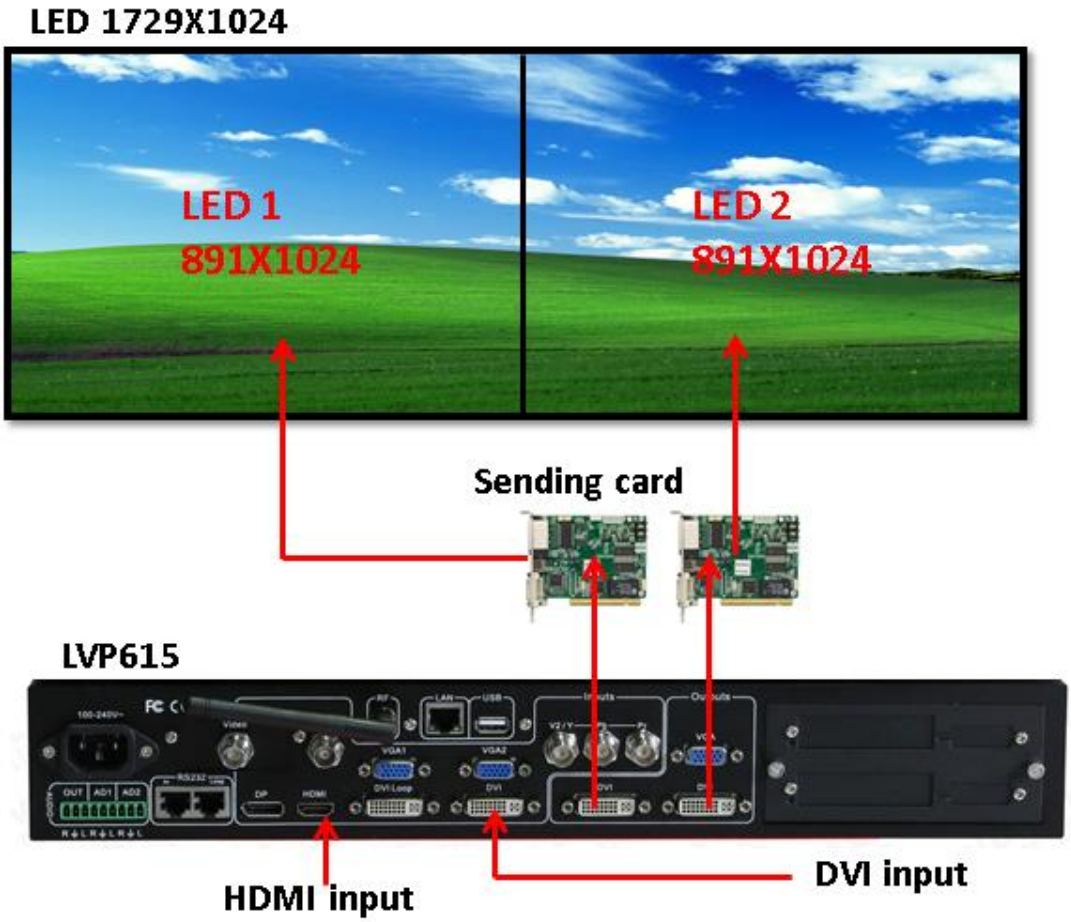
menu (normally for input parameters we only need to set In H_Start and In V_Start);

E. Mosaic (Video wall App)	
E.9 In Width	960
E.10 In Height	540
E.11 In H_Start	0
E.12 In V_Start	0
E.13 Ouit Width	1920
E.14 Out Height	1080
E.15 Out H_Start	0
E.16 Out V_Start	0

22.7. Note: when LVP615 have opened splicing function(Mosaic) also can use PIP / POP function, the input and output resolution of processor which has opened Mosaic function must be same;

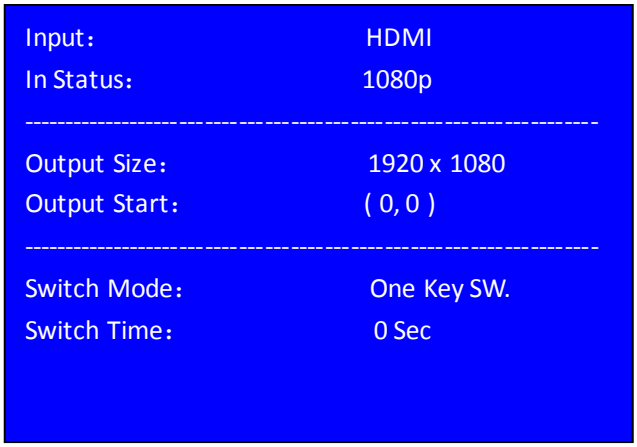
23. Example 1 LED screen 1792 x 1024

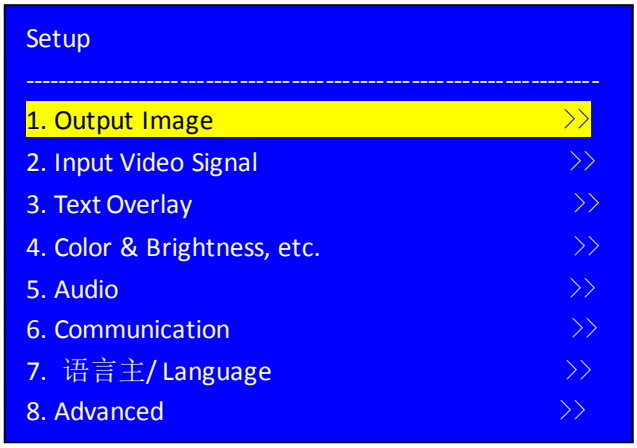
23.1. Device connection diagram;



Setting output resolution

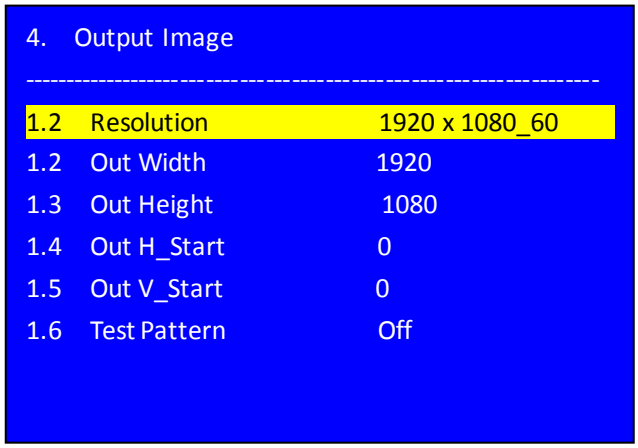
23.2. After opening processor press Setup key to enter setup menu, press Brt- to select 1.Output Image, press OK to enter output image setup;

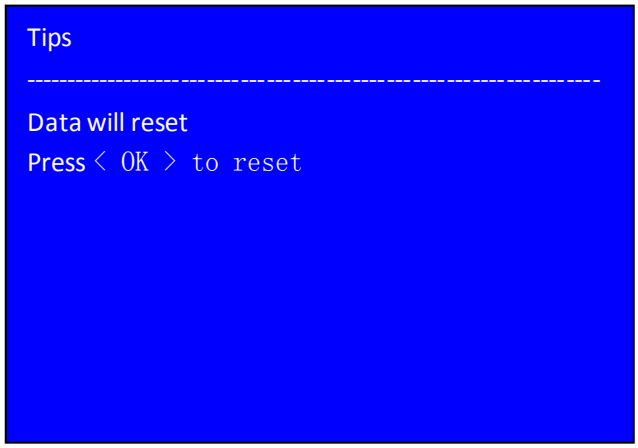




23.3. After entering output image setup menu, press Brt- key to select 1.2 Resolution, rotate OK to select correct output resolution for LVP615, then

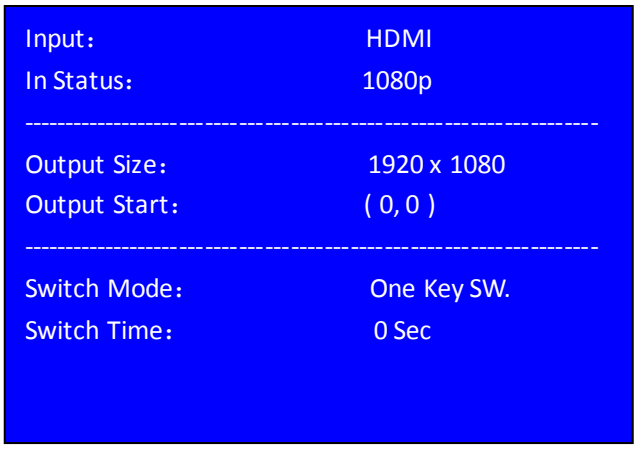
press OK to enter confirmation menu press OK to confirm(Note: the output resolution you select must be bigger than the resolution of actual LED screen or equal);

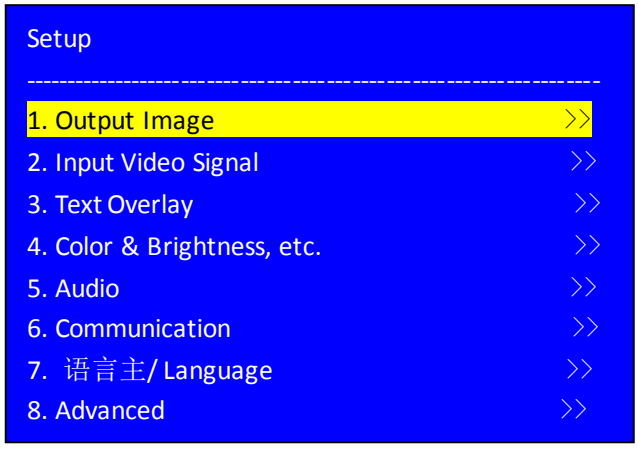




Setting output width and height

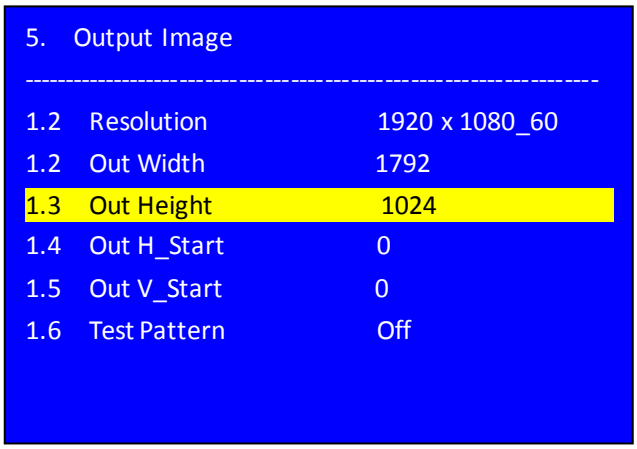
23.4. After opening processor press Setup key to enter setup menu, press Brt- to select 1.Output Image, press OK to enter output image setup;





23.5. After entering output image setup menu, press Brt- or Brt+ key to select setup option, rotate OK to change parameter value, then press OK to confirm (the output width and height must be as same as the width and height of actual LED screen, out _H or _V start normally keep 0, change it

means move the location of output video);

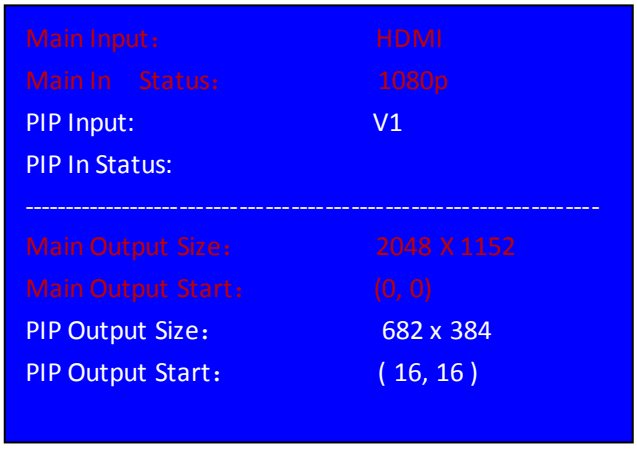


23.6. Please set the resolution of sending card as same as LVP615's output resolution, then configure sending card system ok, (after configuring sending card system ok, must set the X location of LED2's sending card be 896, if no you only can get a half part of video, after setting you can get a full video on LED screen);

PIP application example

23.7. For example we need the LED screen to display two video sources, it can be different or not, and we need the two window size being 896x1024;

23.8. After opening LVP615 press On / Off key to open PIP / POP function, then press signal key to select a video source for PIP / POP window;



23.9. Press Setup key to enter PIP setup menu, press Brt+ or Brt- key to select setup option, rotate OK to change parameter, press OK to save parameters (before setting parameters you can press M1 M2 M3 to select a mode to save these parameters);

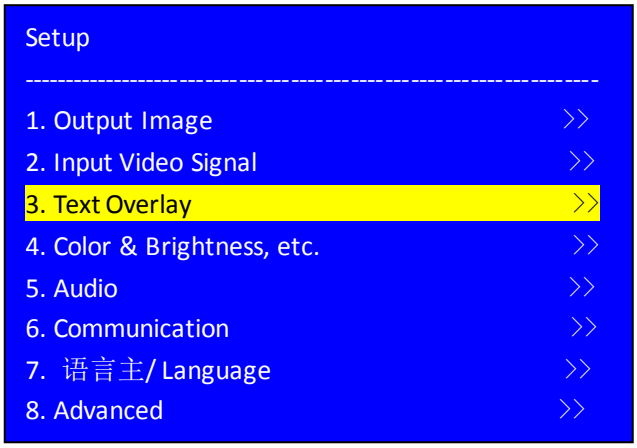
D. PIP / PBP			Mode = 1
D.1	PIP	Width	891
D.2	PIP	Height	1024
D.3	PIP	H_Start	896
D.4	PIP	V_Start	0
D.5	Main	Width	891
D.6	Main	Height	1024
D.7	Main	H_Start	0
D.8	Main	V_Start	0

23.10. The size of PIP and Main window depend the width and height you set, the PIP and Main window location depend the H_Start and V_Start you set, (normally the PIP and Main window must in the area of actual LED screen, the video source of Main and PIP window can't from same signal group);

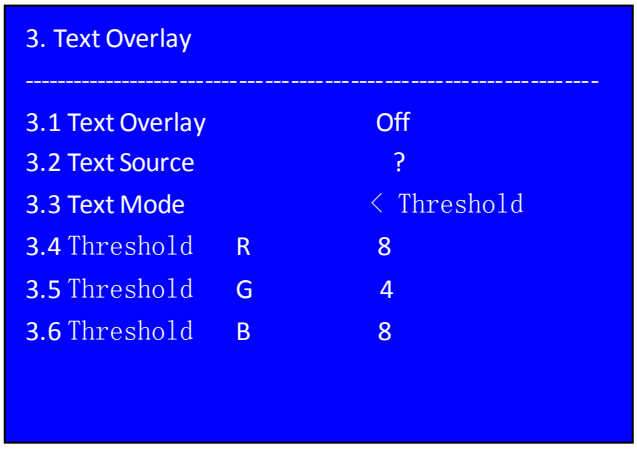
23.11. The display you can see on LED screen 1792 X 1024 as the picture below;

HD text application

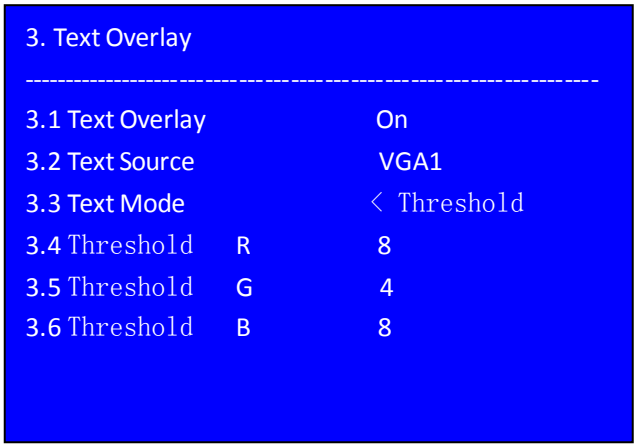
23.12. After entering user setup menu, press Brt- or Brt+ key to select setup option 3. Text Overlay then press OK to enter text overlay setup;



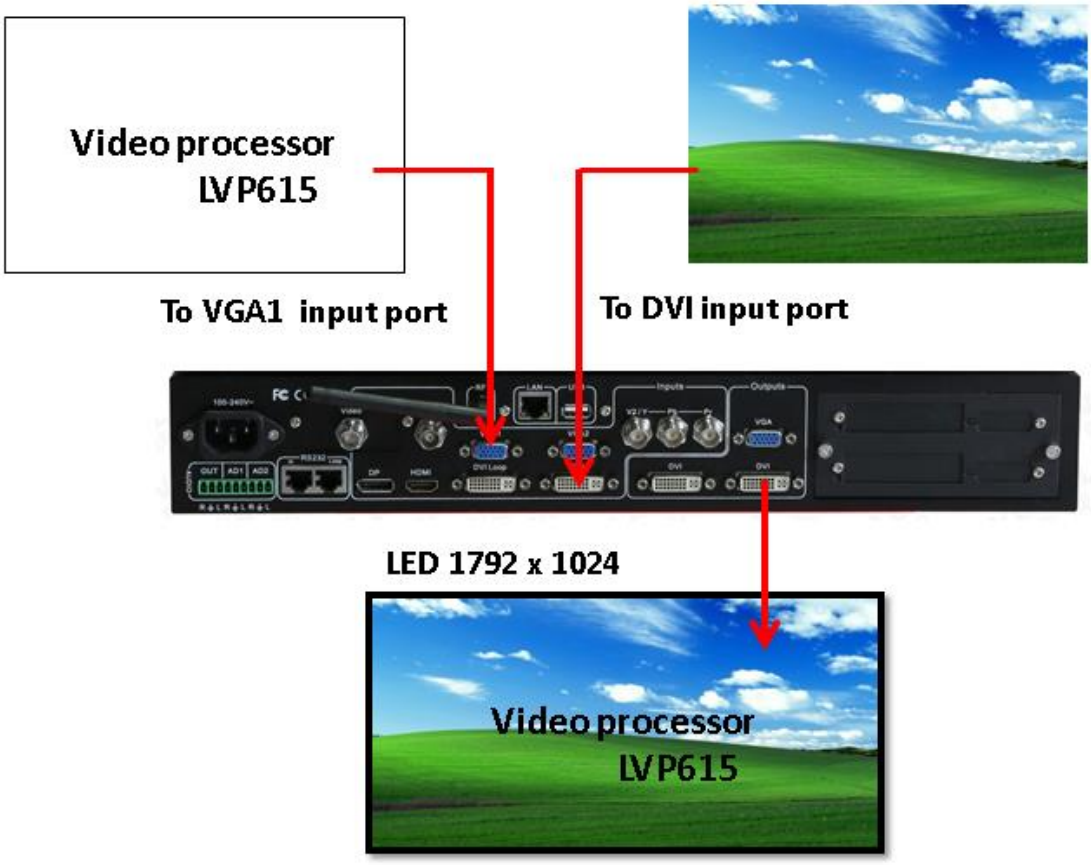
23.13. press Brt- or Brt+ key to select setup option, rotate OK to change parameters, 3.1 Text Overlay to open or Off HD text function, 3.2 Text source to select the text source from which input port, 3.3 Text Mode to select HD text Mode (〈 threshold and 〉threshold) normally we use 〈 threshold mode);



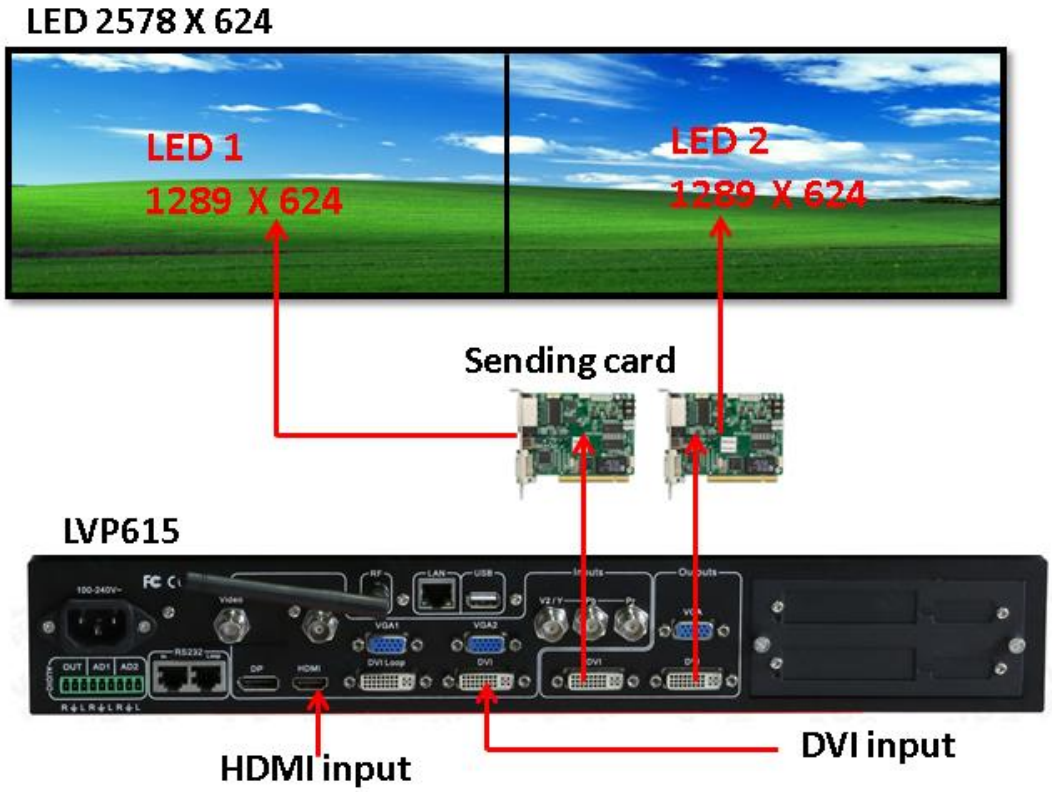
23.14. As the below menu, we have opened the Text Overlay On, and the HD text source is form VGA1, the text mode is 〈Threshold;



23.15. Normally we use PC's PPT software to make the text content then the PC's output video as text source (the principle you can refer 19. Setting HD text);

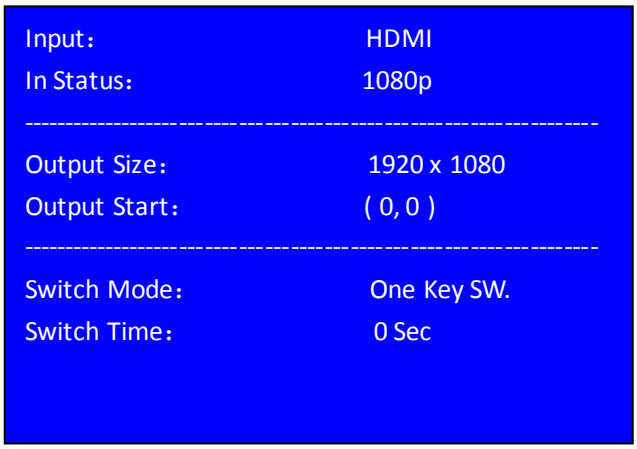


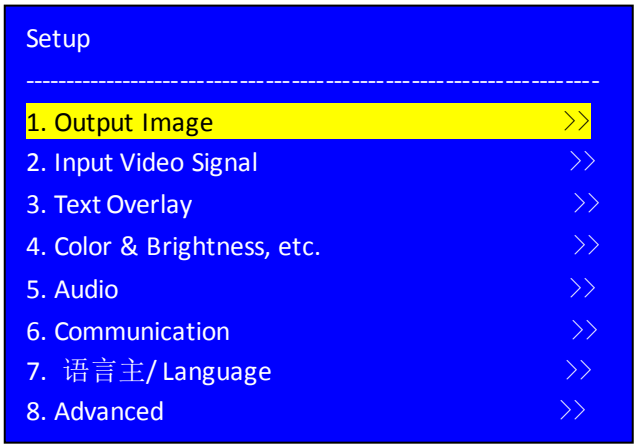
24. Example 2 LED screen 2578 x 624



Setting output resolution

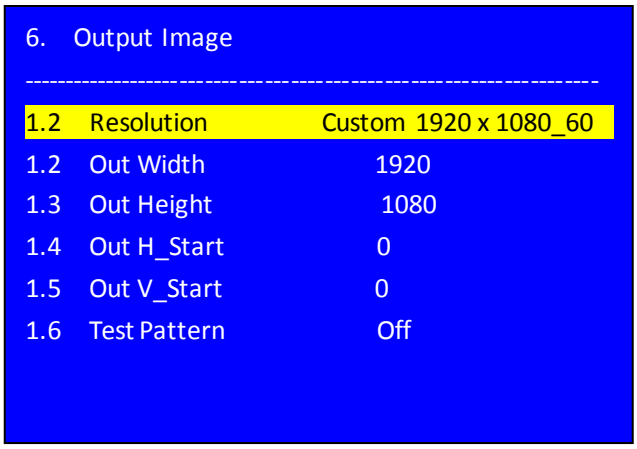
24.1. After opening processor press Setup key to enter setup menu, press Brt- to select 1.Output Image, press OK to enter output image setup;



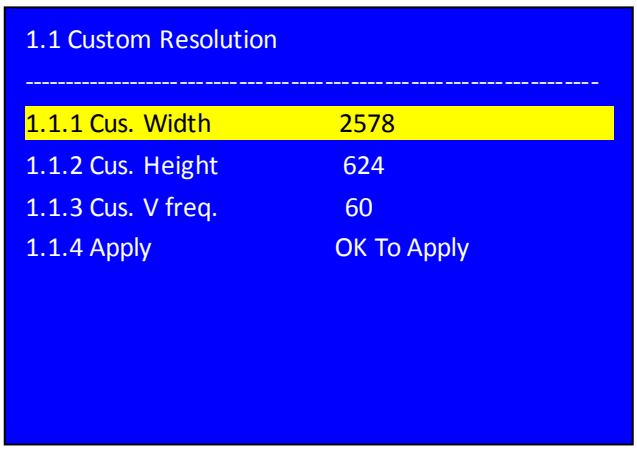


24.2. After entering output image setup menu, press Brt- key to select 1.2 Resolution, rotate OK to select Custom resolution, then press OK to enter

custom resolution menu, (because the resolution 2578 x 624 our processor doesn't have so we need to custom it, specification about custom output resolution please refer 13. User defined output resolution);

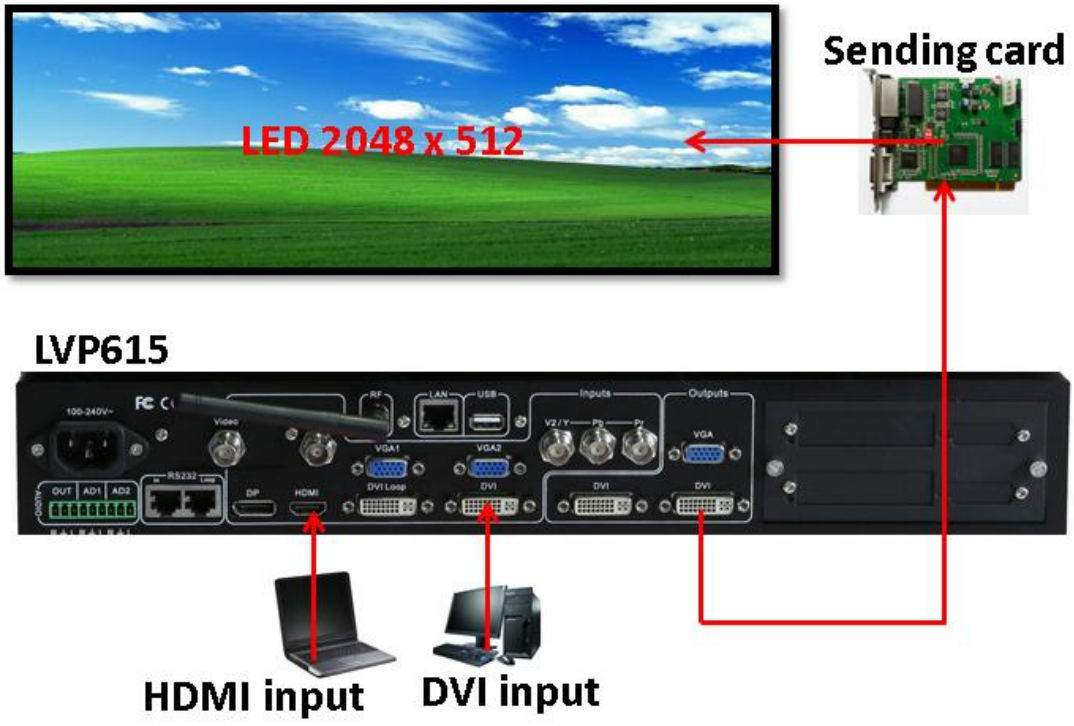


24.3. press Brt- or Brt+ key to select setup option , rotate OK to change parameters, after configuring custom resolution parameters select 1.1.4 Apply then press OK to save parameters;



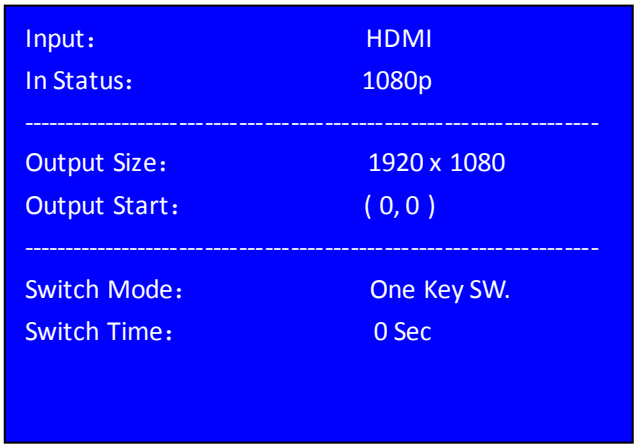
24.4. the sending card you use must support the resolution of 2578 x 624, if not please use video wall processor or use the sending card support the resolution;

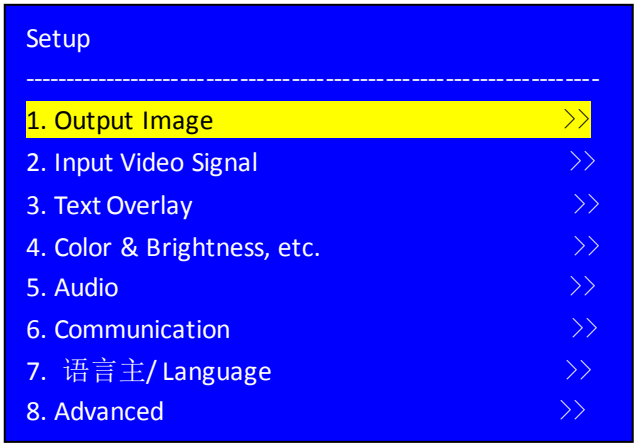
25. Example 3 LED 2048 x 512



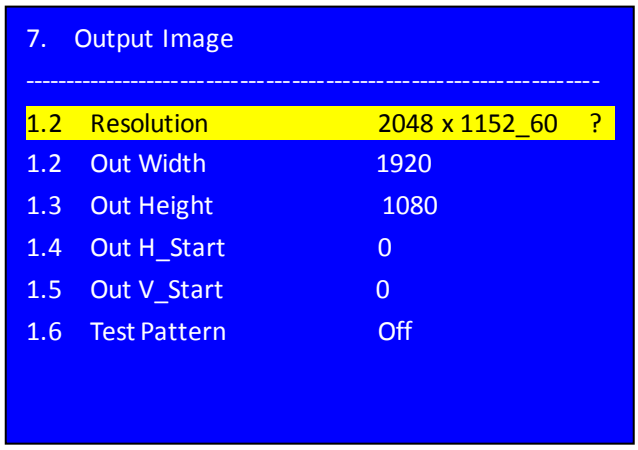
Setting output resolution

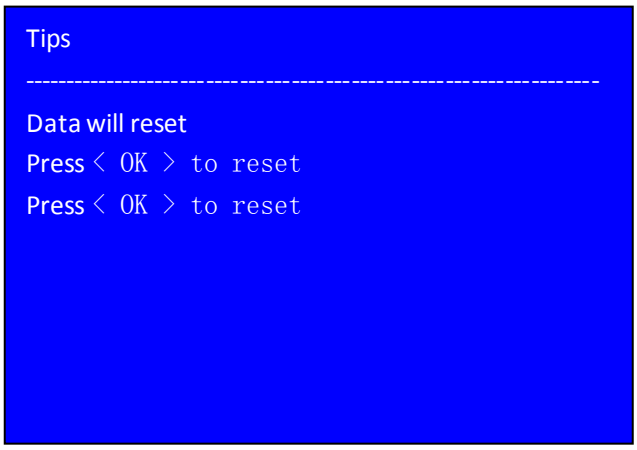
25.1. After opening processor press Setup key to enter setup menu, press Brt- to select 1.Output Image, press OK to enter output image setup;





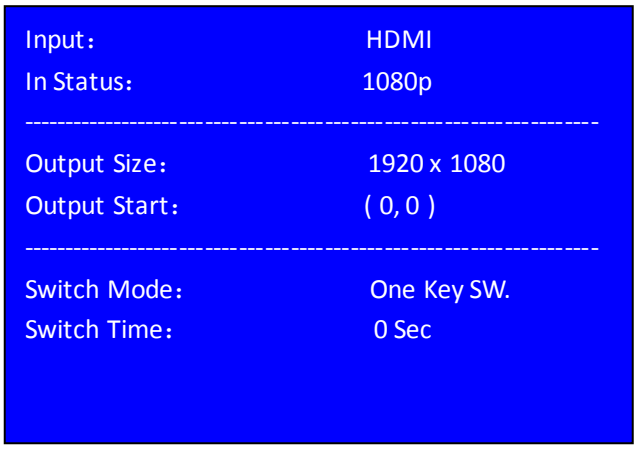
25.2. After entering output image setup menu, press Brt- key to select 1.2 Resolution, rotate OK to select 2048 x 1152_60, then press OK to enter confirmation menu press OK to confirm;

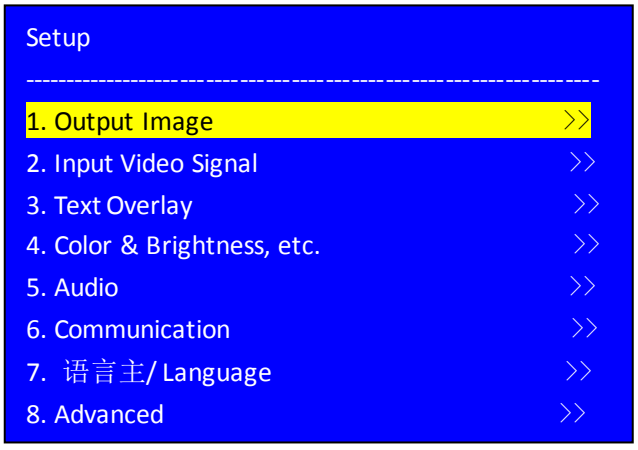




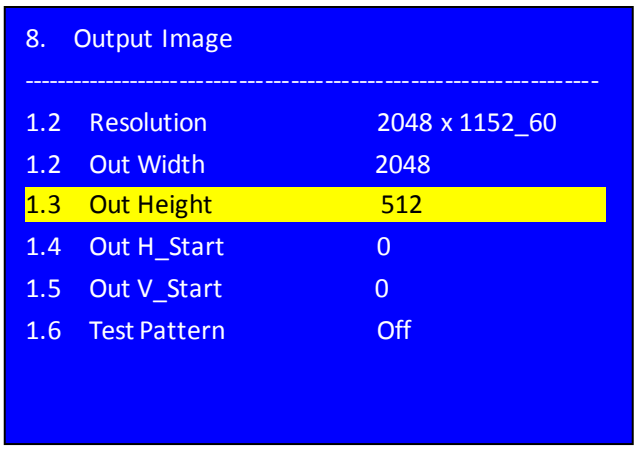
Setting output parameter

25.3. After opening processor press Setup key to enter setup menu, press Brt- to select 1.Output Image, press OK to enter output image setup;



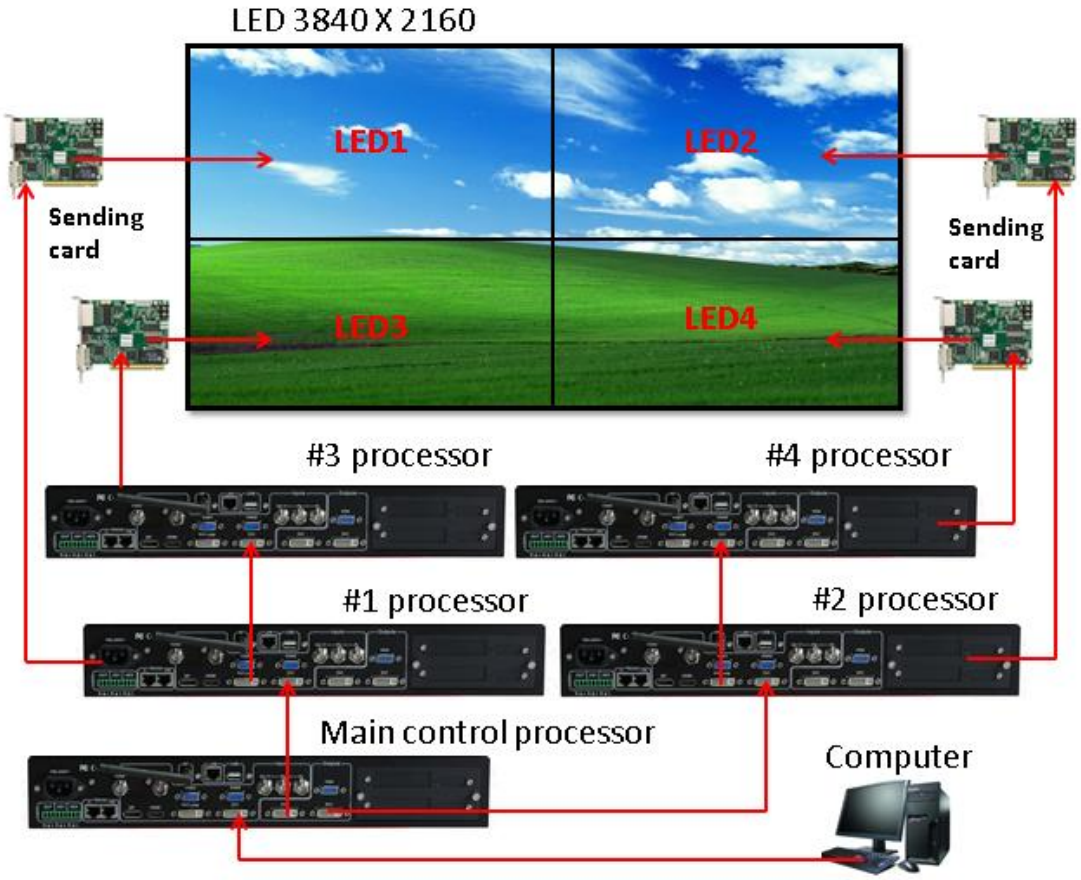


25.4. After entering output image setup menu, press Brt- key to select 1.3 Out Height, rotate OK to change it to be 512 , then press OK to confirm;



25.5. When you configure sending card system, the resolution of sending card must be as same as the output resolution of LVP615's, and make sure let the input source resolution of LVP615 less than 1920 x 1080 or equals;

26. Example 4 LED 3840 x 2160



26.1. LED 3840 X 2160 composed by 4 LED screens LED1 LED2 LED3 LED4

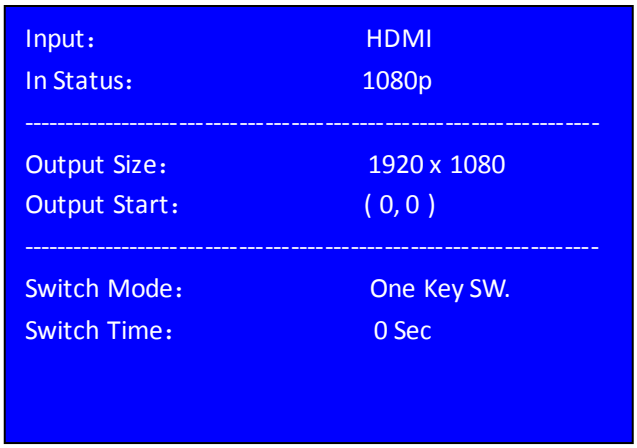
and the resolution of every LED screen are same 1920 x 1080;

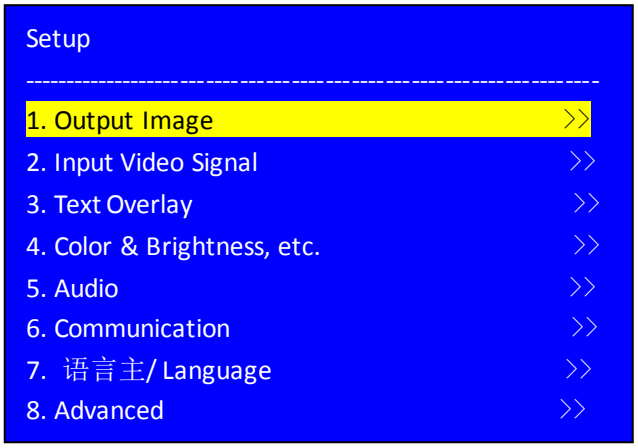
26.2. When you open LVP615's Mosaic function to splicing very bigger LED screen, there are some conditions you need to consider:

1. Every processor must set same output resolution;
2. Only # 1 2 3 4 processor must open Mosaic function, press Mosaic key to open or off the function;
3. After opening Mosaic # 1 2 3 4 processor only have Mosaic and PIP function;
4. We use main processor to switch input video source;

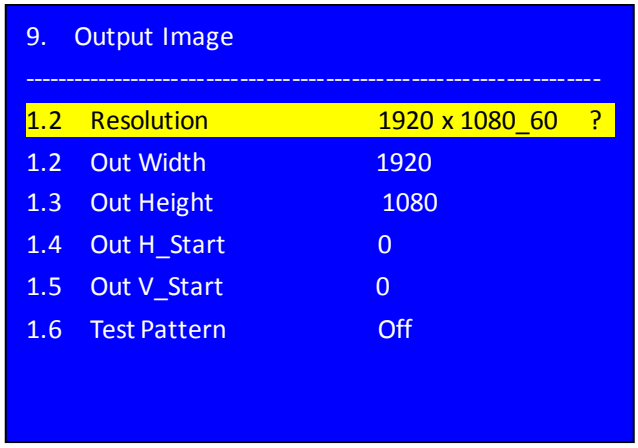
Setting output resolution

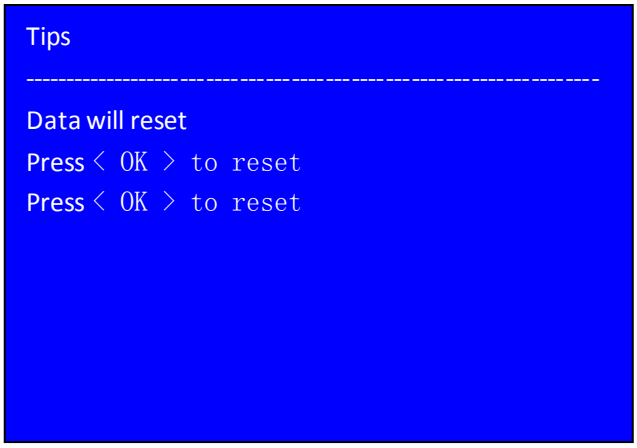
26.3. After opening processor press Setup key to enter setup menu, press Brt- to select 1.Output Image, press OK to enter output image setup;





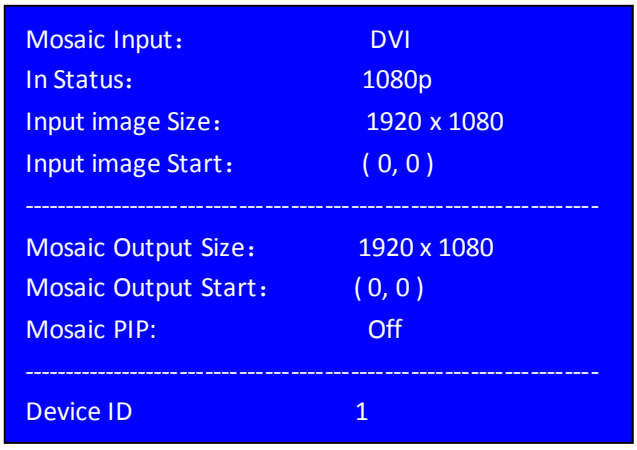
26.4. After entering output image setup menu, press Brt- key to select 1.2 Resolution, rotate OK to select 1920 x 1080_60, then press OK to enter confirmation menu press OK to confirm (every processor must do the step and every processor must set same output resolution);



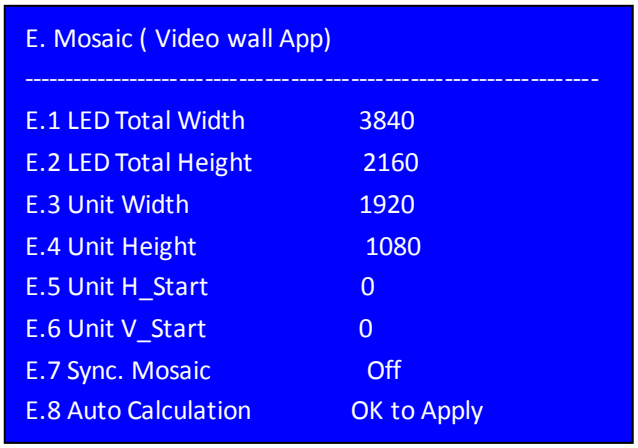


Setting splicing (Mosaic)

26.5. First the processor must select DVI source as input, then press Mosaic key to open splicing function (the step only for #1 #2 #3 #4 processor);



26.6. Press Setup key to enter Mosaic setup menu, press Brt+ or Brt- key to select setup option, rotate OK to change parameter, press OK to save parameters (the step only for #1 #2 #3 #4 processor) ;



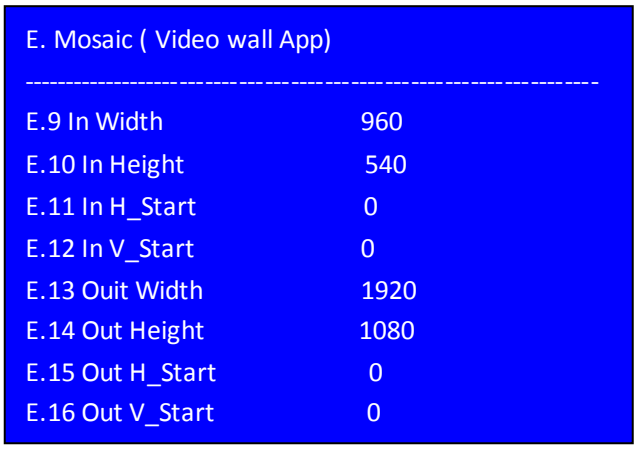
26.7. In menu the LED Total Width and LED Total Height must be as same as your actual LED screen, at present the resolution of LED screen is 3840 x 2160;

26.8. In menu the Unit width and Unit height must be as same as the actual LED screen the unit LVP615 connected;

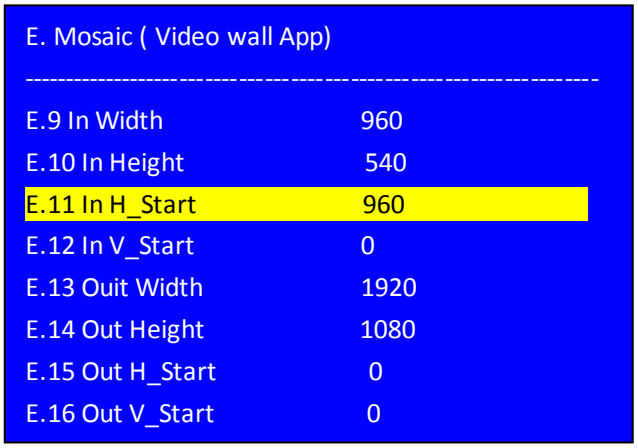
26.9. After set these parameters of last two steps, press Brt+ or Brt- key to select setup option E.8 Auto Calculation, press OK to calculate input parameters automatically (the step only for #1 #2 #3 #4 processor);

26.10. After last step press press Brt+ or Brt- key to enter input parameter setup menu (normally for input parameters we only need to set In H_Start and In V_Start, the step only for #1 #2 #3 #4 processor);

26.11. #1 processor

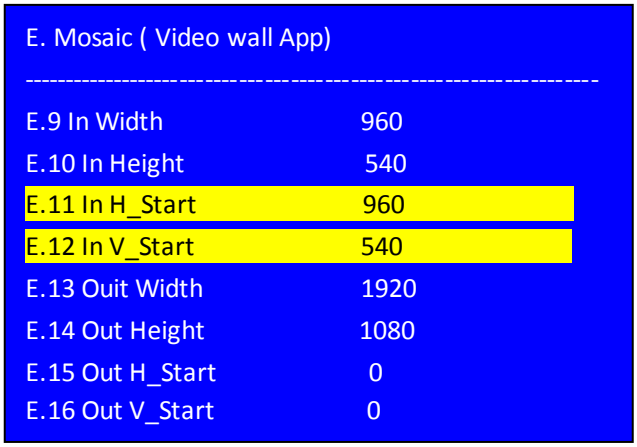


26.12. #2 processor

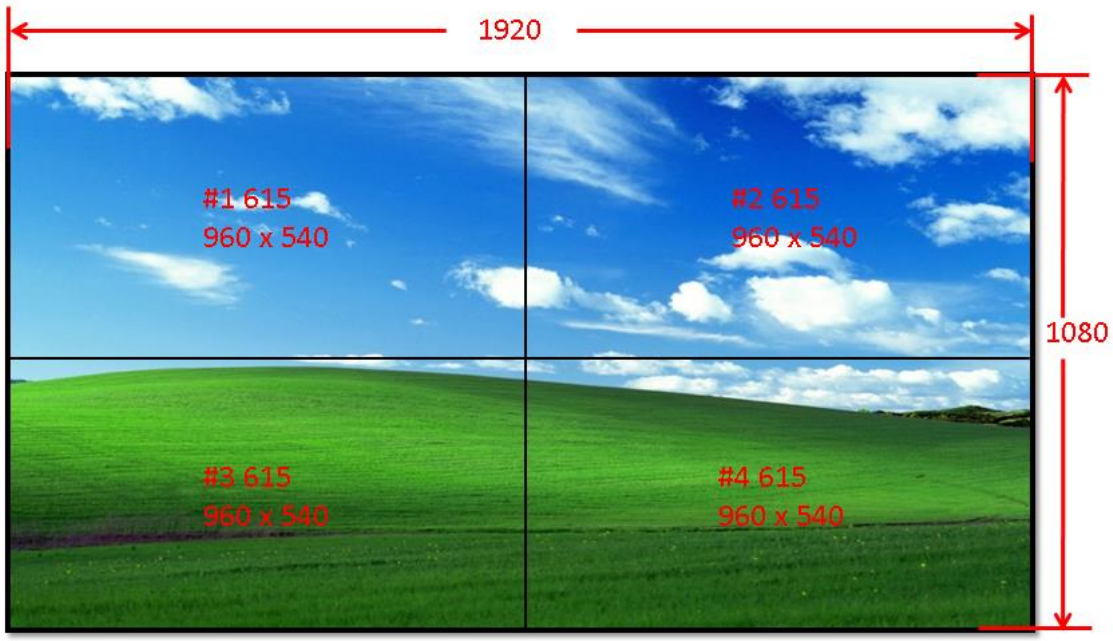


26.13. #3 processor

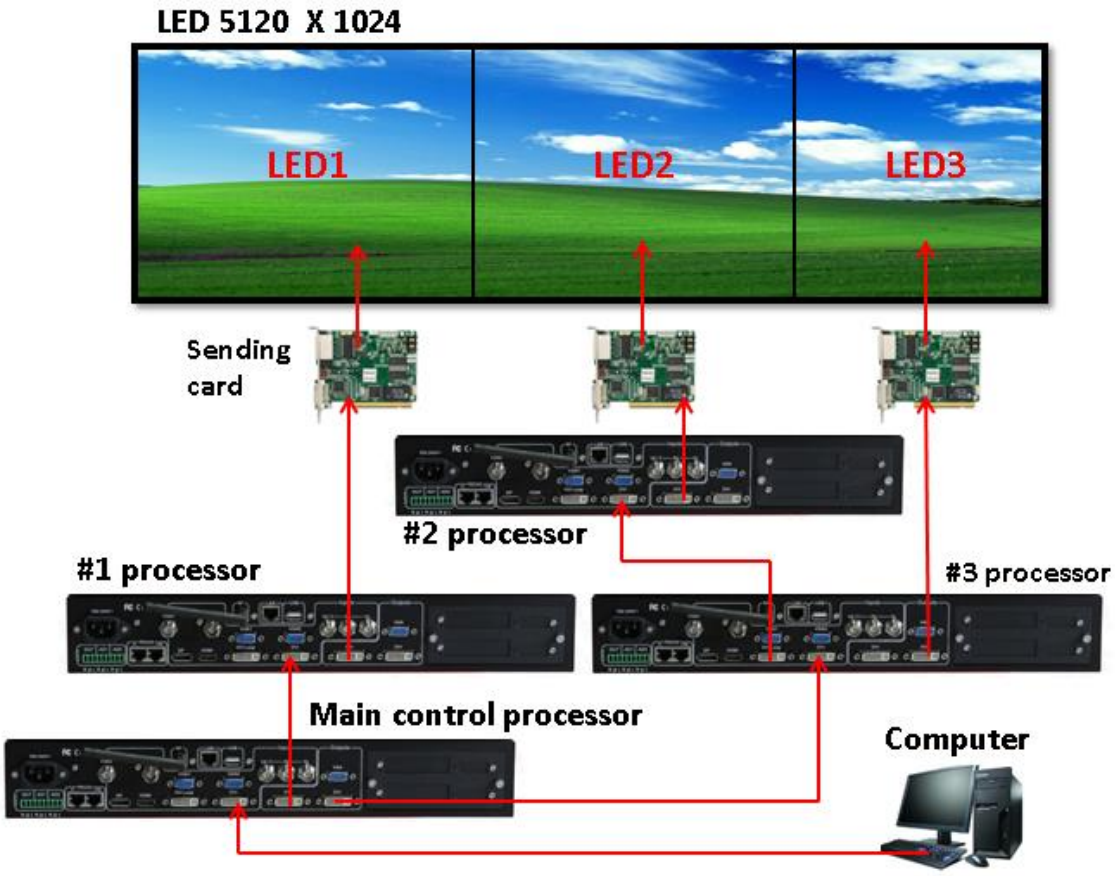
26.14. #4 processor



26.15. The principle of input parameter, setting E.8 Auto Calculation means to tell the unit LVP615 to crop how much of the input video source, and setting the H or V start means to tell the unit LVP615 to crop the input video source from where, the example as the picture below;



27. Example 5 LED 5120 x 1024



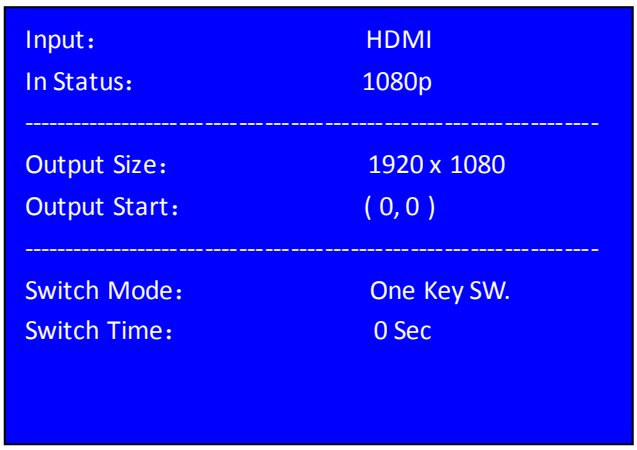
27.1. LED 5120 X 1024 composed by 3 LED screens LED1 LED2 LED3 and the resolution of every LED screen: LED1 1792 x 1024, LED2 1792 x 1024, LED3 1536 X 1024;

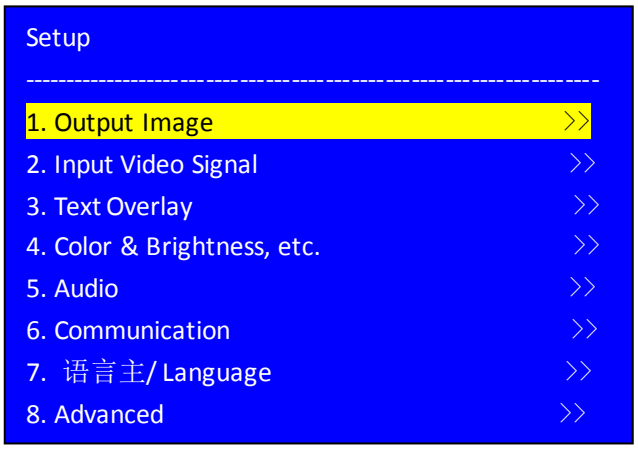
27.2. When you open LVP615's Mosaic function to splicing very bigger LED screen, there are some conditions you need to consider:

5. Every processor must set same output resolution;
6. Only # 1 2 3 processor must open Mosaic function, press Mosaic key to open or off the function;
7. After opening Mosaic # 1 2 3 processor only have Mosaic and PIP function;
8. We use main processor to switch input video source;

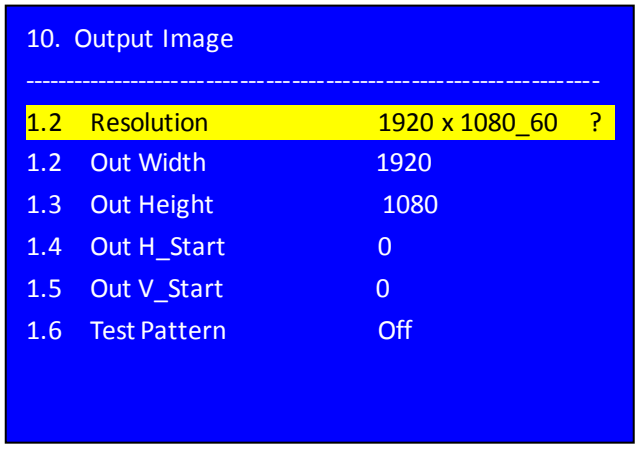
Setting output resolution

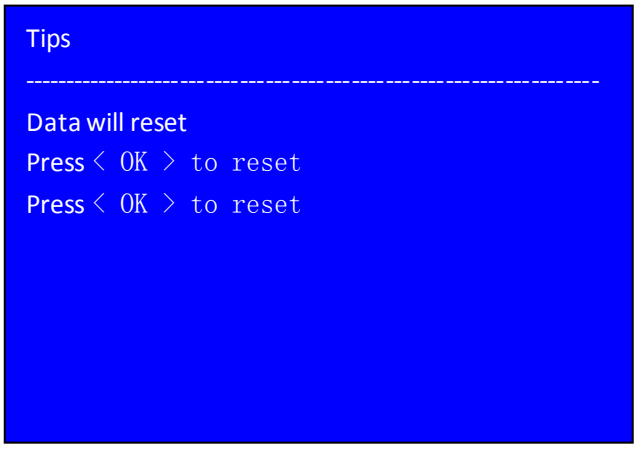
27.3. After opening processor press Setup key to enter setup menu, press Brt- to select 1.Output Image, press OK to enter output image setup;





27.4. After entering output image setup menu, press Brt- key to select 1.2 Resolution, rotate OK to select 1920 x 1080_60, then press OK to enter confirmation menu press OK to confirm (every processor must do the step and every processor must set same output resolution);

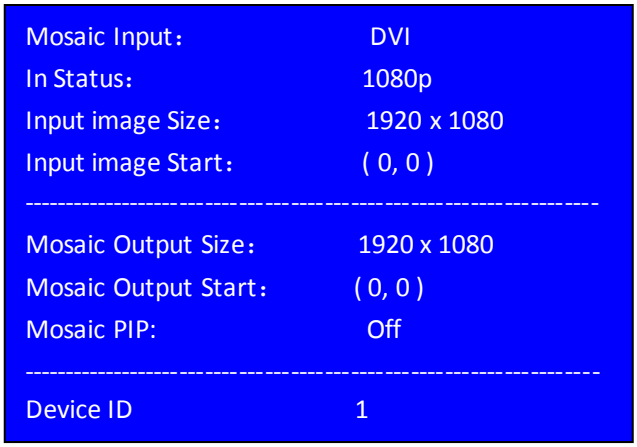




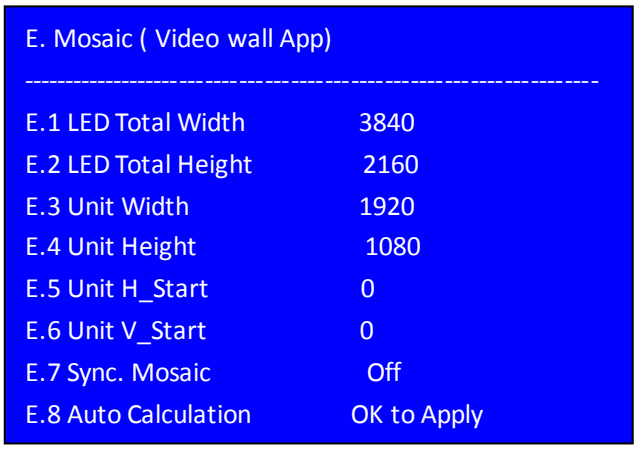
Setting splicing (Mosaic)

27.5. First the processor must select DVI source as input, then press Mosaic key to

open splicing function (the step only for #1 #2 #3 processor);



27.6. Press Setup key to enter Mosaic setup menu, press Brt+ or Brt- key to select setup option, rotate OK to change parameter, press OK to save parameters (the step only for #1 #2 #3 processor) ;



27.7. In menu the LED Total Width and LED Total Height must be as same as your actual LED screen, at present the resolution of LED screen is 5120 x 1024;

27.8. In menu the Unit width and Unit height must be as same as the actual LED screen the unit LVP615 connected;

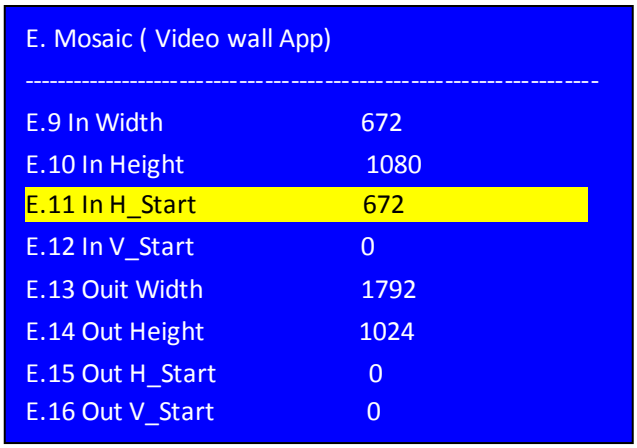
27.9. After set these parameters of last two steps, press Brt+ or Brt- key to select setup option E.8 Auto Calculation, press OK to calculate input parameters

automatically (the step only for #1 #2 #3 processor);

27.10. After last step press press Brt+ or Brt- key to enter input parameter setup menu (normally for input parameters we only need to set In H_Start and In V_Start, the step only for #1 #2 #3 processor);

27.11. #1 processor

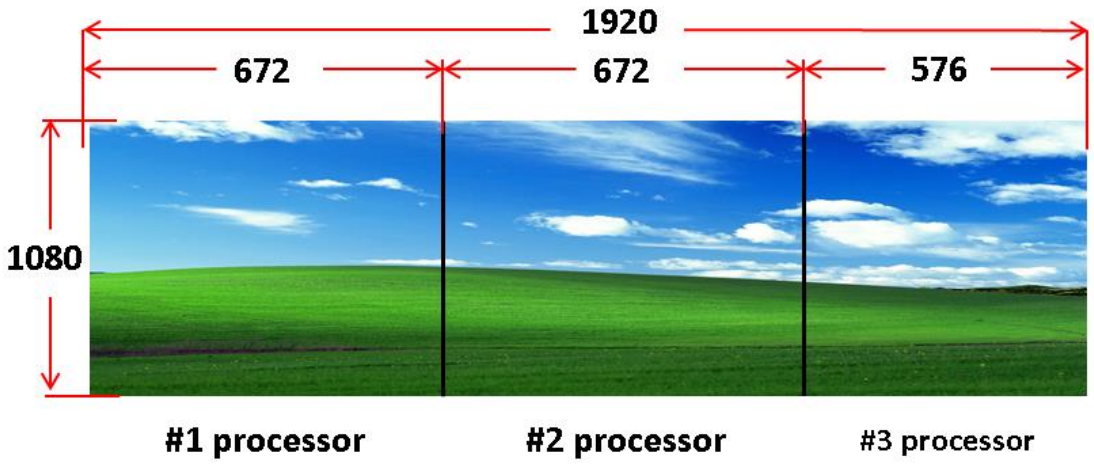
27.12. #2 processor



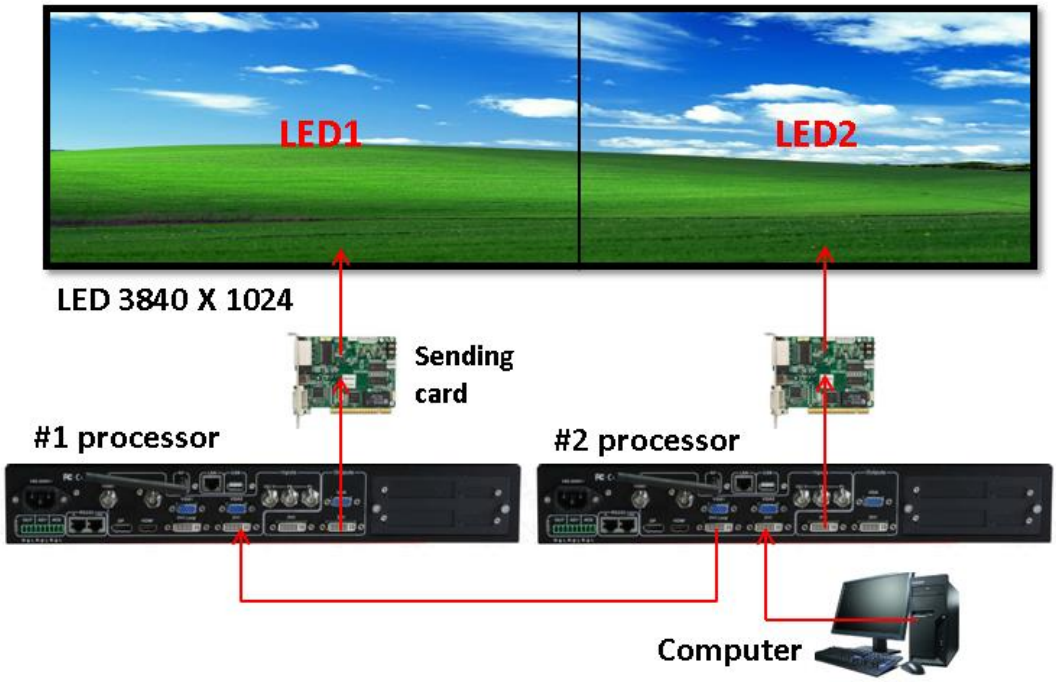
27.13. #3 processor

E. Mosaic (Video wall App)	
E.9 In Width	576
E.10 In Height	1080
E.11 In H_Start	1344
E.12 In V_Start	0
E.13 Ouit Width	1536
E.14 Out Height	1024
E.15 Out H_Start	0
E.16 Out V_Start	0

27.14. The principle of input parameter, setting E.8 Auto Calculation means to tell the unit LVP615 to crop how much of the input video source, and setting the H or V start means to tell the unit LVP615 to crop the input video source from where, the example as the picture below;



28. Example 8 LED 3840 x 1024



28.1. LED 5120 X 1024 composed by 3 LED screens LED1 LED2 and the resolution of every LED screen: LED1 1920 x 1024, LED2 1920 x 1024;

28.2. When you open LVP615's Mosaic function to splicing very bigger LED screen, there are some conditions you need to consider:

9. Every processor must set same output resolution;

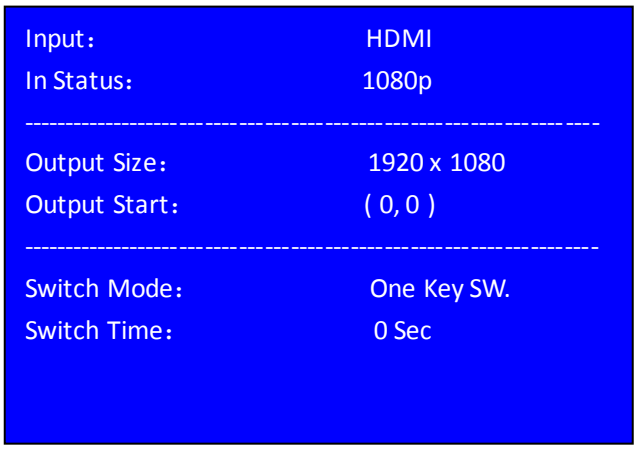
10.# 1 2 processor must open Mosaic function, press Mosaic key to open or off the function;

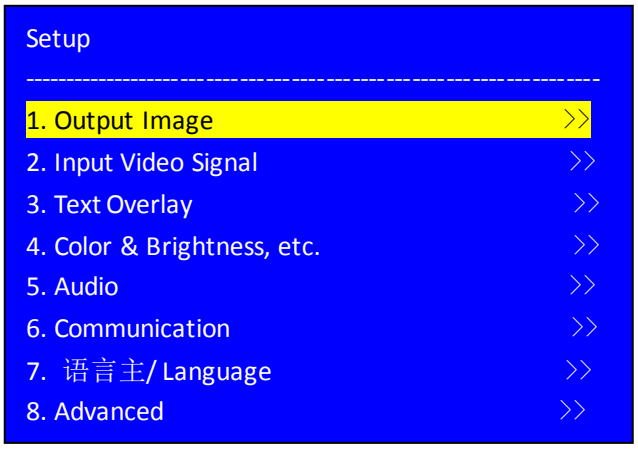
11.After opening Mosaic # 1 2 processor only have Mosaic and PIP function;

12.The output resolution of PC must be as same as the output resolution of processor, and at this example you only can connect DVI input source;

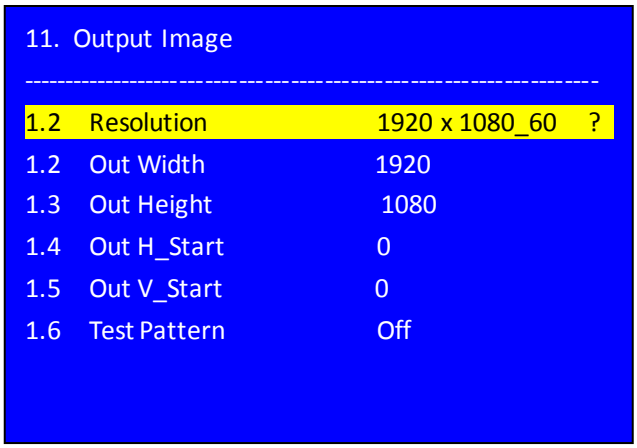
Setting output resolution

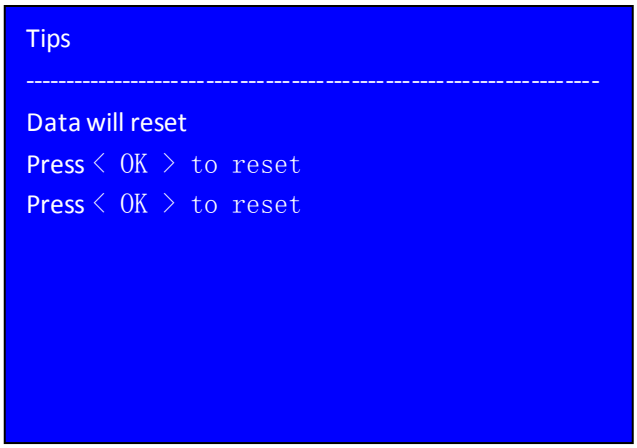
28.3. After opening processor press Setup key to enter setup menu, press Brt- to select 1.Output Image, press OK to enter output image setup;





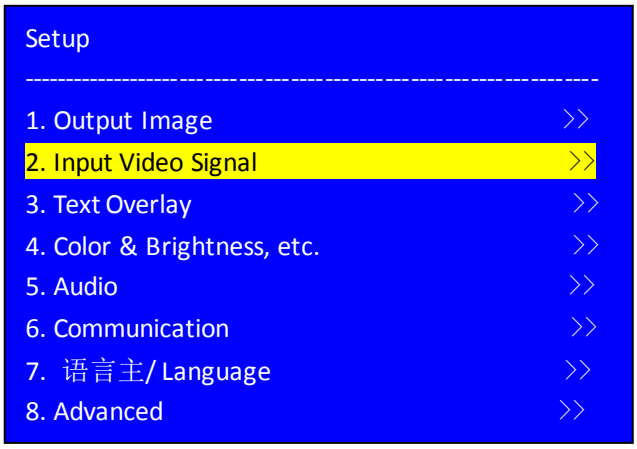
28.4. After entering output image setup menu, press Brt- key to select 1.2 Resolution, rotate OK to select 1920 x 1080_60, then press OK to enter confirmation menu press OK to confirm (every processor must do the step and every processor must set same output resolution);



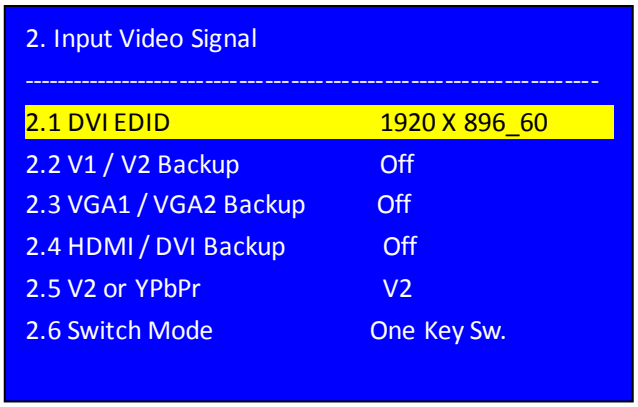


Setting DVI EDID

28.5. After entering user setup menu, press Brt- or Brt+ key to select setup option 2. Input Video Signal then press OK to enter input video signal setup;

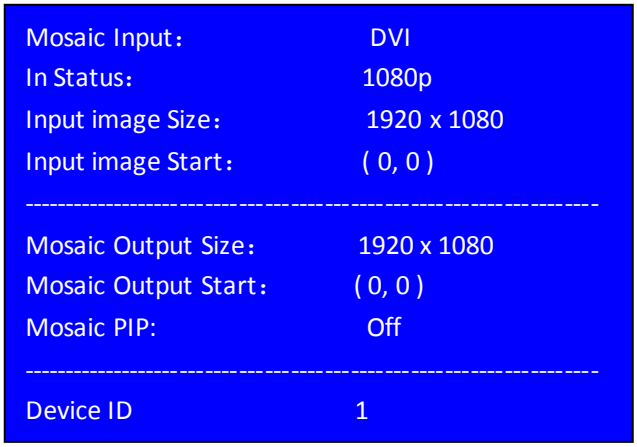


28.6. press Brt- or Brt+ key to select setup option 2.1 DVI EDID, select the EDID resolution you need(you also can custom the resolution, after setting the DVI EDID resolution when PC graphic card open extended mode then connect the cable to LVP615's DVI input port, PC will output the DVI EDID resolution, custom the resolution please refer custom output resolution);

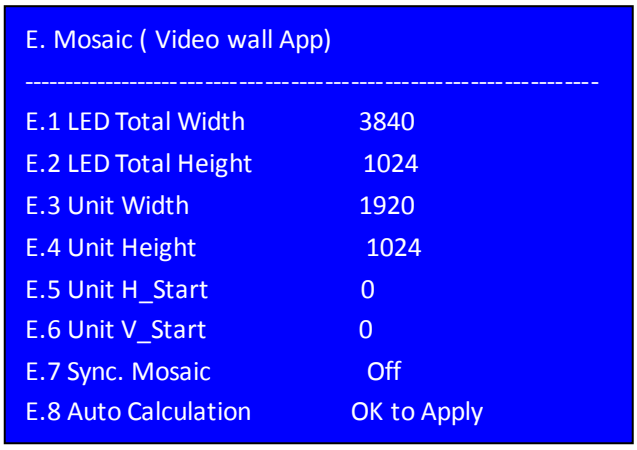


Setting splicing (Mosaic)

28.7. First the processor must select DVI source as input, then press Mosaic key to open splicing function (the step only for #1 #2 processor);



28.8. Press Setup key to enter Mosaic setup menu, press Brt+ or Brt- key to select setup option, rotate OK to change parameter, press OK to save parameters (the step only for #1 #2 processor) ;



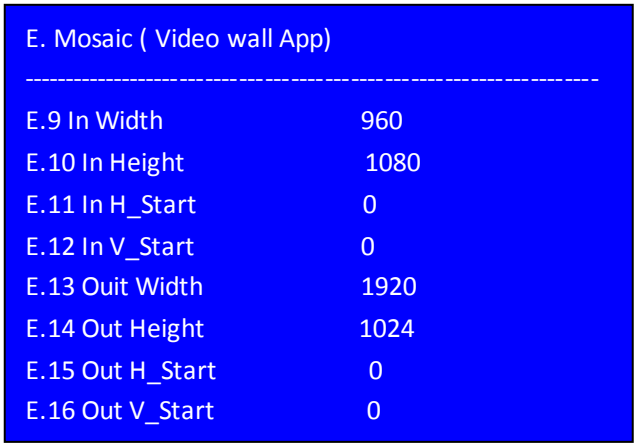
28.9. In menu the LED Total Width and LED Total Height must be as same as your actual LED screen, at present the resolution of LED screen is 3840 x 1024;

28.10. In menu the Unit width and Unit height must be as same as the actual LED screen the unit LVP615 connected;

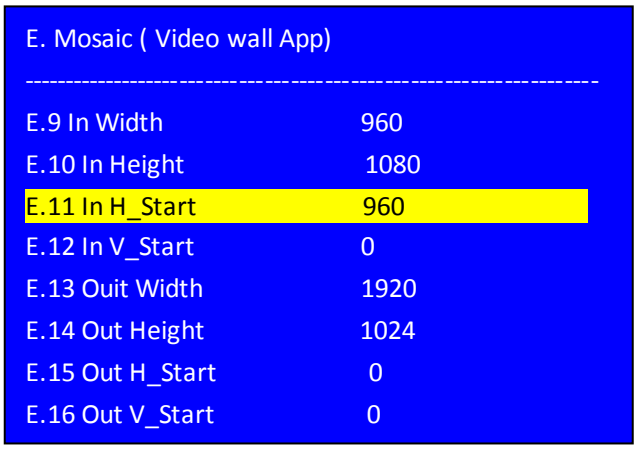
28.11. After set these parameters of last two steps, press Brt+ or Brt- key to select setup option E.8 Auto Calculation, press OK to calculate input parameters automatically (the step only for #1 #2 processor);

28.12. After last step press press Brt+ or Brt- key to enter input parameter setup menu (normally for input parameters we only need to set In H_Start and In V_Start, the step only for #1 #2 processor);

28.13. #1 processor



28.14. #2 processor



28.15. The principle of input parameter, setting E.8 Auto Calculation means to tell the unit LVP615 to crop how much of the input video source, and setting the H or V start means to tell the unit LVP615 to crop the input video source from where;