

HD Video Multiplexers

1 Product Overview

The HD quad video multiplexer is a high-performance image processor, and its main function is to turn 4 BNC, VGA, HDMI input signals into 1 HD HDMI and VGA signal, which makes 4 digital signals display on one HD screen unit synchronously. The HDMI signal with USB (like mouse, keyboard) can be switched synchronously. The HD video multiplexers support various kinds of display units with HDMI, such as: projector, LCD, DLP, plasma, full color LED.

The HD video multiplexer is chiefly applied to video conference, teaching, display and demonstration, stock ect, where need single display unit display multi HD signals synchronously, and it is generally used in the market at present.

Meanwhile, the video multiplexer is the only product that adds USB synchronous switch, so when case or IR controller switch to fully display one signal, correspondingly, USB of computer host also synchronous switch. It meets the demand of video conference which need switch mouse and keyboard synchronously.

2 Main Function

- ✚ Support single display unit display 4 HD or analog signal synchronously;
- ✚ Support 4 composite video、4VGA、4 HDMI, 12 input signal in total;
- ✚ Support 1 VGA and 1HDMI synchronic output;
- ✚ 4 input USB signal,2 output USB,and USB connect mouse and keyboard;
- ✚ Support KVM function, that is USB、 mouse、 keyboard with video synchronous switch;
- ✚ Compatibility all kinds of input resolution and support output ultrahigh resolution of 1920*1080;
- ✚ Size and position of image can be adjust arbitrarily,and other functions,such as:windowing、 superposition、 roaming、 PIP、 POP.
- ✚ Support regulatory image transparency, therefore you can see base picture though upper image;
- ✚ Can be commonly used in any nation in the the world due to support ultra wide input alternating voltage of 90V to 264V ;
- ✚ It's drawbench case is standard dimension of 19 cun 1U ,so it can be put on normal equipment cabinet;
- ✚ Can be controled by case key、 IR、 RS-232 serial port and center control.
- ✚ High quality HD quad video multiplexers is especially customized generate for video engineering;

3 More detail

3.1, Pure hardware construction

Adopt pure hardware construction ,without CPU and memory,so booting only need 3 to 5 minutes,system stability,without crash,virus and system breakdown;can uninterrupted work for 24 hours a day of 365 days a year .

3.2,FPGA image process

Adopt FPGA that is the most powerful image chip process technology at present.FPGA support various world's leading image processing technology,for example:DCDI edge smooth、ACM color automatically adapt、CSS light crosstalk suppression、SHARPNESS enhancement、dynamic contrast ratio enhancement、the real six axis color overlap、eliminate the noise amplification ect.

In addition,possess many advanced function like 3D comb filter video decoding function,3D noise reduction and automatic adapt moving compensation's remove isolation technology,skin color adjust,enhance color brightness,GAMMA adjust and frame frequency switch ect.Which make output image texture smooth and sharp、clear and fluent、bright color without sawtooth and trailing .

3.3, Powerful operation capability

Data use parallel processing,output port occupy one channel and data bandwidth reach 10.2G/S of each channel .So It can fully achieve high resolution of 1920*1080 display.High speed dynamic image without trailing、delayed、tear、frame loss、image catch up phenomenon.

3.4,Support input and output 1920*1080 HD signal

The HD video multiplexers support 4BNC、4VGA、4HDMI, in total 12 input signal and HD video support interlaced and line-by-line input.It support highest input ultrahigh resolution of 1920*1080 and downward compatibility all kinds of resolutions; The highest output resolution support 1920*1080 after all input signal

go through professional image processing chips and line-by-line export HDMI signal of 60HZ and it also can customize output resolution according to user demand.

3.5, USB switch

The video multiplexers is the only product that built-in USB switch in the market, which perfectly solves the question that previous product can't synchronous switch video with USB connecting device (like USB mouse, keyboard). It will be widely used in various kinds of video conference situations, will be more convenient, more efficient, save more display equipment and operating space for user.

3.6, Regulatory Transparency

Support PIP, so you can have regulatory transparency for upper picture, therefore you can see base picture through upper image.

4 controller

4.1, software control

The HD video multiplexers contain a green control visual interface software.exe, available when starting up, can achieve global functions like switch input signal, size and position of image adjust arbitrarily by using the mouse, save or invoke shortcut, fastly switch after custom 16 shortcuts etc.



4.2, IR control

IR control can invoke 10 shortcut mode without starting up computer;

Through IR can choose input signal of each channel, and adjust output resolution.



4.3, Case key control

There are 14 shortcut keys on the front panel, which can realize 10 shortcut switches corresponding to IR control, mouse, and keyboard switch.

4, Center control

The device adopts frequently-used control codes. After writing the control code into the center processor according to demand,

5, Commonly display mode

Our product solidify some frequently-used switch and display mode in order to make client more easier use it, and user can custom some common use pattern according to different individuate demand ,following are some common and practical mode:

5.1, Division display

4 HDMI or VGA image signal display in one screen unit in quartering at the same time, can simultaneously monitor 4 HD HDMI or VGA signal ,as following:



5.2, Fully display one signal

It can switch to fully display whichever input signal like HDMI、VGA and BNC though switching control. As following:



5.3, USB switch under quartering mode

It realize mouse、keyboard KVM division function though control software or UA1、UA2、UA3 and UA4 keys, that is can control and operate whichever host under quartering mode by means of a set of mouse and keyboard.

5.4, Full screen and USB synchronous switch

When you choose fully display certain HDMI or VGA,USB video signal also switch to this image signal which binding with it,so you can operate the host binding with fully display image through USB mouse、 keyboard;

5.5 , Other mode

By control software,it can achieve other multi individual display mode,like PIP、POP、 window overlap、 roaming、 any size, any position;



Thirds division mode



custom mode



PIP mode

6, Product Picture



7 , Dimension figure



8 ,System Topology



9, HD video multiplexers technical parameters

Name	Specification
HDMI/DVI input	
Input port	4BNC、4VGA、4HDMI、4USB
Resolution	Support 1920*1080 ultrahigh highest resolution and downward compatibility all kinds of resolutions
Color depth	24bit,1677 ten thousand
Zoom and display	unlimited
Video input	
Identify pattern	automatic
Image adjust	Move 、 transformate 、 brightness 、 contrast 、 color temperature;
output	

interface	1 HDMI、1VGA synchronic output;2USB connecte mouse、 keyboard or other equipment
Resolution	1920*1080/60HZ,can customize downward this resolution
frequency	60HZ
Color depth	24bit,1677 ten thousand
Control mode	RS232、 IR、 case key
Cotrol software	HD video multiplexers professional control sofeware
voltage	AC 90~260V
dimension	442mm(L)*45mm(H)*242mm(W)
Power	No more than 15w