HD 4K Video Multiplexers

1 Product Overview

The HD 4K quad video multiplexer is a high-performance image processor, and it's main function is to make 4 HD or analog signal display in one ultra HD display unit synchronously under quartering,and realize PIP、POP function.

The HD 4K quad video multiplexers can support 1VGA、2DP、4HDMI signal input.The highest DP input signal can support 3840*2160@60HZ,the highest HDMI input signal can support 3840*2160@30HZ and the highest output resolution can reach to 3840*2160@60HZ.

Product Support 1 channel HDMI 2.0 output, the output resolution and refresh rate up to 3840x2160 @ 6OHZ, the output refresh rate of high-definition 4K video multiplexers is the highest on the market at present. Meanwhile, if input 4signal of 1920 * 1080 , 4K display unit may display under quartering , point-to-point display 4-way high-definition signals, 4 full HD 1080P video signal can be completely uncompressed displayed on a 4K display unit,and there is no any distinguish between 4 image signal connect a 1080P display unit with single1080P signal link a 1080P display unit.

Meanwhile, The video multiplexers can also supports USB synchronous switch HD video multiplexers, switch to a computer signal display full screen by a case key or remote control , the corresponding host computer's USB also synchronous switch, which realize the need of achieving   synchronous switch mouse, keyboard of video conferencing.

The HD video multiplexers is use a relatively large number in standard products currently on the market ,products are mainly used in video conferencing, teaching, exhibitions   ect ,where need to use single display unit simultaneously display multiple HD signals workplace.

2   Main Function

- Supports one VGA, 2-way DP, 4-way HDMI (including 3-way compatible MHL) input signal, the input resolution up to 3840 * 2160 @ 60HZ, downward compatible;

- Supports one HDMI 2.0 output, the output resolution up to 3840 * 2160 @ 60HZ;

- Support point-to-pointsimultaneous display 4-way 1920 * 1080 full HD signal;

- Input and output signal wide support audio, also support 3.5mm headphone jack and the left and right channel stereo output;

- 2 USB signal output, USB connection support mouse and keyboard, and USB with image synchronous switch;

- Single screen simultaneously displays four HD digital / analog signals, or switchingto whichever signal full-screen display;

- Support image fixed position 、PIP、 POP function

- Wide support 90V ~ 264V AC input, can be commonly used to any country worldwide;

- Standard 19-inch 1U chassis drawing directly put on the cabinet;

- Support case key, infrared remote control, RS232 serial control and the center control;

3 Detailed Introduction

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, Advanced DSP image processing techniques

Adopt DSP that is the most powerful image chip process technology at present.DPS 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 3840*2160@60HZ display.High speed dynamic image without trailing、delayde、tear、frame loss、image catch up phenomenon.

3.4,Supports 3840 * 2160 HD input and output signals

The HD video multiplexers supports 1 channel VGA, 2-way DP,4 HDMI input signal , HD video supports interlaced and progressive input. Products up to ultra high resolution of 3840 * 2160 @ 60HZ signal input, and downward compatible; all input signals through professional-level image processing chip, HDMI signal of 60HZ unified progressive output, the maximum output resolution support 3840X2160 @ 60HZ, At the same time the user can choose other resolutions according to the needs , such as 1920 * 1080,1280x720,2560x1440.

3.5,USB switch function

The video multiplexers can also support USB with the picture simultaneously switching function, which perfect solution the problem of preproduct can't

synchronous switch video and USB connecting devices (such as USB mouse, keyboard, etc.) The product will be widely used in various of video conferencing systems and other places, allowing users to use the product more convenient, more efficient, more economical of display terminal device and save more room of operation.

3.6 , Ultra-Low Power

Products using ultra-low-power design, the actual power under operational state is only around 3W , no cooling fan, energy conservation and environmental protection, no noise pollution, adapt to a variety of relatively strict noise control meeting or other places.

3.7, Multiple display modes

The device can quad video display and full-screen single display, it can also support a variety of different display modes, the following are all display modes:
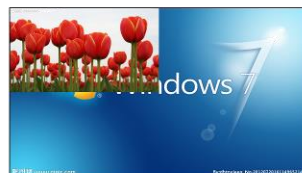

Quad mode

Full screen

Left-right of POP

Top-down of POP

Left-up of PIP

Right-up of PIP

Left-down of PIP

Right-down of PIP

Center of PIP

3.8, Audio and video switching functions

The 4K Quad video multiplexers except can display video signals, but also supports audio and image synchronization switch or under quad mode select a picture

corresponding audio play,which to fill the gaps that pre HD video multiplexers can not be achieved audio capabilities.

4 Control method

4.1, Software Control

The HD video multiplexers contain green control visual interface sofeware.exe,available when starting up ,can achieve global function by control sofeware.

4.2, Infrared remote control

It can be set by remote control 16 kinds of fast mode, without having to boot the computer and the software can be realized to call the original setting mode, simple and convenient.
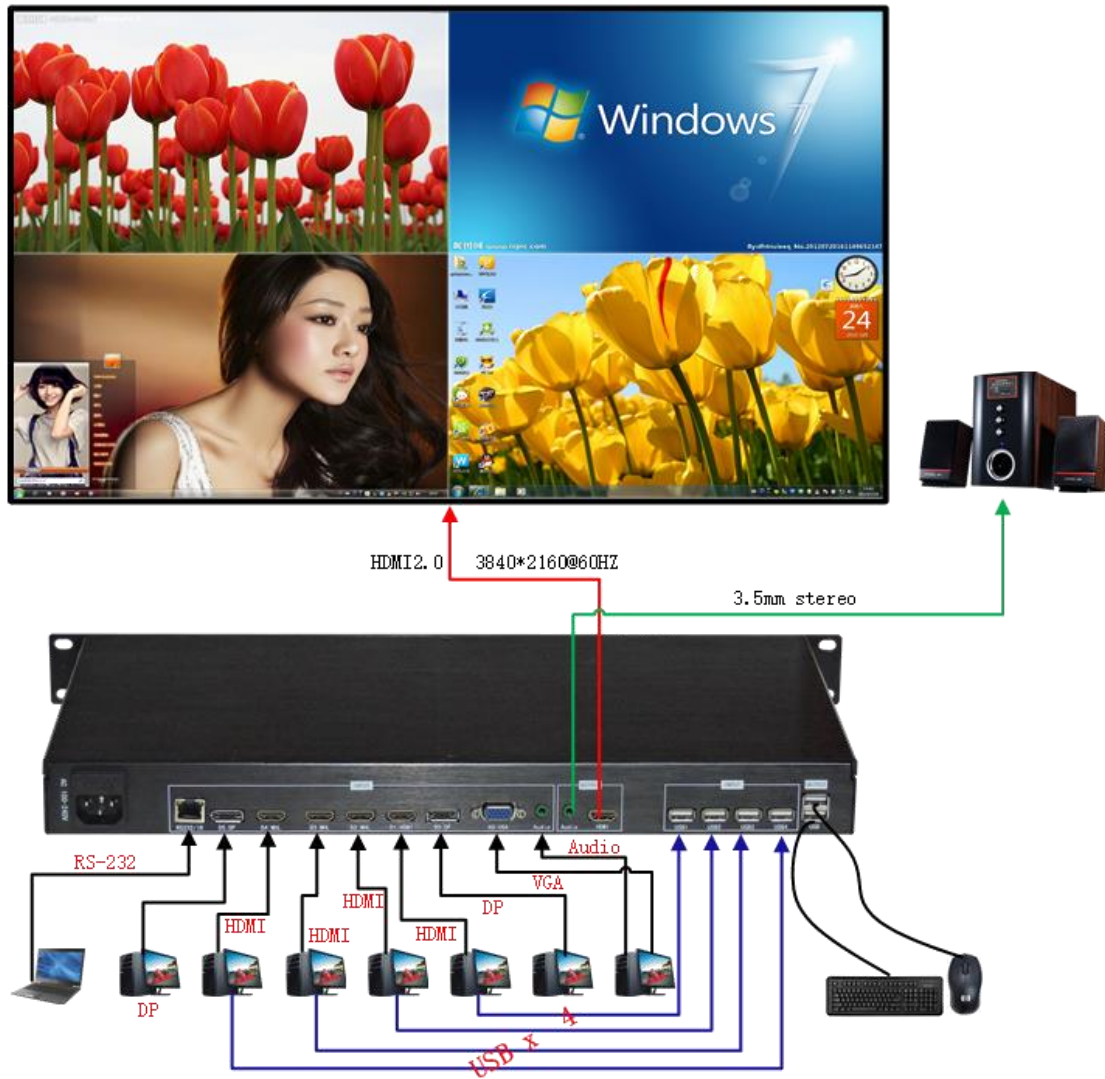
4.3, Chassis control buttons

By case key, you can quickly switch to four split screen display, or select a full-screen display a signal; and an image can be achieved sync switch with a USB mouse, keyboard and audio

4.4,center control

The device adopt frequently-used control code,user using center control after write control code into center processor accordding to demand;

5 System topology

HDMI2.0   3840*2160@60HZ

3.5mm stereo

RS-232

HDMI

HDMI

HDMI

HDMI

DP

VGA

Audio

DP

USB x 4

6 Product Picture

7 HD video multiplexers technique datd

name	specification
Signal input	
Input port	1VGA、2DP、4HDMI、4USB、1right and left channel audio
Resolution	DP support highest resolution of 3840*2160@60HZ and downward compatibility HDMI support highest resolution of 3840*2160@30HZ and downward compatibility
Color depth	24bit,1677 ten thousand
PIP、POP mode	Fixed model
output	
interface	1 HDMI2.0 connect display device and support video、audio sync output; One 3.5 mm audio right and left stereo 2 USB 2.0,one connect mouse the other connect keyboard
Resolution	Canchoose3840*2160/60HZ, 3840*2160@30HZ, 1920*1080@60HZ, 1280*720@60HZ
Color depth	24bit,1677 ten thousand
Control mode	RS232、IR、case key
Cotrol software	Not available
voltage	AC 90~260V
dimension	441mm(L)*44mm(H)*239mm(W)
Power	No more than 15w
audio	Audio input supports 3.5mm audio interface input, for Binding VGA;