

TK-FH41 HD Video Multiplexers

1 Product Overview

TK-FH41 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 and HDMI signals with USB (like mouse, keyboard) can be switched synchronously. TK-FH41 HD video multiplexers support various kinds of display units with HDMI, such as: projector, LCD, DLP, plasma, full color LED.

TK-FH41 HD video multiplexers are chiefly applied to video conferences, teaching, display and demonstration, stock exchange, etc., where a single display unit displays multiple HD signals synchronously, and it is generally used in the market at present.

Meanwhile, TK-FH41 video multiplexers are the only product that add USB synchronous switches, so when a case or IR controller switch is used to fully display one signal, correspondingly, the USB of the computer host also switches synchronously. It meets the demand of video conferences which need mouse and keyboard to switch 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 about TK-FH41

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

TK-FH41 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 though 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

TK-FH41 video multiplexers is the only product that built-in USB switch in the market,which perfectly solute 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 video conference situation , will more convenient、more

efficient、 save more display equipment and operating space for user.

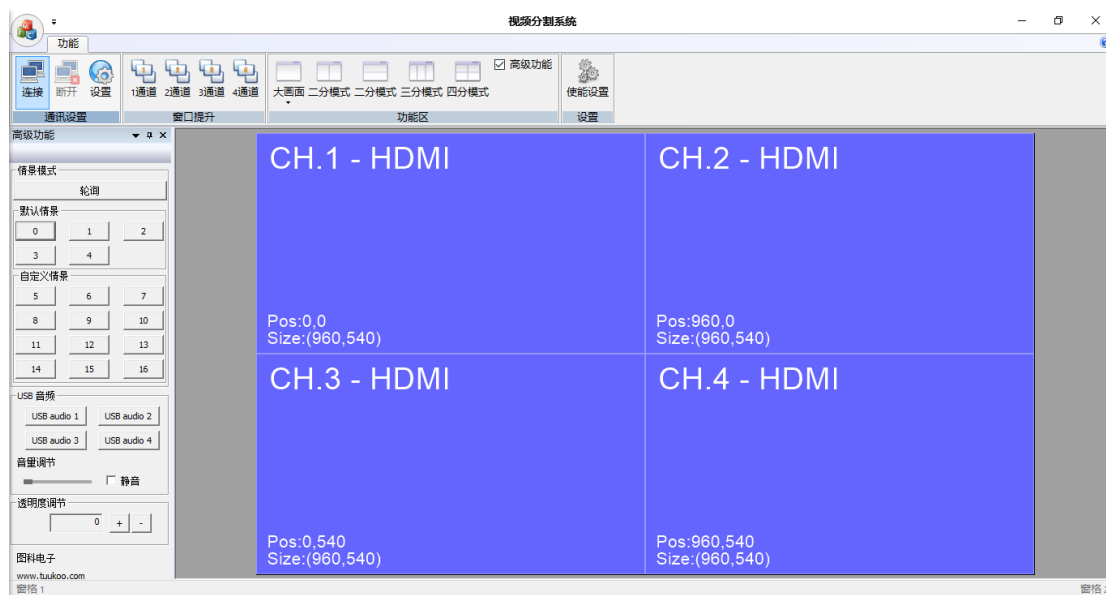
3.6, Regulatory Transparency

Support PIP,so you can regulatory transparency for upper picture, therefore you can see base picture though upper image

4 controller

4.1, software control

TK-FH41 HD video multiplexers contain green control visual interfaceTK-FH software.exe,available when starting up ,can achieve global function like switch input signal、 Size and position of image adjust arbitrarily by using the mouse、 save or invoke shortcut、 fastly switch after custom 16 shortcut ect.



4.2, IR control

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

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



4.3, Case key control

There have 14 shortcut keys in the front panel, can realize 10 shortcut switch which are correspondent with IR control, and mouse、 keyboard switch alone.

4, Center control

TK-FH41 adopt frequently-used control code, user using center control after write control code into 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

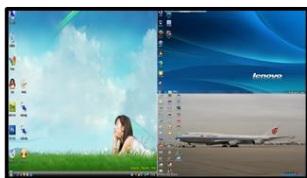
It realize mouse、keyboard KVM division function though control software or UA1、UA2、UA3 and UA4 keys, that is can control and operate whichever host under quartering mode by means of a set of mouse and keyboard.

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, TK-FH41 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