# U4

## Four Windows Processor
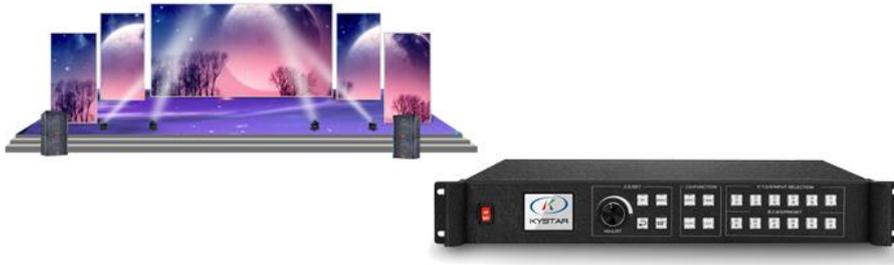
★ **Output pixels up to 15360 horizontally or 6144 vertically**

★ **Display six windows of images on a single screen simultaneously or control six different LED screens**

★ **Support HDMI , DVI , VGA , SDI , CVBS , IP inputs**

★ **Four windows preview and output monitoring**

★ **Ethernet monitoring and control in real time**

★ **Editable text and image overlay**

★ **Window or mode transition effects including dissolves, wipes, and cuts**

★ **Brightness control of each input**

★ **Transparency adjusting and edge feathering**

★ **Hot backup of input signals**

## Multi-format signal processing & 4k Processing

**Multi-format Signals Processing**

Processor is compatible with a variety of input signals : DVI×1, HDMI×1, VGA×2, CVBS×2, SDI×1 and expansion slot×1.

The expansion slot can be configured as HDMI 1.4a,IP, DVI, HDMI1.3, and CVBS.

**4k Processing**

Accommodating 4k signal input terminals including HDMI 1.4 and Dual Link DVI,

U4 enables an input resolution up to 4096×2160, conveniently realizing UHD

display of large LED screens!
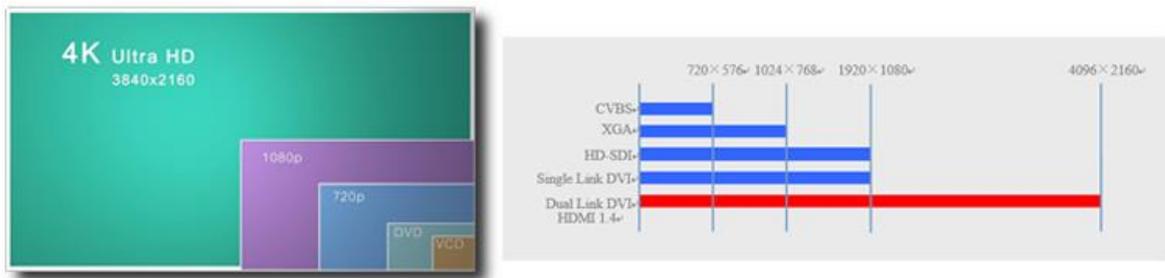


# Splicing Output For Large Screen

**User-define Splicing Display**

Processor is a 4 outputs device that supports horizontal, vertical and cross splicing

to reach high resolution as 15360×400 or 960×6144. U4 also supports user-define

output resolution , allowing users to freely change aspect ratio of resolution and

refresh rate.

Horizontal Splicing 15360 x 400

Cross Splicing 4096 x 1536

Vertical Splicing 960 x 6144

## Free Display of four Windows

**Free Display of four Windows on a single screen**

U4 enables the simultaneous display of four windows on a single screen.The size, location and hierarchical relationship of each window can be adjusted independently.
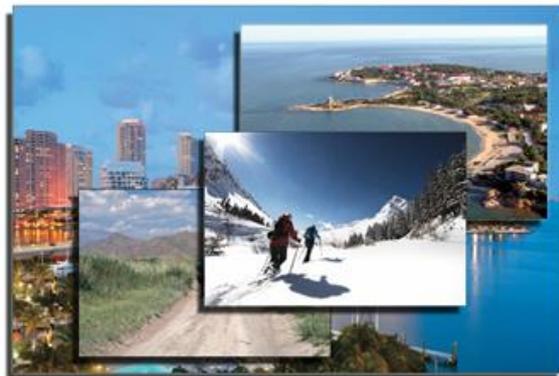


## Multi-screen Combination and Special-shaped Splicing

U4 can not only display 4 windows on a screen, but control 4 LED screens simultaneously as well, each of which can display independently or be combined into a complete image. Besides, pixel pitch of such screens can be different.

Pixel pitch of each screens can be different.

## Image Configuration

**Transparency adjusting and edge feathering**

In order to integrate the different layers of image well, U4 can change the

transparency of   each windows or achieve edge feathering effect.



Without edge feathering

With edge feathering

Transparency value: 0%

Transparency value: 30%
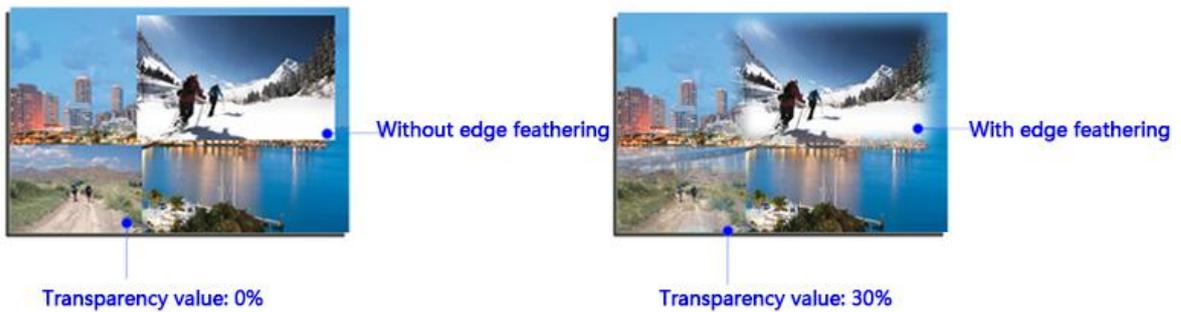
## Local Monitoring And Preview

There're three modes when using the local monitor & preview output of U4:

1.Monitor the outputs, showing the same image with the Display.

2.Preview the inputs, showing 6 inputs images in the same time.

3.Monitor and preview in the same time.



Monitor & Preview

Preview the inputs

Monitor the outputs

Display

## Excellent Image Processing Effect

**CrossInt Splicing Technology**

The splicing unit of LED screen is often non-standard, non-uniform or different size ones, which may result in dislocation or out-sync etc. U4 adopts the CPT+FST splicing processing technology specially designed for small pixel LED displays, perfectly solving the said problem.



Conventional splicing method commonly leads to dislocation or out-sync

CrossInt technology guarantees uniformity and synchronism of splicing

**Super Resolution Technology**

Super Resolution Zoom-in Technology can effectively eliminate edge aliasing induced from image zoom-in, thus reducing out-of-focus blur accordingly.



Enlarge 16 times

Enlarge 16 times
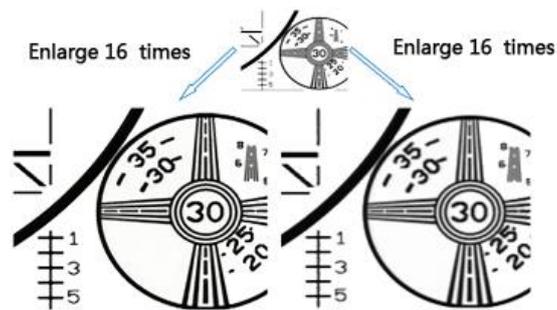
Super Resolution Zoom-in Technology

Traditional Interpolation Zoom-in Technology

## Images And Texts Overlay

U4 is able to generate independent images and texts overlay layer. The user is allowed to overlay pictures or characters on the signal image conveniently with the KYSTAR control software . The overlaid contents can be stored in the equipment.

## Ethernet monitoring & control in real time

**Ethernet control**

U6 can be compatible with KYSTAR management software via Ethernet or serial communication. Users can configure parameters on U6 through management software, adjust window layout, complete special effects switching, set up scheduled tasks etc.

**Ethernet monitoring and preview**

Via Ethernet, users can not only configure the parameters of U6, but achieve monitoring and preview through the KYSTAR management software in real time.



## Seamless Transition With Effects

Whether in case of a signal or a preset, U4 is capable of seamless transition, without any blackout, glimmer or delay in the process; Besides, U4 owns over ten transition effects for choice by the user, adaptable for different applications.



Window Transition



Preset Transition



Vertical Combing  Horizontal Combing  Diamond Cut-in  Diamond Cut-out  Upper-right Cross  Upper-left Cross  Down Cross  Up Cross

Round Cut-in  Round Cut-out  Lower-right Cross  Lower-left Cross  Left Cross  Right Cross  Cut  Fade In/Out
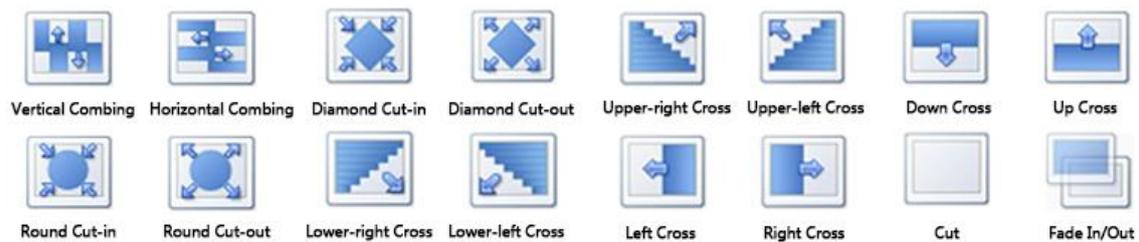
## Hot Backup of Input Signals

**Hot Backup**

Users can specify the backup signal for signal source . If current signal goes wrong, the system will automatically detect and call the backup signal immediately. And if the signal returns to normal, the system will transfer back to the original signal intelligently. Building parallel system with this function, the reliability of scene can be guaranteed efficiently.

Primary Signal    Backup Signal        Primary Signal Loss

Primary Signal    Backup Signal

# Parameters

| Video Input | | |
|---|---|---|
| **Type** | **Qty.** | **Description** |
| DVI-D (24+1) | 1 | · 1920×1200@60Hz max., downward compatibility |
| | | · Compatible with HDMI1.3 and inferior version, EDID version 1.3 |
| HDMI (TYPE A) | 1 | · 1920×1200@60Hz max., downward compatibility |
| | | · Compatible with HDMI1.3 and inferior version, EDID version 1.3 |
| VGA (HD-15) | 2 | · 1920×1200@60Hz (UXGA) max., downward compatibility |
| Composite Video (BNC) | 2 | ·NTSC/PAL adaptive, support 3D comb filter |
| Extension Input | 1~2 | · Can be configured as DVI, VGA, SDI, HDMI1.3/1.4, Dual Link DVI, IP and CVBS |
| | | · Default configuration：2 DVI-D inputs |

| Video Output | | |
|---|---|---|
| **Type** | **Qty.** | **Description** |
| DVI-D (24+1) | 6 | · Support common output resolutions like: 2048×1152@60Hz and 1920×1080@60Hz |
| | | · Support user-define output resolutions like 2600×1000@60Hz |
| | | · Compatible with HDMI1.3 and inferior version |
| | | · 4 as programming outputs, 1 as monitor & preview output, 1 as loop |

| Function Description | |
|---|---|
| Splicing Output | · Splicing output resolutions can be up to 7680×660@60Hz (horizontal splicing) or 1536×3072@60Hz (vertical splicing) or 3360×1536@60Hz (cross splicing). And the output resolution can be adjusted arbitrarily within this range. |
| Four-Window Display | · Render 4 or less images on the screen at the same time, these images can be from the same or different input signals. |
| | · Each image can be freely zoomed and arranged. Images can overlap each other. |
| Ethernet Monitoring | · Via Ethernet, users can monitor and preview through the KYSTAR software in real time |
| Hot Backup | · Users can set the priority of the input signal. When current signal fails, the system will automatically output next priority signal. |
| Image-Text Overlay | · Text or pictures can be overlaid on the image through KYSTAR software |
| Seamless Transition With Effects | · In case of signal or preset transition, users can choose different transition effects, including: fade in/out, cut, vertical or horizontal comb, round cut-in or cut-out, diamond cut-in or cut-out and cross of every side |
| Local monitoring and preview | · Users can preview input signals through the monitor or monitor current output image: |
| | 1. Monitor the outputs, showing the same image with the Display. |
| | 2. Preview the inputs, showing 6 inputs images in the same time. |
| | 3. Monitor and preview in the same time. |
| Transparency adjusting and edge feathering | In order to integrate the different layers of image well, KS928E can change the transparency of   each windows or achieve edge feathering effect. |
| Preset and Calling | · Users can save up to 64 presets of parameters for quick calling. |