4K×2K Video Processor
LED-780H

Overview

LED-780, an superior approach to better visual performance for LED walls.It is a 4K x 2K/60Hz capable video processor for 4 screens splicing. With EDID and user-defined output management, it delivers high quality pixel-to-pixel display via its user-friendly controls.It is an ideal choice for multi-media hall, multi-purpose room, theater, studio and showroom.

Supporting all kinds of input ports, it outperforms competitor products in terms of loading capacity and broadband utilizing rate (the up-processes width is 15360, and refresh rate reaches up to 121Hz). Also, 16 selective built-in resolutions allow user to scale and match the real size of LED walls.

Input ports include DVIx2, HDMIx2, DPx1(4K), SDIx1(with loop function). For extended inputs, user can choose 2 ports from VGA, DVI and SDI or 1 DP.

It accepts network linking, USB linking or RS232 linking for different control demands.

Main Features

- 4 screens splicing in 1 processor:
  8 DVI output ports are divided into 4 groups for horizontal splicing, vertical splicing, same size splicing, and different size splicing. A single unit up-loads 8,000,000 pixels and accepts splicing for 4 screens.
- 4 windows output
  On non-splicing mode, each output is capable of displaying 4 layers with any size or position.
- Output monitoring:
  Real time monitoring can be seen on the computer or monitor after adding an extended module.
- Multiple cascade:
  Machines can be cascaded to realize ultra wide display.
- Built-in input matrix for seamless switching between 8 inputs
- Logo saving
- Image freezing
- Preset saving & loading
- Accurate control for brightness & high grey level

- More input ports
  DVIx2, HDMIx2, DP(4Kx2K)x1, SDI(3G SDI)x1, 2 Extended 2K Inputs(VGA, DVI or SDI), or 1 Extended DP Input(4Kx2K).
- EDID management
  User-defined input resolution for DP, DVI, HDMI and VGA.
- Rotary output
  Splicing after rotary output
- DP loop
  1 DP loop (for any input signal)
- User-defined output resolution
- Image crop
- Task manager
- Internal graphic card for testing
- Computer host control
- Preview switching
- USB upgrade
- Low latency(16ms@60Hz)
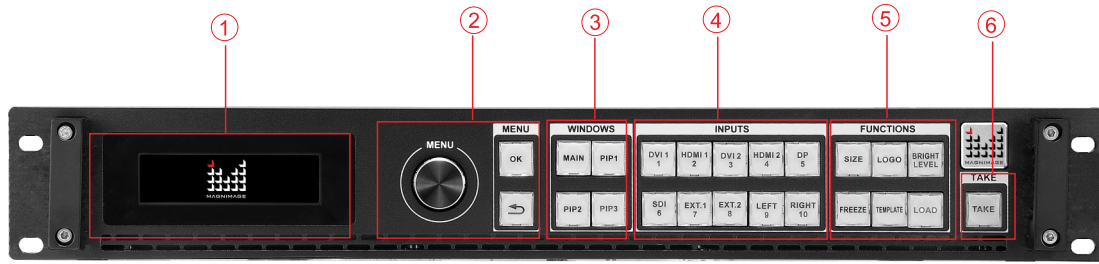- Serial port for future developing

Operating Mode

Windows control requires a RS232 or USB cable for operation.
By manual pressing, button control is a quick access to any setting.

Operating Interface
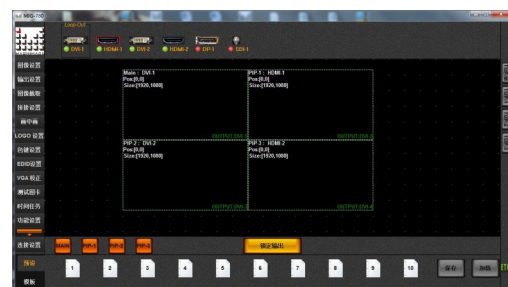
1--Screen
The screen tells the current operating details. On default mode, press "OK" or rotate the knob to enter the main menu, where 16 options are shown on 4 pages.

2--Operating Keys
Selecting or setting operations will be done with "OK", "OK"and the knob. " ↰" is for entering the menu or confirming any setting. "↰"is for backward. The knob is for selecting or setting.

3--Layer Keys
Long press will turn on or turn off the current window. Fast press will choose the selecting window. Also, fast any window and any input at the same time, window switching can be done.

4--Input Selecting & Number Keys
Together with window keys, window switching can be done by these keys. Also, they can be used as number keys when setting any resolution or other value.

5--Shortcut Keys
"SIZE" is for setting the size of an image.
"LOGO" is for turning on or off the logo.
"BRIGHT LEVEL" is for setting the brightness.
"FREEZE" is for freezing an image.
"TEMPLATE" is for entering fixed templates.
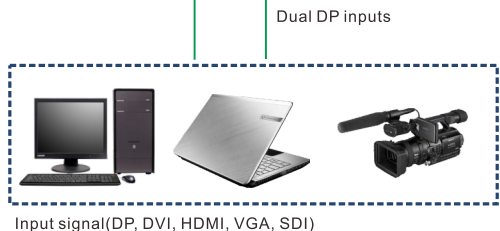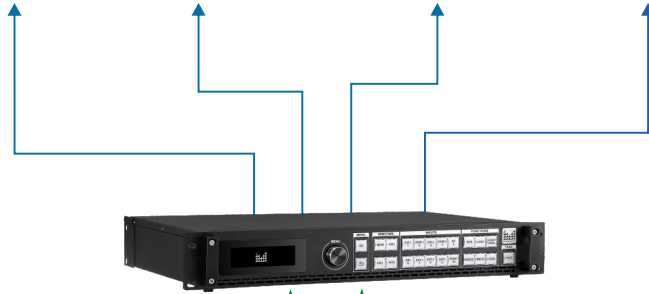"LOAD" is for entering user's presets.

6--TAKE Function
On switching mode, press "TAKE" to switch from preview to program.
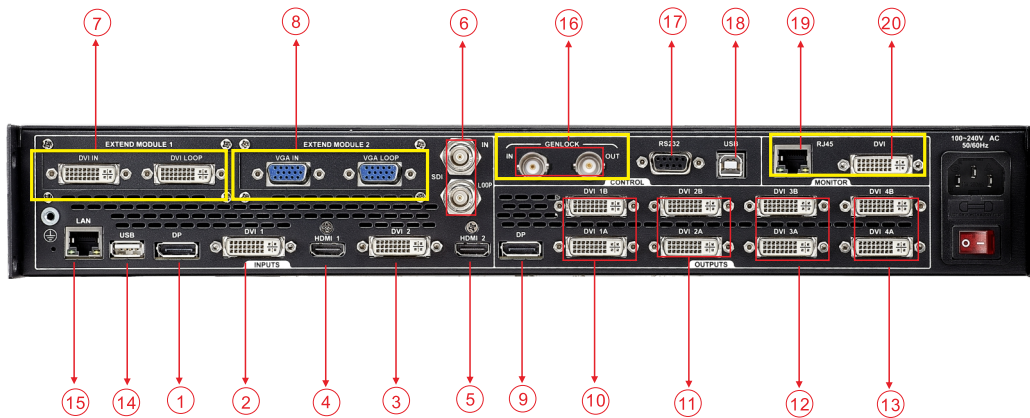
1--DP input
2--DVI1 input
3--DVI2 input
4--HDMI1 input

5--HDMI2 input
6--SDI input & loop
7--Extended input 1
8--Extended input 2

9--DP loop
10--DVI1 output
11--DVI2 output
12--DVI3 output

13--DVI4 output
14--USB upgrade port
15--Network host control port
16--Genlock input & loop

17--RS 232 control port
18--USB control
19--Input preview via IP
20--DVI output monitor

Ports in the yellow box are not included in a standard unit.

4 Screens Splicing In 1 Processor

LED screen 1   LED screen 2   LED screen 3   LED screen 4


Dual DP inputs

Input signal(DP, DVI, HDMI, VGA, SDI)

Single Machine Supports 4 Screens Splicing

With user-defined input/output resolution and synchronous follow-up function, LED-780H is able to realize pixel-to-pixel splicing for multiple inputs, or zoom splicing for one single input. As the picture shows, the DP resolution is 3840*1080/60Hz. By dual DP inputs operating, the processor is able to realize 7680*1080/60Hz pixel-to-pixel display.

User-defined Input/Output Resolution

With EDID management, LED-780H is able to customize the input resolution of DVI, HDMI and DP. For the output part, there are 16 available fixed resolutions and user-defined output function. In order to adjust pixel-to-pixel display from different size LED walls, user can also set an accurate resolution.

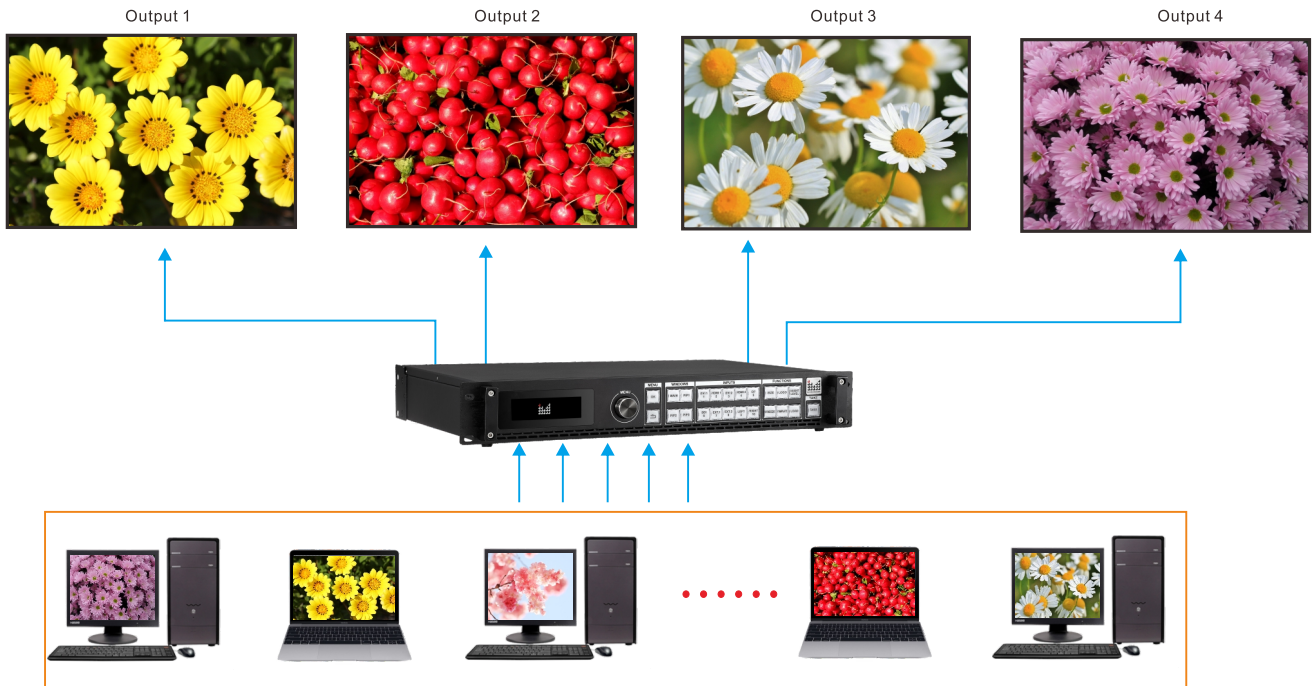## 4 Screens Splicing In 1 Processor

LED screen 1   LED screen 2

LED screen 3   LED screen 4
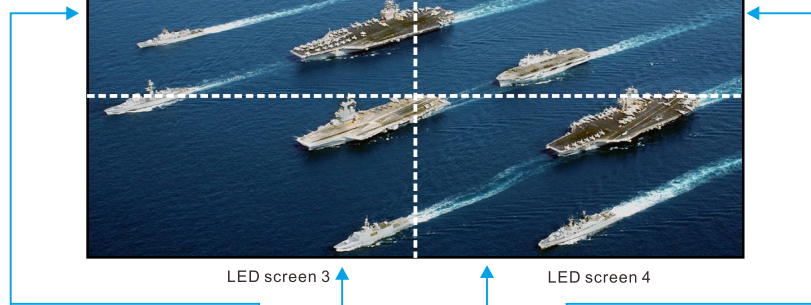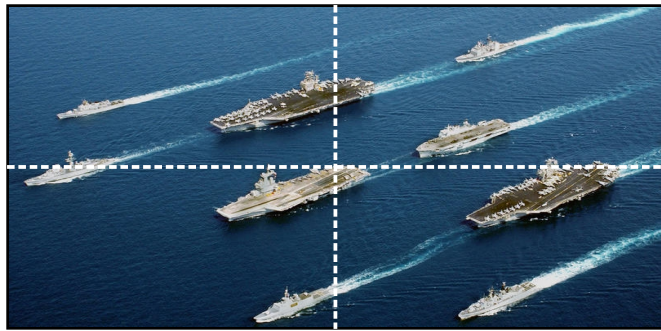
Input signal(DP, DVI, HDMI, VGA, SDI)

4 Screens Splicing In 1 Processor

Horizontal splicing,vertical splicing, same size splicing, or different size splicing.

Output 1

Output 2

Output 3

Output 4

4 Independent Outputs

The maximum input quantity of one LED-780H is 8. It can be used as matrix of 8 inputs and 4 outputs. It can also control 4 different screens with independent content. Any input can be quickly switched to any output without the black or signal break-off.

Multiple Cascade 1

LED screen 1   LED screen 2   LED screen 3   LED screen 4   LED screen 5   LED screen 6   LED screen 7   LED screen 8
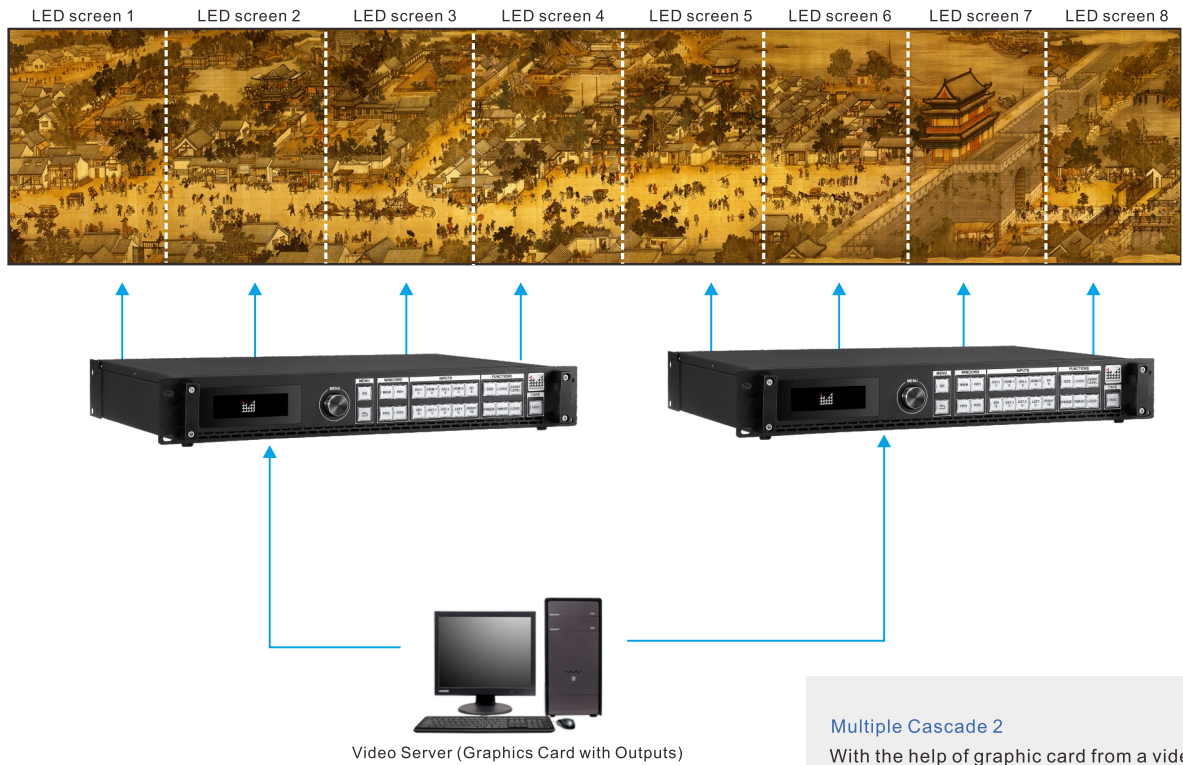
DVI output
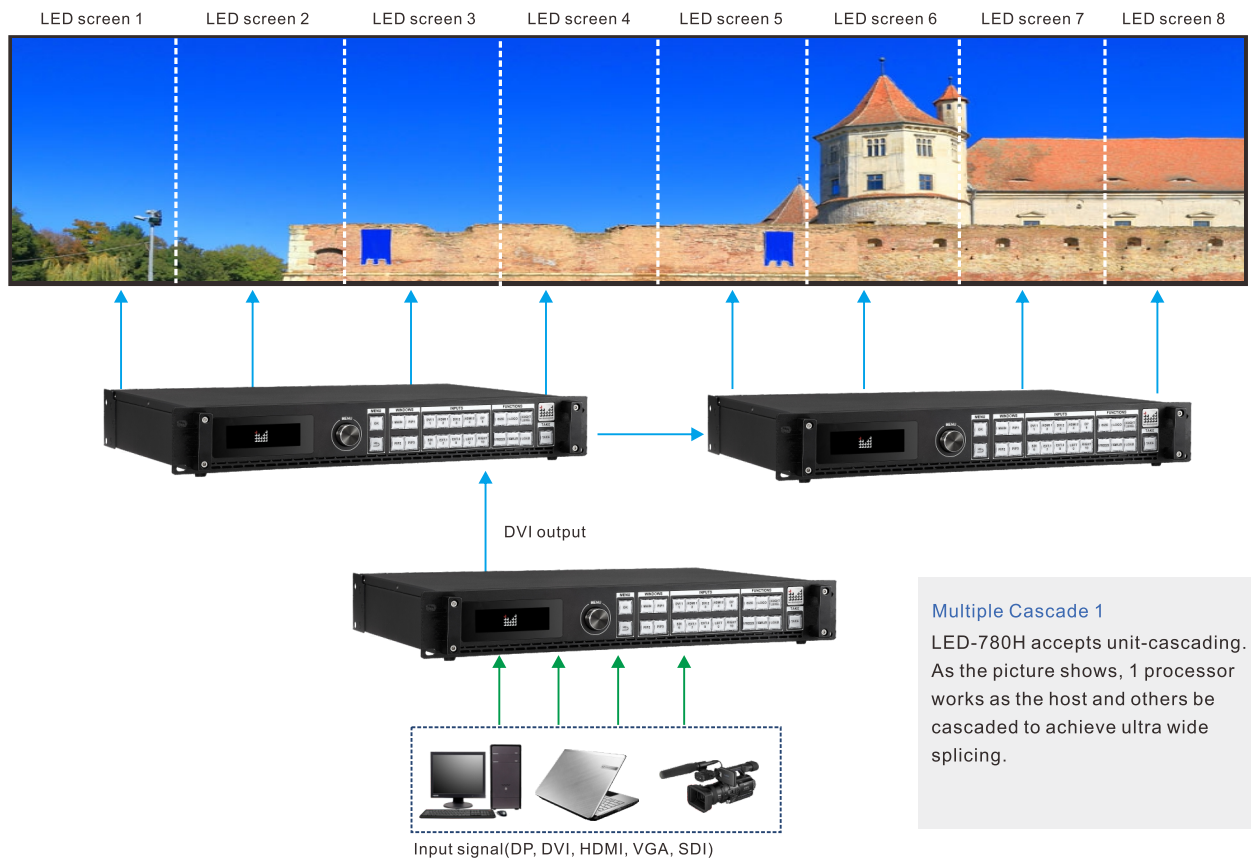
Multiple Cascade 1

LED-780H accepts unit-cascading. As the picture shows, 1 processor works as the host and others be cascaded to achieve ultra wide splicing.
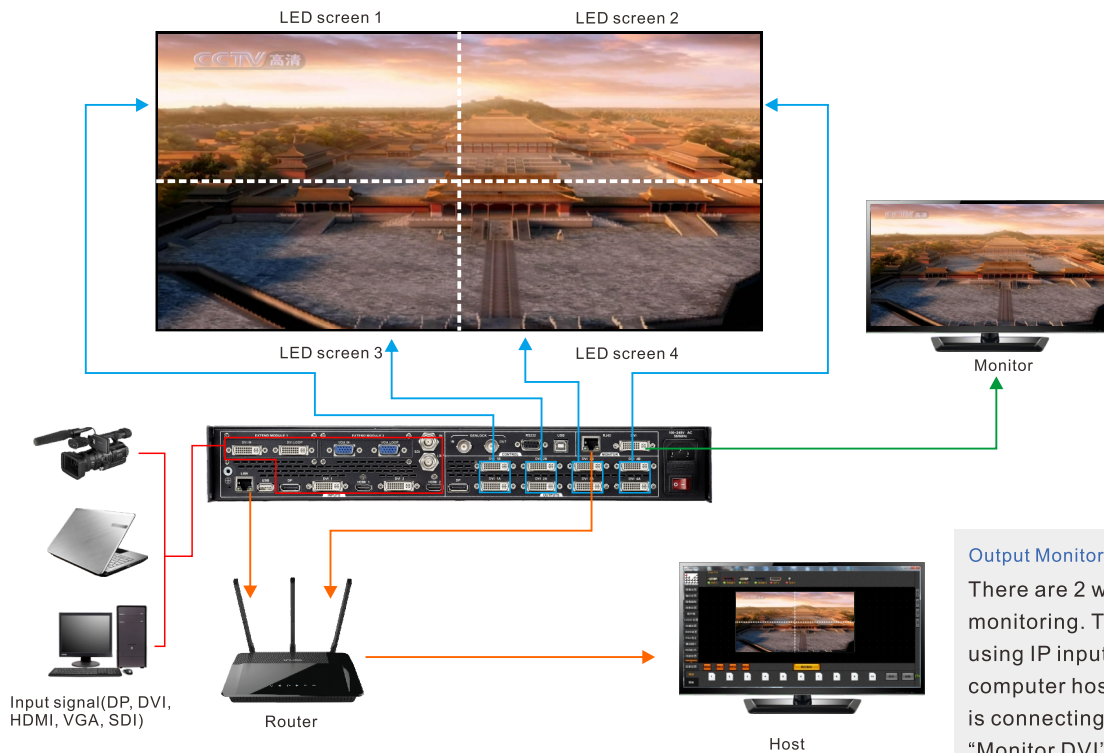
Input signal(DP, DVI, HDMI, VGA, SDI)

LED screen 1   LED screen 2   LED screen 3   LED screen 4   LED screen 5   LED screen 6   LED screen 7   LED screen 8

Video Server (Graphics Card with Outputs)

Multiple Cascade 2

With the help of graphic card from a video server, sets of LED-780H are able to realize ultra wide splicing.

Output Monitoring

LED screen 1   LED screen 2

LED screen 3   LED screen 4

Monitor

Input signal(DP, DVI, HDMI, VGA, SDI)

Router

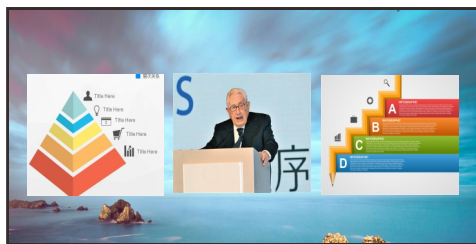Host

Output Monitoring

There are 2 ways of output monitoring. The first one is using IP input preview and the computer host. The other way is connecting the monitor with "Monitor DVI" in the processor.
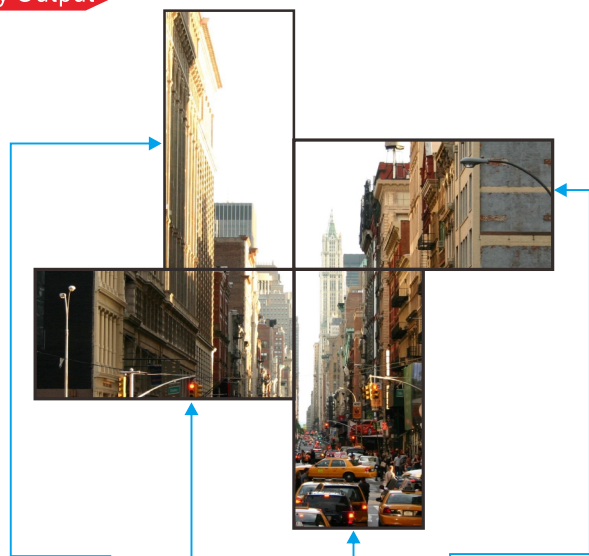
4 Layers Output

LED screen

Input signal(DP, DVI, HDMI, VGA, SDI)

4 Layers Output

In the non-splicing mode, each port is able to display 4 independent pictures. Input signal, size and position of these 4 pictures can be changed.

Rotary Output

Rotary Output

The 4 program outputs of LED-780H can be spliced after rotating every 90 degrees independently. Based on the rotation, the images can also be up-and-down reversed or left-and-right reversed.

Input signal(DP, DVI, HDMI, VGA, SDI)

Technical Specifications

Input Indication

Port	Quantity	Resolution
DVI	2	VESA
DP	1	Displayport1.1/1.2
HDMI	2	HDMI 1.3
SDI	1	480i/60Hz 576i/50Hz 720p/60Hz 1080i/50Hz/60Hz 1080p/50Hz/60Hz(3G SDI)
EXT.1	1	Extended Input Port 1
EXT.2	1	Extended Input Port 2

User can add 2 X 2K inputs (VGA, DVI, SDI), or one 4K input (DP).

Output Indication

Port	Quantity	Resolution (for each DVI output)
DVI	4×2	1024×768/60Hz 1280×1024/60Hz 1024×768/120Hz 1280×720/60Hz 1440×900/60Hz 1600×1200/60Hz 1600×1200/60Hz- Reduced 1680×1050/60Hz 1920×1080/60Hz 1920×1080/50Hz 2176×1168/60Hz 1920×1200/60Hz 1936×1280/60Hz 2048×1152/60Hz 1024×1280/60Hz 1536×1536/60Hz The user-defined output resolution is 3840 for maximum width or 2160 for maximum height.
DP loop	1	Looping any input signal
Genlock*	IN×1、OUT×1	
Monitor*	RJ45×1、DVI×1	Output monitoring to the whole unit

*Expanding Module

Console Specification

Power Supply	100~240V AC 50/60Hz
Power Consumption	55W
Operating Temperature	0~45℃
Overall Dimension (L×W×H)	482.6×452×66.75mm
Net Weight	6.0kg

Including Accessories

Provided accessories :

User Manual ×1
Power Cable ×1
DVI Cable ×1
USB Cable ×1
RS232 Serial Cable ×1
DP-DP Cable ×1
USB Memory ×1
Certificate ×1