



Shenzhen Amoonsky Technology Co., Ltd.

LCD Video Wall Controller LED Display Screen Matrix

-- English

User Manual

LCD · LED Video Matrix



Serve Customers • Achieve Value

www.amoonsky.com

Safety Instructions



This Symbol Prompts User, The Device User Manual Has Important Operating And Maintenance Instructions.



This Symbol Warns The User Of The Equipment Inside The Enclosure Exposed To Hazardous Voltages, There Is The Risk Of Electric Shock.

Note

Read The Manual • Read And Understand All Safety And Operating Instructions Before Using The Equipment.

Save Manual • The Safety Instructions Should Be Kept For Future Reference.

Follow Warnings • Follow All Warnings And Instructions Marked On The Device Or In The User Information.

Avoid Attachments • Do Not Use The Tools Or Attachments That Are Not Recommended By The Equipment Manufacturer Because They May Be Hazardous.

Warning

Power Sources • This Equipment Should Be Operated Only From The Power Source Indicated On The Product.

This Equipment Is Intended To Be Used With A Main Power System With A Grounded (Neutral) Conductor. The Third (Grounding) Pin Is A Safety Feature, Do Not Attempt To Bypass Or Disable It.

Power Disconnection • To Remove Power From The Equipment Safely, Remove All Power Cords From The Rear Of The Equipment, Or The Desktop Power Module (If Detachable), Or From The Power Source Receptacle (Wall Plug).

Power Cord Protection • Power Cords Should Be Routed So That They Are Not Likely To Be Stepped On Or Pinched By Items Placed Upon Or Against Them.

Servicing • Refer All Servicing To Qualified Service Personnel. There Are No User-Serviceable Parts Inside. To Prevent The Risk Of Shock, Do Not Attempt To Service This Equipment Yourself Because Opening Or Removing Covers May Expose You To Dangerous Voltage Or Other Hazards.

Slots And Openings • If The Equipment Has Slots Or Holes In The Enclosure, These Are Provided To Prevent Overheating Of Sensitive Components Inside. These Openings Must Never Be Blocked By Other Objects.

Statement

This Document Is Intended To Help You Understand And Use The Product. For Accuracy And Reliability, Our Company May Make Improvements And/Or Changes To This Document At Any Time And Without Notice. Any Problem In Use Or Any Good Suggestion, Please Contact Us Through Ways Provided In The Document. We Will Do Our Utmost To Solve The Problems And Adopt The Suggestions After Evaluation As Soon As Possible.

Copyright

Copyright © 2018 The Video Wall Controller And Video Matrix Manufacturers All Rights Reserved.

Trademarks

VGA And XGA Are Registered Trademarks Of IBM Corporation.

VESA Is A Trademark Of The Video Electronics Standards Association.

HDMI And High-Definition Multimedia Interface (High-Definition Multimedia Digital Interface) Are HDMI Licensing LLC. Trademarks.

Contents

Overview	5
Application	5
Panel Introduction	6
Front Panel	6
Rear Panel	7
Menu System	8
Standby Menu	8
Main Menu	8
Sub-Menu	9
Output Setting	9
Input Setting	10
Function Setting	12
Mode Setting	14
System Setting	15
Upper Computer Control	16
Control Method	16
Web Upper - PC • Login	17
Web Upper - PC • Basic Operation	18
Web Upper - PC • Window Operation	19
Web Upper - PC • Aadvance Operation	20
Web Upper - PC • System	22
Web Upper - PC • Status	23

■ Overview

AMS-MT4K_4*4 Is A Seamless Switching Matrix That Supports 4K@60Hz Input And Output, Support HDCP And HDR, Can Flexible Management Of Multiple Signals, Supports A Maximum Resolution Of 3840*2160@60Hz, The Device Is Bulti-in Taiwan Meanwell Power Supply, Used Crystal Buttons And Fullcolor LCD Screen, Easy To Operate, The Control Methods Include Panel Buttons, Web Version Upper Computer, Serial Port Protocol, etc.

The Product Supports Multi Screen Management, Supports One Click Black Screen, Has 11 Sets Of Test Graphics Cards And Intelligent Edid Management To Ensure Compatibility With Signal Sources And Operations In Various Scenarios.

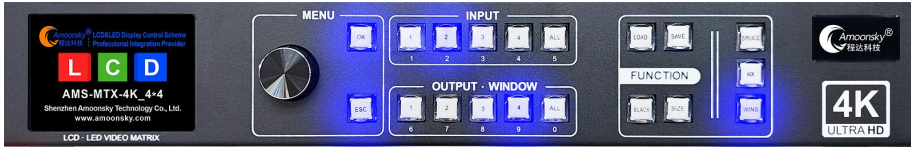
The Series Of Products Is Widely Used In Integrated Display And Control Scenarios, Such As Multimedia Conference Rooms, Lecture Halls, Multifunctional Halls, Stage Performances, Education And Teaching, Exhibitions, Command Centers, Security Monitoring, Etc.

■ Application



■ Panel Introduction

➤ Front Panel



Video Matrix · Front Panel

»» **LCD Screen** -- Display The Menu And Parameters Of Configuration.

»» **Operating Button** -- Operate The Menu System.

- **OK:** "Confirm";
- **ESC:** "Exit Operation" or "Return";
- **Knob:** Press Down Is "OK",

Turn Right "+" Turn Left "-" Is Adjust The Parameters On Menu.

»» **INPUT** -- The Area Includes "1-4" Numeric Keys, "All"; Among Them, 1-4 Correspond To Input Signal Sources 1-4, Pressing The Key Will Select The Corresponding Input Source To Output, Press "All" Will To Select All Input Sources;

»» **OUTPUT** -- The Area Includes "1-4" Keys, "All"; When The Input Source Has Been Selected, The Key 1-4 Correspond To Output Channels 1-4 Respectively. Pressing One Of The Key Will Select The Corresponding Output; If There Is No Key Light On In The Input Area, The Output Selection Will Be Invalid!

-- Signal Switching, Must Select The Input Channel First, And Then Select The Channel, If There Is No Selection Input, Pressing The Output Key Will Be Invalid.

»» **0 - 9 Number Key** -- The Bottom Of The Input&Output Keys Has Printing Numbers. When The 0-9 Key Lights Are All On , The Key Is Numeric Input Key, And Selecting The Corresponding Key Will Input The Corresponding Number Or Select The Corresponding Template;

»» **F_Function** -- The Area Includes "LOAD", "SAVE", "BLACK", "SIZE", "SPLICE", "MX", "WINS";

- **LOAD:** Mode Loading Shortcut Button Can Directly Recall The Pre-Set Mode;
- **SAVE:** Mode Save Shortcut Button, Can Directly Save The Current Set Parameters To Pre-Set Mode;
- **BLACK:** One Key Black Screen Button, When The Button Is Selected, All Outputs Are Black Screen;

- **SIZE:** Adjusting Window Parameters Shortcut Button, Can Set Window Size And Start Position, Alpha, Image Rotate, And Other Parameters;
 - **SPLICE:** The Button Light Is On, Indicating That The Device Is Currently In Splicing Mode And Can Quickly Recall Splicing Templates;
 - **MX:** The Button Light Is On, Indicating That The Device Is Currently In Matrix Mode And Can Quickly Recall The Matrix Template;
 - **WINS:** The Button Light Is On, Indicating That The Device Is Currently In Multi Windows Mode. And Can Quickly Recall Multi-Window Templates;
- Splice · MX · Wins_ **Lights On Alternately**
If Choose Which Function And The Representative Light Will Lights Up

➤ Rear Panel



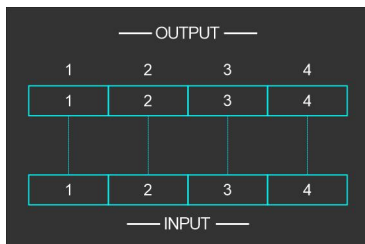
Video Matrix · Rear Panel

- »» **Power Connector** -- Including Switch, Fuse And IEC Standard Power Cable, Input Voltage Support 100-240 VAC, 50 -60Hz;
- »» **INPUT** -- 4 Input Channels, Signal Source Resolution Support 4K@60Hz And Backward Compatibility;
- »» **OUTPUT** -- 4 Output Channels, Output Resolution Support 3840*2160@60Hz 4K@60Hz And Backward Compatibility, Support Custom Resolution;
On Multi-Windows Mode, 1&2 Channels Output Multi-windows, 3&4 Support Bypass, Output The Resolution Is Consistent With The Input Source Resolution!
- »» **CONTROL** -- Control Area
 - **RS-232:** Used To Connect Control Ports Such As Central Control Devices, Refer To The Provided Upper Computer Communication Protocol; Support Serial Port Control Cascade, RS232-IN As Input, RS232-OUT As Loop Output;
 - **USB:** Type-A, Used For Upgrading Internal Programs Of The Machine;
 - **NET:** The Computer Is Connected To The Machine Network Interface Through The Network Cable To Realize The Web Version Upper Computer Control;
 - **ANT:** As A Backup Expansion Interface, Not Currently Enabled.

■ Menu System

➤ Standby Menu

Standby Menu As Follows, Click The "Ok" Button To Enter The Main Menu;



Standby Menu

»» **Menu Icon:** The Following Icons Are Not Displayed By Default. Once The Corresponding Function Is Enabled, They Will Be Displayed In Real-Time In The Standby Menu. If Cancelled, They Will Not Be Displayed;

 **Time& Tasks:** The Icon Indicates That The Scheduled Tasks Function Is Enabled;

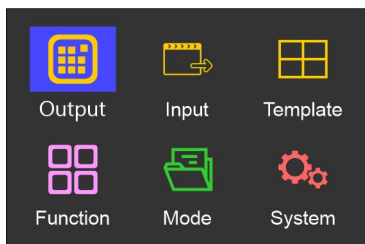
 **Keypad Lock:** The Icon Indicates That The Keypad Is Locked, And Can Be Unlocked Or Locked By Long Pressing The "Esc" Key For 2 Seconds;

 **Freeze:** The Icon Indicates That The Display Freezing Function Is Enabled;

 **Black:** The Icon Indicates That The Black Screen Function Is Enabled;

➤ Main Menu

Main Menu As Follows, Click The "Ok" Key Or Press The Knob Can Enter The Sub Menus, By Rotating The Knob Can Setting The Parameters



Main Menu

➤ Sub Menu

● **Output Settings** (Select "Output" In The Main Menu, Click The "Ok" Button Or Press The Knob To Enter The Interface Shown In As Below)

Output Setting	
Output Status	▶
Output Resolution	▶
Output Mode	▶
Splice Setting	▶
Window Setting	▶
Frame Lock	Off



Output Status	
OUT1:	3840*2160 60Hz RGB
OUT2:	3840*2160 60Hz RGB
OUT3:	3840*2160 60Hz RGB
OUT4:	3840*2160 60Hz RGB

◆ Output Resolution

Output Resolution	
Output Selection	All
4096x2160	60Hz
4096x2160	30Hz
3840x2160	60Hz
3840x2160	30Hz
1920x1080	60Hz

...

1920x1080	30Hz
1280x720	60Hz
2560x1600	60Hz
2560x1440	60Hz
2048x1152	60Hz
1920x1200	60Hz

1400x900	60Hz
1280x800	60Hz
1024x768	60Hz
720x480	60Hz
Custom Resolution	▶



Custom Resolution	
Width	1920
Height	1080
Frame Rate	60
Apply Settings	▶

◆ Output Mode

Output Mode	
Output Selection	All
Color Space	RGB
Bypass Input	Off

Output Selection: Select "1 - 4" Or "All";

Color Space: Select RGB, YUV444,
YUV422, YUV420

Bypass Input: Effective On Multi-windows
Mode, And When Output 3 Or 4 Channels,

Can Choose Any Input Channel For Bypass Operation!

◆ Splice Setting

Splice Setting	
Window Select	Win1
Splice OnOff	Off
Splice Mode	Equal
H Units	2
V Units	2
Position	1

Window Selection: Select Win1 - 4;

Splice Switch: Select "On" Or "Off";

H Units • V Units: According To Actual Settings, The Maximum Value Is 10;

Position: Please Select The Output Channel First, And Match The Position According To The Actual Situation;

◆ Window Setting

Window Setting	
Window Select	Win1
Window OnOff	Off
H Start	0
V Start	0
Width	3840
Height	2160

Window Selection: Select Win1 - 4;

Splice Switch: Select "On" Or "Off";

H Start: Adjust The Horizontal Start Position Of The Corresponding Window;

V Start: Adjust The Vertical Start Position Of The Corresponding Window;

Width: Adjust The Horizontal Size Of The Corresponding Window;

Height: Adjust The Vertical Size Of The Corresponding Window;

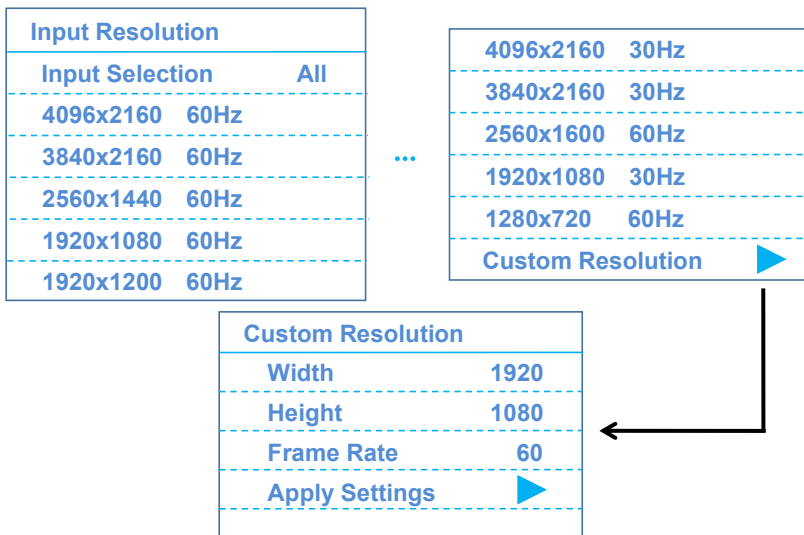
● **Input Settings** (Select "Input" In The Main Menu, Click The "Ok" Button Or Press The Knob To Enter The Interface Shown In As Below)

Input Setting	
Input Status	▶
Input Resolution	▶
Audio Select	▶
Image Crop	▶



Input Status	
IN1:	No Signal
IN2:	No Signal
IN3:	No Signal
IN4:	No Signal

◆ Input Resolution



◆ Audio Select

Audio Select	
Input Selection	All
Analog Audio	▶
Digital Audio	▶

Input Selection: Select “1 - 4” Or “All”;

Analog Audio: Click To Open External Audio, And The Output Audio Changes With The Input Signal Source;

Digital Audio: Click To Open HDMI Built-in Audio

◆ Image Crop

Image Crop	
Window Select	Win1
Crop Onoff	Off
H Start	0
V Start	0
Width	960
Height	540

Window Selection: Select Win1 - 4;

Crop Onoff: Select “On” Or “Off”;

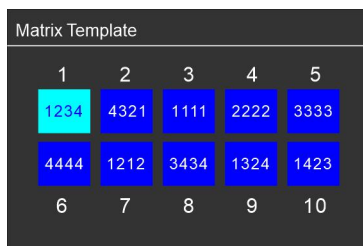
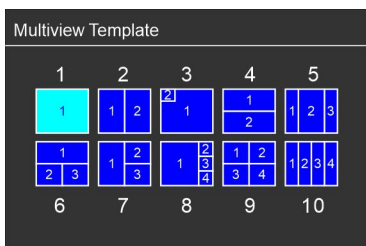
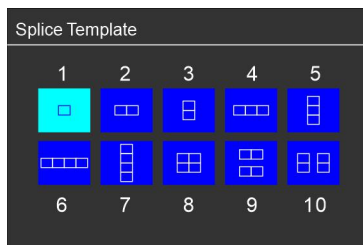
H Start: Corresponding To The Horizontal Start Position Of the Crop Signal;

V Start: Corresponding To The Vertical Start Position Of the Crop Signal;

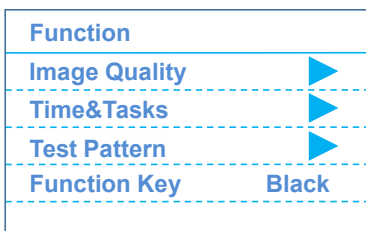
Width: Corresponding To The Horizontal Size Of the Crop Signal;

Height: Corresponding To The Vertical Size Of the Crop Signal;

● **Template Settings** (Select "Template" In The Main Menu, Click The "Ok" Button Or Press The Knob To Enter The Interface Shown In As Below)



● **Function Settings** (Select "Function" In The Main Menu, Click The "Ok" Button Or Press The Knob To Enter The Interface Shown In As Below)



◆ Test Pattern

Test Screen Without Input Of Signal Source, Test Pattern: 0-10;

Upon Entering The Menu, The Test Pattern Function Will Automatically Turn On

Upon Exiting The Menu, The Test Pattern Function Will Automatically Turn Off;

◆ Function Key

In The Menu Options Select Black Screen, Press The **"BLACK"** Key , When The Key Indicator Light Is On, All Outputs Will Be Black Screen;

In The Menu Options Select Freeze, Press The **"BLACK"** Key, When The Key Indicator Light Is On, All Outputs Will Retain The Last Frame Of The Screen;

◆ Image Quality

Image Quality			
Brightness	50		
Contrast	50		
Saturation	50		
Hue	50		
Gamma	2.2		
Color Temp	Standard	▶	→
Reset All		▶	

Color Temp	
Color Temp	
Red	
Green	
Blue	

Image Quality:

Brightness, Contrast, Saturation, Hue, With An Interval Value Of 0-100;

Gamma: Can Select 1.8, 2.0, 2.2, 2.4, 2.6;

Color Temp: Standard, Cool, Warm, User;

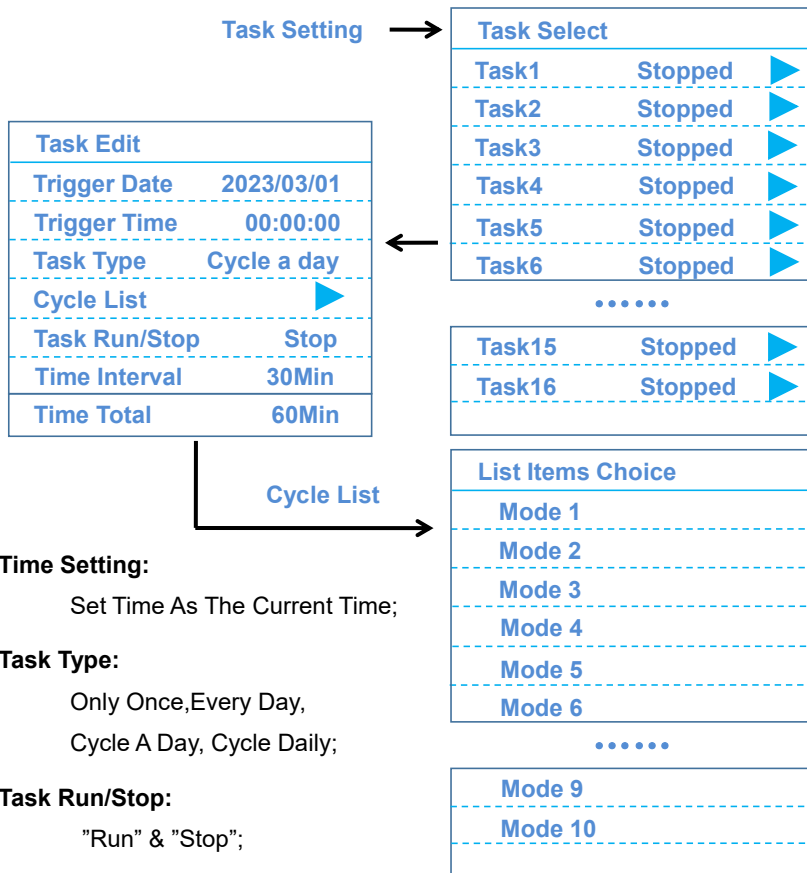
Can Be Adjusted According To User Requires;

◆ Time&Task

Select Time&Tasks, Can Achieve Timed Switching Mode, Timed Signal Source Switching Or Black Screen Switching .etc ;

Time & Task			
Time		▶	→
Task Setting		▶	
Tasks On Off	Off		
Reset All Tasks		▶	

Time Setting	
Date	2023/03/01
Time	11:15:31



Time Setting:

Set Time As The Current Time;

Task Type:

Only Once, Every Day,
Cycle A Day, Cycle Daily;

Task Run/Stop:

"Run" & "Stop";

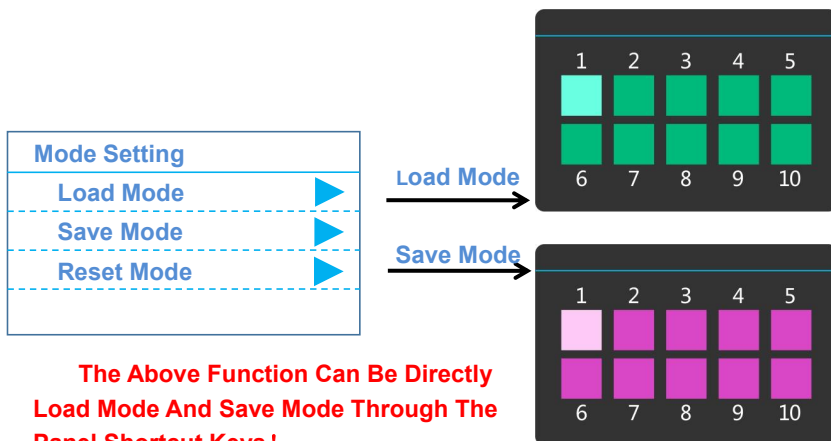
Note: If Need Enabled The Feature And Effectively Activated, Please Check And Ensure That The Mainboard Has A Lithium Battery And The Battery Is Charged!

● **Mode Settings** (Select "Mode" In The Main Menu, Click The "Ok" Button Or Press The Knob To Enter The Interface Shown In As Below)

Load Mode: Enter The Load Interface And Press The "Number Key" To Load The Preset Mode;

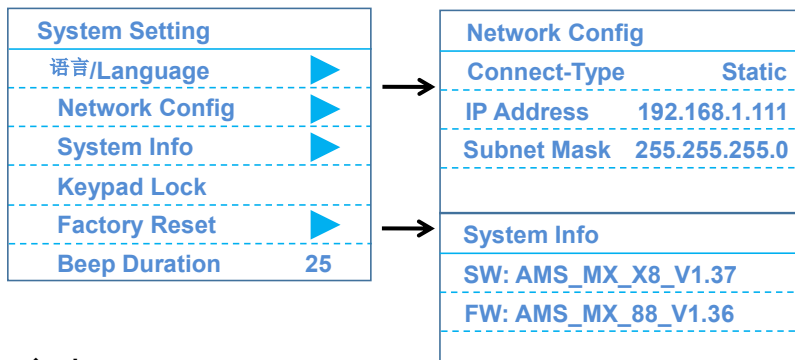
Save Mode: Enter The Save Interface To Save The Current Preset Mode;

Reset Mode: Clear The Preset Mode Saved By User.



- **System Settings** (Select "System" In The Main Menu, Click The "Ok" Button Or Press

The Knob To Enter The Interface Shown In As Below)



◆ Language

Support: English, Simplified Chinese, Traditional Chinese, Korean, Vietnamese, Thai, Spanish, Portuguese, Russian .etc;

Language	
简体中文	▶
English	▶

If Need The Corresponding Language, Please Contact Our Sales And Make A Note Before Placing The Order.

◆ **Keypad Lock**

In The Device's Working Mode, Enabling The Function, Can Effectively Prevent And Avoid Misoperation;

◆ **Factory Reset**

If Click OK, The Device Will Reset To Factory Parameters;



◆ **Buzzer Duration**

Install The Buzzer, When The Device Switching The Signal, Audio Reminder Is Indicating Successful Switching; If The Numerical Value Set To **0**, The Sound Will Be Turned Off;

■ Upper Computer Control

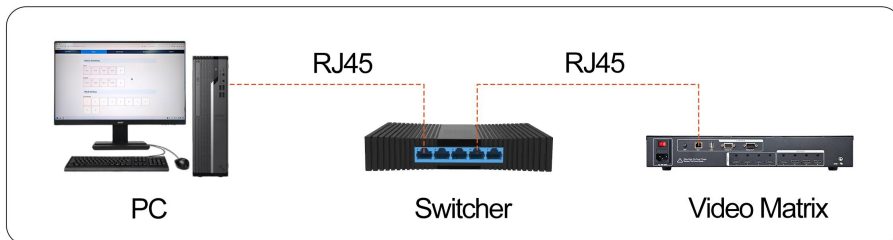
➤ **Control Method**

- **RS232** Control -- AMS-MTXSeries Upper-PC Control **Protocol**;
- Network Cable Control • **RJ45** -- **Web Version** Upper Computer

A. Network Cable **Direct Connection** • **Static IP**;



B. Through The Network Switch · DHCP IP;



➤ Web Upper - PC • Login

- Connect The Device Correctly According To The Connection Method And Retrieve The IP Address On The Device LCD Screen;
- Enter The IP Address Directly In Browser To Enter The Login Interface;

Login

Account

Password

Login

Account: admin

**Initial Password: admin
Lowercase**

**If Need
Authorization Management,
Please Contact Our Sales!!!**

- Modify The Web Upper Computer To The Corresponding Language:
Support Chinese And English;

Basic	Advanced	System
基本设置	高级设置	系统设置

Language

Language Select English ▼

English

简体中文

Beep

➤ Web Upper - PC · Basic Operation

● Matrix Switching

Basic					Advanced				
Matrix Switching									
Input									
1 Input1	2 Input2	3 Input3	4 Input4	All					
Output									
1 Output1 1	2 Output2 2	3 Output3 3	4 Output4 4	All					

The Switching Method Is Equivalent To Device Panel Key Operation, First Selecting The Input Source, And Then Selecting The Output; Instant Response Switching!

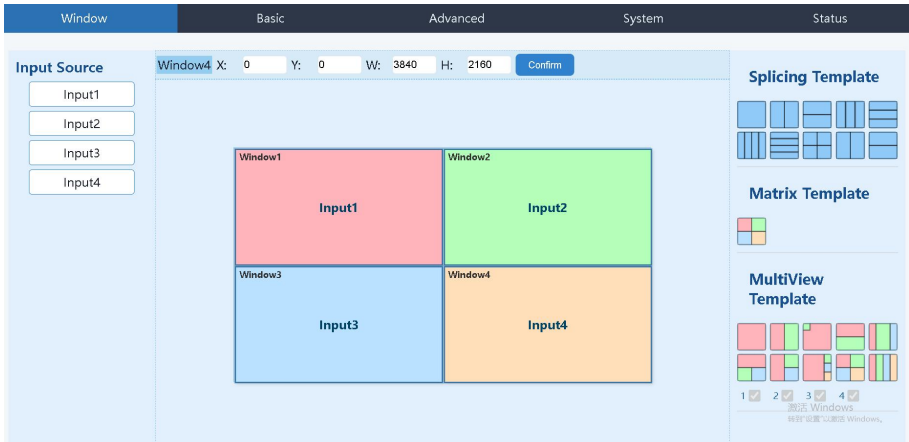
The Input • Output • Mode Can Be Rename

Operation Steps:

Open The Web Version Upper Computer -- System -- Rename

Basic					Advanced					System				
Rename														
Input														
1	Input1	2	Input2	3	Input3	4	Input4							
Output														
1	Output1	2	Output2	3	Output3	4	Output4							
Mode														
1	1	2	2	3	3	4	4	5	5					
6	6	7	7	8	8	9	9	10	10					
Save Reset														

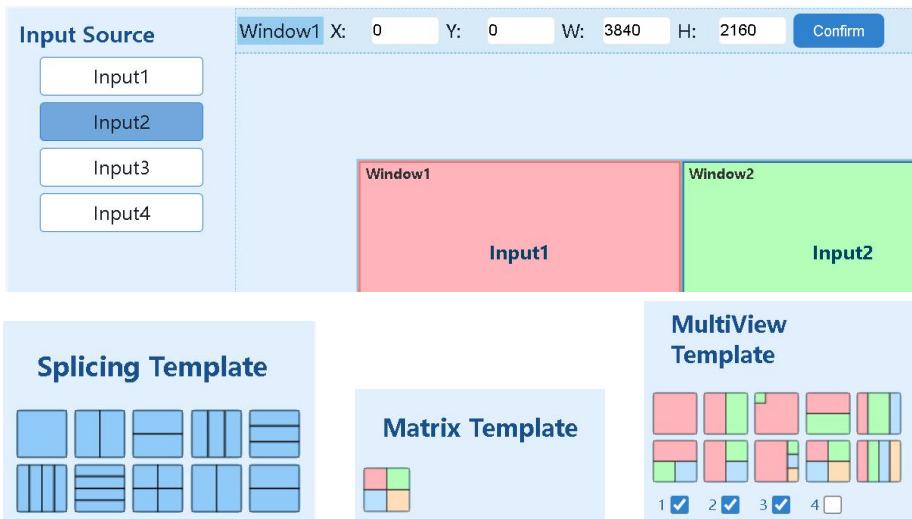
➤ Web Upper - PC · Window Operation



On Splicing Mode: Can Select Input Signal Source Or Splicing Template To Switching;

On Matrix Mode: The Window Size Can Be Scaled And The Input Signal Source Can Be Switched;
-- **Can Used Mouse To Be Freely Dragged And Dropped !**

On Multi-window Mode: Can Directly Drag And Adjust The Window Size With The Mouse, Or Select To Switch Signal Sources;



● Mode Setting

Mode Setting

Load Mode

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Save Mode

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Delete Mode

1	2	3	4	5	6	7	8	9	10	All
---	---	---	---	---	---	---	---	---	----	-----

Load Preset Mode: Can Recall A Saved Preset Mode, And The Mode If Saved, The Preset Box Show Color Will Turn Purple;

Save Preset Mode: Can Save The Current Parameters To The Preset Mode, Which Successfully saved Will Take Effect Immediately;

Delete Preset Mode: Can Delete Saved Parameter Mode;

➤ Web Upper - PC · Advance Operation

● Output Setting

Output Setting

Output Select Output1 ▼

Resolution 4096x2160 60Hz ▼ Confirm

Custom Resolution 1920 1080 60 Confirm

Color Space RGB ▼ Confirm

Image Rotation : 1 0° ▼ 2 0° ▼ 3 0° ▼ 4 0° ▼ Confirm

Bypass : Output3 Off ▼ Output4 Off ▼ Confirm

The Operation Method Is Equivalent To Menu Operation
Operation Takes Effect Immediately!

- **Input Setting**

Input Setting

Input Select

Audio Embedding

☒ On☐ OffImage Crop X Y W H Window1 ☒ On☐ Off

EDID Preset

EDID User

EDID Copy

→

- **Image Setting & Other Setting**

Picture Quality

Brightness



Contrast



Hue



Saturation



Red



Green



Blue



Other Setting

Black Screen



Freeze



OSD Information



Test Pattern



➤ Web Upper - PC · System

Beep

Duration (ms):

Reset Settings

Factory Reset

Account Settings

Modify Account

System Information

Master version: SW: MX_X4_V1.38

Input Version: 1.17

Output Version: 1.17

Network Status

Network Type

IP Address . . .

Subnet mask . . .

Gateway . . .

DNS: . . .

- The Buzzer Duration Can Be Adjusted: 0-200ms;
- AfterClicking Factory Settings, Press Ok To Take Effect;
- Can Change The Account And Password Through Account Settings;
- If Want Open **Authorization Management** Function, **Please Contact** Our Sales;

Authorization Settings

Super Account: Super Password:

➤ Web Upper - PC · Status

Input Status

Input1 : No signal

Input2 : No signal

Input3 : No signal

Input4 : No signal

Output Status

Output1 : 3840x2160 60Hz

Output2 : 3840x2160 60Hz

Output3 : 3840x2160 60Hz

Output4 : 3840x2160 60Hz

Can View The Input And Output Information Through Device Status!