SYSOLUTION

LED video processor User Mannual

Version: V.1.0



Statement

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Update Record

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	1	Ver.1.0	initial issue	2023.08.29	
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Hardware Connection Diagram

synchronous mode connection



Operation Menu

working status

After the video processor run up, will see the LCD screen status as in below:

2023-10	-27 10:11 1 USB	Link down-NET Link down				
	SCREEN : 7680x1080 2	DVI1 DVI2 HDMI3				
OU	TPUT : 7680x1080 60Hz	HDMI1 4				
WIN1	HDMI3 NO SIGNAL!	HDMI2 DP SDI1				
WIN2	UNUSED!	12345				
WIN3	UNUSED! 3	6,78910				
WIN4	UNUSED!	11 12 13 14 15				
WIN5	UNUSED!	16 17 18 19 20				
No.	Description					
1	clock and time					
2	setup the led screen total resolution					
	Windows for used and w	indow' s signal status: gray color means the window				
3	closed					
4	Input signal source, blue means has signal, gray means no signal					
E	Gitbyte Ethernet port, b	lue means already connected with receiver card, gray				
5	means no connection					

Main Menu

Press the knobe in the status interface and enter the main Menu interface, then press

knobe to enter sub menu, ESC for exit.

There are 5 menus : screen , window, scene, advanced and system.

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2023-10-27 10:11		MAIN	
Screen	Windows	Scene	
Advanced	Network	System	2.

screen configuration

It contains "Fast screen" and " Match screen"

Fast screen: setup output resolution, screen width and height pixels for video processor

quickly

Match screen: auto recognize the led screen configuration files from the upper software.



Fast screen

Setup output resolution, screen width and height pixels.

Resolution: support fixed and customized setup

Fixed resolution choices : 3840x2160_60Hz 、 4096x2160_60Hz 、 4320x1920_60Hz 、

4800x1920_60Hz 、 2560x3840_60Hz 、 6144x1536_60Hz 、 7680x1080_60Hz

7680x1200_60Hz 、 8192x1152_60Hz 、 9216x1080_60Hz 、 10240x900_60Hz

15360x640_60Hz、

Customized resolution: maximum width 15360, maximum height 15360, refresh rate

0-120Hz, total capacity no more than 1040,0000 pixels.

Screen width in Horizontal : led screen width pixels in real

Screen height in vertical: led screen height pixels in real

2023-1 0-27 10:13	FAST SCREEN	2023-10-27 10:15	USER SCR
Resolution	7680x1080 60Hz	H Total	76
H Total	7680	V Total	10
V Total	1080	Frame Rate	
Apply			
AHER			

Click Apply to setup.

Windows

Set specific parameters for window opening and each window, including window size,

position, layer stacking order, transparency, window freezing, etc.

To open a window, you can choose a shortcut window or New window.

2023-10-27 10:17	PICTURE
Shortcut Mode	
New Window	
Window Settings	
Auto Input	
Window Layer	
Window Alpha	
Window Freeze	

Shortcut Window

Can select the templates to open window and choose numbers, positon and size.

Window 1: select 4K for input signal source, can open one or two windows.

Window 2: select 2K for input signal source, can open 1 to 5 windows.

Use the knobe to choose directly.

The green color means the selected window after open window setup success.

Press "Return" key to status interface, press "' WIN' to select window, press Source signal key to switch window signal.



New window

Add new window in order, select the signal source and set size and postion.

Window serial number: add the window in order, can not change the serial number.

Signal Source : use the knobe to choose the signal source for the current window, can

choose 2K for all windows, only window 1 can use 4K signal source.

Window width, height and positon: change the values by knobe after selected each item

or directly input the digital numbers.

Press "Return" key to status interface, press "' WIN' to select winodw, press Source

signal key to switch window signal.

NOTE: horizontal start+horizontal size \leq led screen total width

Vertical start+vertical size≤led screen total height

2023-10- <mark>27 10:2</mark>	1	0	USER WINDOW
Window	WIN2	Input	HDMI1
H Start	0	V Start	0
H Szie	500	V Size	500
Window ON	15		
	5		
A			

Window parameters

Can set each window' s signal source, window size and position, display switch and input

image capture. Default parameters as those of openning window.

Window serial number: use the knobe to select the window that need to be setup.

Signal Input: use the knobe to choose the input signal source for the current window,

can choose 2k for all windows, only window 1 can choose 4K signal.

Window width, height and positon: change the values by knobe after selected each item

or directly input the digital numbers.

Can set width, height, position for each window within the led screen resolution range,

can set each window overlay or tile display.

NOTE: horizontal start+scale horizontal wide ≤ led screen total width

Vertical start+scale vertical height≤led screen total height

Display switch: turn on or off window display

Capture switch: turn on or off capture input image capture. When turn off, window will display full screen image from input signal source.

When turn on, window will display part of image from signal source according to the pre set parameters.

Capture width, height and position: modify the values by knobe or input digital numbers directly.

NOTE: capture horizontal start+ capture horizontal wide ≤Input signal source resolution width

Capture Vertical start+capture vertical height≤Input signal source resolution height

2023-10-27 10:23	8		WINDOWS
Window	WIN1	input	HDMI3
ZOOM H Sta	0	ZOOM V Star	0
ZOOM H Szie	7680	ZOOM V Size	1080
DISP Switch	ON	CROP Switch	OFF
CROP H Starl	0	CROP V Start	0
CROP H Size	1920	CROP V Size	1080

Layer switching

Set the layer position where each window is located, that is, the window stacking order.

Select window: use the knobe to select the window that need to be setup

Current layer: the layer for the selected window, there are 4、3、2、1、0 layers, layer 4 is

the bottom, layer 0 is the top one.

Turn the knob to select "Layer Up", "Layer Down", "Layer Top", and "Layer Bottom" in the execution interface to change the position of the selected layer, while other layers are changed in order.

2023-10-27 10:24	1		LAYE
Window	WIN1	Layer	4
Move Lip		Move Down	
C/n Top		On Bottom	
Default Layer			

Transparency (ALPHA)

Set the image transparency for each window.

Window number: Select the window to be set with the knob.

ALPHA: Optional values range from 0 to 100, with higher values indicating higher

transparency.

Restore default: The image is restored to opaque.

2023-10-27 10:25	5		ALPHA
Window	WIN1	Alpha	0
Default Alpha			
			60

Freeze

Set the image screen displayed in the window to freeze.

Window number: Select the window to be set with the knob.

Frozen state: The switch selects the window to display the frozen image.

You can freeze all windows with one click, or release the frozen state of all windows with

one click.

St C'

2023-10-27 10:	26		FREEZE
Window	WIN1	Status	OFF
Freeze All		Release All	

Scene presets

Save multiple usage scenarios, save settings for "screen splicing", "window display", and input signal sources, and quickly load and cancel saved scenario applications.

Save: Saves the current display effect as the scene preset. Select the button to execute the save, open the save interface, select the saved scene number to complete the scene save. If the selected scene number already has parameters, it will be overwritten by new scene parameters.

Load: Invoke saved scene presets.

 2023-10-27 10:29
 SCENCE
 023-10-27 10:30
 SAVE

 Save
 Load
 Clear Saved
 023-10-27 10:30
 SCREEN: 1920x1080 60Hz

 Save
 Load
 Clear Saved
 WIN 1: DVII | WIN 2: NOT USED!
 WIN 3: NOT USED!

 WIN 3: NOT USED!
 WIN 3: NOT USED!
 WIN 3: NOT USED!
 WIN 3: NOT USED!

Clear Saved: Clears all saved scene presets.

Advanced

Enter Advanced, set up EDID, screen patrol, Pattern, audio in, timing switch, and SD card

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item.

2023-10-27 10:31	ADVANCED
EDID	
Screen Patrol	
Pattern	
Audio In	Earphone
Timing Switch	
Sdcard Item	
Port Settings	

EDID

Set input signal interface EDID information, supporting common EDIDs and customization.

Input signal: Select the input interface to change the EDID.

Common EDID: 2K input interface supports 1366x768_ 60Hz, 1400x900_ 60Hz, 1920x1080_ 60Hz, 2304x1152_ 60Hz, 2560x900_ 60Hz; 4K input interface supports 1366x768_ 60Hz, 1400x900_ 60Hz, 1920x1080_ 60Hz, 2304x1152_ 60Hz, 2560x900_ 60Hz, 3072x3072_ 60Hz, 3840x1080_ 60Hz, 3840x2160_ 60Hz

Custom EDID supports two types: HDMI and DVI, with customized adjustments for width, height, and refresh rate. It supports a maximum horizontal width of 4092, a maximum vertical height of 4092, and a refresh rate of 0-180Hz.

2023-10-27 10:31	EDIC
Input Source	DVI1
Common EDID	1920x1080 60Hz
Customer EDID	

2023-10-27 10:32	EDID
EDID Type	HDMI
H Active	1920
V Active	1080
Frame Rate	60
Apply	

Screen Patrol

Screen Patrol

Patrol type: optional for all, sending card, or receiving card.

Patrol times: can be either once or continuous, and continuous can only be selected

when the inspection type is selected as receiving card.

Patrol data: Optional internal storage or external SD card for storage.

Save Patrol Data: Data is saved to hardware,

0000 10 07 10 24	
2023-10-27 10:34	PATROL
Patrol Type	ALL
Patrol Times	One
Patrol Data	Inner Flash
Patrol Start	
Save patrol data	
Off patrol	
93.	

Before using the Patrol, it is necessary to use the upper computer software to save the patrol data to internal storage or external SD card storage. The operation of the upper

computer software is as follows:



Send Data Options	×	and data	
Sender card list:	Detect receive cards		
1D:0008 20031 037			8
Patrol data		×	
lata can be saved in the following ways:			
🗹 Compressed display profile		_	•
\checkmark Read back the display configuration data (from the sending card		2 - I
✓ Software patrol			
X Hardware inspection			2
Original box command data			
× Read back the display configuration data f	from the sending card		2
✓ Software patrol			
✓ Hardware inspection			
		\cdot	
1	2	\sim	
Remarks: patrol inspection data includes bo	x configuration data and box	offset	6
Charridata Sava Ela	Cause data		
Clear data Save file	Save data	se	
As a backup card (if unchecked	as a master card configuratio		
	as a master care eginigerade		
Patrol data	Save Send	-	

Send the display screen connection file in the complex screen adjustment interface of the upper computer screen configuration interface, and then click on the adjacent patrol data to save the data. For internal storage inspection, you can choose the patrol type: receiving card, sending card, all; You can choose the number of inspections, only the receiving card can conduct unlimited inspections, and sending cards can only be selected once; Cure after inspection.

Attention: After the unlimited inspection of the receiving card is enabled, the USB needs to be unplugged. After unplugging the USB, the menu cannot be operated. To restore, press and hold the button for 10 seconds to close the inspection or plug in the USB again to close it.

External SD card item

Send the display screen connection file in the complex screen adjustment interface of the upper computer screen configuration interface, then click on the patrol data next to it to save the data, and then save the file to the SD card (the file suffix must be:. bin). For external SD card patrol, you can choose the patrol type: receive card, send card, all; You can choose the number of inspections, only the receiving card can conduct unlimited inspections, and sending cards can only be selected once; Cure after inspection. Attention: After the unlimited inspection of the receiving card is enabled, the USB needs to be unplugged. After unplugging the USB, the menu cannot be operated. To restore, press and hold the button for 10 seconds to close the inspection or plug in the USB again.

Pattern

Switch the test image output and select the corresponding test image output.



Audio In

Select the input signal source for outputting audio, which can be a window signal or an

external headphone jack input.



Timing switch

Time Scene: Up to 5 timed scenes can be set.

Status: Turns on or off the selected timed switching period.

Scene: Select the scene preset for timed switching calls.

Time: The time range for timed switching.

Mode: The selected timed switching period is executed once or repeatedly.

2023-10-27 10:37	SWITCH
Scone	TIME 1
Status	OFF
Scene	SCENE 1
Time	09:00-10:00
Mode	Once

SD card backup

Backup the video processor settings parameters to the SD card, or restore the settings

SD CARD ave file to sdcar ad file form sdc.

parameters from the SD card to the video processor

System

The system settings include version information, Day&Time, language, keylock, LCD Driver and factory settings.

J-OGY

Language: Supports both Chinese and English, with the default language being 'Chinese'.

Key lock: Lock the front panel button function, default to the "off" state, select the "on" state, and then press the OK button to confirm. After 3 minutes of opening, there will be no operation to automatically lock.

Unlock method: Press the OK button and there will be a prompt. Press any button again to unlock.

to uniock.

Factory settings: After selection, press the OK key to restore the device to its default factory settings.

2023-10-27 10:38	SYSTEM
Version	
Day & Time	
Language	ENGLISH
Key Lock	OFF
LCD Drive	Drive 2
Factory Settings	

Version information

View video processor FPGA and MCU software version information

2023-10-	27 10:38	VERSION
	FPGA1	99.08.01.18
	FPGA2	00.01.01.42
	MCU	05.40
		a sta

Time

Set the local clock and date of the video processor. The video processor motherboard has a built-in button battery or supercapacitor, which can keep the clock running normally after power failure. If the device is not powered on for a long time before use, it is necessary to reset the time and clock. The timing of the switch is based on this, and restoring the factory settings will not change the time setting parameters.

Rotate the knob to select the value that needs to be adjusted. Press "OK" to select it and

it will turn green. Rotate the knob to adjust and press "OK" to save.



LedSet4.0 Software Operation

Enter the software setup interface

Open LedSet4.0 software, click "Sender" to enter the send card parameter setting interface. The device list shows the sender model recognized by the software: S80.take S80 for example

LedSet4.0 $\mathbf{\nabla}$ 设备列表: (1/1) Parameter configuration General configuration Image Stitching Video output Input signal HUB Video output OUT Type Region 1 0 , 0)-1 7660 , 1060) 7660 X 1060 Image Clipping Modify Net Port Master/B, Multi-wine Region P1 0)-(384 , 1080) 384 X 1080 Nain × 0. Modify 12 Nain ź 884 768 . 1080 3 384 X 1080 Modify Modify P3 Nain 1 768 ×. 0)-1 1152 . 1080 (384 8 1080 P4 Nain × 1 1152 . 0 1-1 1536 . 1080 1 384 x 1080 Modify P5 Nain 1 1536 . 0)-(1920 , 1080) 384 X 1083 Modify Nain PS × 1 1920 . 0)-(2504 , 1080) 384 × 1080 Modify Nain × 1 2304 0)-(2688 , 1080) 384 % 1080 Modify Nein × 1 2688 0)-(3072 . 1080) 384 X 1080 Modify Nain 1 3072 0)-(3456 , 1080) 384 % 1080 Modify × 1 9456 0)-1 3840 . 1080) 384 × 1080 Nain Modity -O- Device connected Ver:3.69

Video output

Click "video Output" in the parameter configuration. The software will display the size of the image clipping and the position of each net port. By clicking Modify, you can set the horizontal and vertical offsets, width and height of the image clipping; horizontal and vertical image offset positions can be set for each net port.

General Configuration

Click General Configuration in the Parameter Configuration. You can edit the settings for

LedSet4.0 ٢ ~ \square Display Sender M-Care Calibration 设备列表: (1 / 1) Parameter configuration Video output General configuration Input signal Image Stitching HUB Name Edit TECHNOL OF Audio Enable audio Color Depth 💿 8bit 🛛 10bit O-O- Device connected Ver:3.69.92 **Input signal**

the processor name, if audio and color depth are enabled or not.

Click "Input Signal" in the parameter configuration to open the input signal source setting interface. Click "Modify Resolution" to set the EDID information of the corresponding input interface; choose 4K input signal source, either HDMI2.0 or DP1.2.

lay Sender Receiver Calibratio 列表: (1 / 1) Para	m M-Card Tool Info meter configurati	on		
vice ID: 287930594D31	Video output Genera	l configuration Input signal	Image Stitching	HUB
del: S80 Signal	source			
rds: [0]				
Group	у Туре	State		
1	DVI1 (DVI2K)	Disconnected		Edit resolution
2	DVI2 (DVI2K)	Disconnected		Edit resolution
3	HDNI1 (HDNI1, 4)	Disconnected		Edit resolution
4	HDN12 (HDN11.4)	Disconnected		Edit resolution
5	HDM13 (HDM12.0) DP1 (DP1.2)	Disconnected	1	Edit-resolution
6	SDI1 (36_SDI)	Disconnected	1	
			31-00 1-00	

Image stitching

Scene Activation

By clicking on " Image stitching " in the parameter configuration, 10 different scene modes can be set and saved in the scene. Click "Scene Activation and as default" to display the scene mode in the output, and the scene number is marked with (√). Click "Edit" to enter the scene setting interface.

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	Parameter con	figuration			11002
vice ID: 287930594D31 odel: \$80 rote: [0]	Video output Splicing mode Scene I 调试时向动创建场展	General configuration	Input signal	Image Stitching 窗口也朦朧式: ④ Clippi	HUB
	Scene No				
	1	Edit		Load as default	<u>^</u>
	2	Edit		Load as default	
	3	Edit		Load as default	
	4	Edit	1	Load as default	
	5	Edit	1	Load as default	
	6	Edit		Load as defoul	:
	7	Edit		Load as default	
	8	Edit		Load at default	
	Canvas				

Scene Editing

In the scene editing interface, you can set pane open, pane deletion, size and position modification of each pane, pane stacking order, pane input signal source switching, pane

signal wi	ill be associated as input	when Refresh	zoo	m in zoom out	New	Full screen	Тор	Bottom	Up	Down	Remove	Remove all Switch signal	Reread	Reloa
the wind	low is created)				-	л <u>л</u>							-	
Index	Signal	State	dowl											
1	1-1 - DVI1 (DVI2K)	Disconnected												
2	2-1 - DVI2 (DVI2K)	Disconnected												
3	3-1 - HDNI1 (HDNI1.4)	Disconnected												
4	4-1 - HDN12 (HDN11.4)	Disconnected												
5	5-1 - HDNI3 (HDNI2.0)	Disconnected												
6	6-1 - SDI1 (36_SDI)	Disconnected												
× 0	V 0 Wid	t 0 Heig 0												
Edit the r	window offset and size													
× 0	Y 0 Wid	t 512 Heig 256												
	Window list	Display												
Index	Signal	Window												
1	1-1 - DVI1 (DVI2K)	-32, 283, 1920, 1080	-											
		0 0 512 256												
2	1-1 - DVIT (DVI2K)	0, 0, 0 10, 000												

input signal image capture.