



CK4L-1000

**Mini Full Color LED video
processor**

User Manual

V1.1

Attention: Please read this manual carefully before using your product.

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1、SAFETY NOTICE



Dangerous

There's high voltage in processor. To avoid danger, please do not open the rear cap without authorization.



Warning

1. Do not allow liquid, small particles or other objects to get into the device;
2. Do not place the system near fire and water;
3. Do not block any vents. To Keep good ventilation, please place the system at least 20 cm away from a wall surface;
4. If any noise、 smoke、 smell, please cut off the power at once and contact your local suppliers;
5. Do not connect or disconnect DVI signal cable when the power is on.



Attentions

1. Read the manual carefully before using the system, and keep it for use later;
2. Check the packing list to confirm if there is any missing.If there is, please contact the local supplier.
3. Cut off the power if thunder or long term sleeping;
4. You should be well trained before operating the system;
5. Do not slip anything from vent to prevent broken or electric shock;
6. Do not place the device near liquid or moisture;
7. Do not put the device near cooling fin or high temperature environment;
8. Keep the power cable properly;
9. If the following situations happen, please cut off the power and for maintenance
 - 1) Liquid splash to device;
 - 2) Device fall down or the cabinet is broken;
 - 3) Any abnormality or malfunction in the system

2、FUNCTION OVERVIEW

CK4L-1000 Mini Full Color LED video processor is the latest and most effective signal format converter. The device integrates our Company for many years on video image processing, high-definition signal processing and displaying. It allows users to convert HDMI, VGA and CVBS signals to DVI/VGA format, to select the input source and output resolution. It can also realize automatic adjustment and ADC correction functions.

It is ideal for applications demanding critical quality graphics and seamless switching, including live TV & Broadcasting center, stage entertainment, conference presentation, government, demonstration hall etc.

Key features:

1. It can convert the AV/ VGA/ HDMI/YPbPr format signal to DVI/VGA.
2. Support four sources input :AV, VGA, HDMI, YPbPr
3. Support two independent outputs :DVI and VGA
4. Support two control modes: front panel and RS232
5. Support HD signal output (up to 2048 * 1080)
6. Compact Construction, easy to install and operate , no need to install the software
7. Hardware-based structure, no trouble of virus' risk and model's crash
8. Support up to 15 kinds of output resolution.
9. Via front panel to select input source & output resolution and do automatic adjustment& ADC correction.
10. External 5V power supply

3、HARDWARE STRUCTURE

3.1 Product elevation

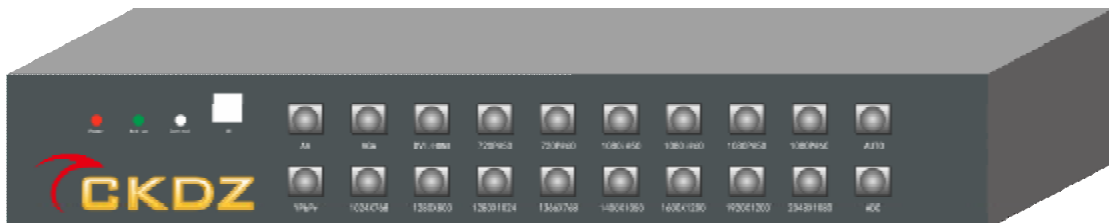


Figure 3.1 CK4L-1000 Mini Full Color LED video processor

3.2 Front panel diagram



Figure 3.2 CK4L-1000 Mini Full Color LED video processor Front panel diagram

1. Status indicator and infrared Radiation;

POWER: Light keeps on once power is on;

ACTIVE: Working indicator light, it stays flashing when works properly.

CONTROL: Light blinks when send command;

IR: IR remote control receiver;

2. Front panel: For the switching of input signal and output signal resolution, AUTO & ADC correction

3.3 Rear panel diagram



Figure 3.2 CK4L-1000 Mini Full Color LED video processor Rear panel diagram

1. The power switch
2. Power connector and power indicator light: Connect with 5V power supply; light keeps on once power is on.
3. RS232 IN: Serial communication input connector
4. VGA/DVI OUT: 1 VGA and 1 DVI output connector
5. HDMI/VGA/CVBS/YPbPr IN: 1 HDMI, 1 VGA, 1 YPbPr and 1 CVBS input connector
6. GND connector;
7. Reserved the position for a Sending-Card to built-in

4、INSTRUCTION OF SOFTWARE OPERATION

4.1 How to install the control software

CK4L-1000 Mini Full Color LED video processor adopts user-friendly design. Its control software requires no installation and the volume is small. The root folder includes following files, you can copy it to any place of the control computer and then double-click it to execute file program. It saves tedious software installation steps and time. Even computer entry-level users can operate it quickly and easily.



Figure 4.1 Software file

Program operating environment: CPU: more than P4;

Memory: more than 512M;

Hard disk: more than 40G;

Attention: the above three files are all necessary to guarantee the control software operation, and they all need to be in the same file .please do not alter the file, Otherwise it will cause software abnormal use.

4.2 How to start up the control software

4.2.1 Run the program

Double click the application program; it will be followed with the following operation interface:



Figure 4.2 Control software interface

4.2.2 Communication connection

As the picture above shows ,select serial port number and baud rate , then click the

【Connect】 button.(Note: Maybe the port number is not the same as below because of different computers)

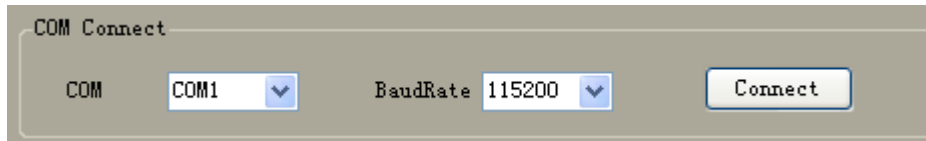


Figure4.3 Serial port and connection.

If the serial port is already occupied or the connection in abnormal condition, it would pop-up prompt message as shown in the picture below:



Figure 4.4 Prompt of abnormal connection

If the serial port is connected correctly, the connection button 【 connect 】 turns into 【disconnect 】.When the user re-click the button【disconnect 】 , the connection between software and machine will be interrupted.

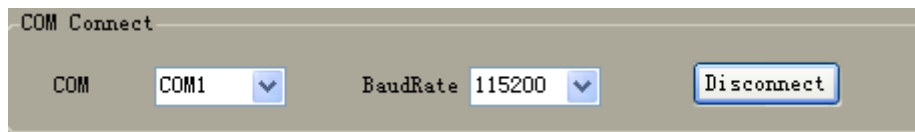


Figure 4.5 Normal connection

4.3 How to operate the software

4.3.1 Settings of output resolution

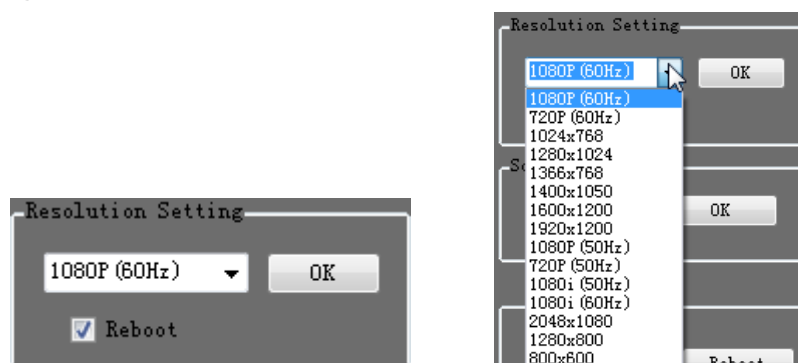


Figure 4.6 Output resolution selections

【Resolution settings】 :Select 1 kind of resolution in the dialog box , then press 【OK】 to take into effect. If the user select 【1024×768_60】 , the output resolution is 1024 * 768, field frequency is 60 Hz. There are 15 kinds of output resolution in total, users can choose according to actual application.

4.3.2 Switching of input signal source

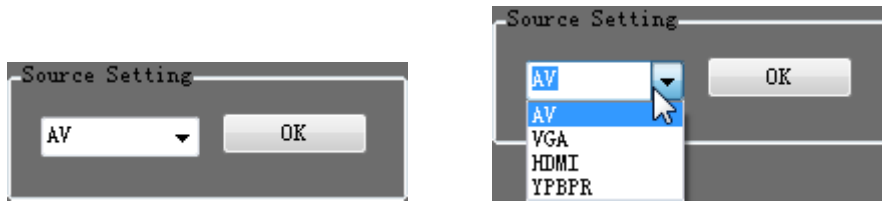


Figure 4.7 Selection of input signal source

【Source Settings】 : Select one signal source in the dialog box , and then press the button **【ok】** to take into effect. There are 4 kinds of input signal in total: AV, VGA, HDMI and YPbPr.

4.3.3 Settings of window size



Figure 4.8 Settings of window size

CK4L-1000 Mini Full Color LED video processor defines output image's upper-left as the initial coordinates (0, 0).The users can input different value in **【Start_H】** , **【Start_V】** , **【End-H】** and **【End-V】** , then click the button **【Send】** to obtain the needed window size and window position.

4.3.4 Settings of window content

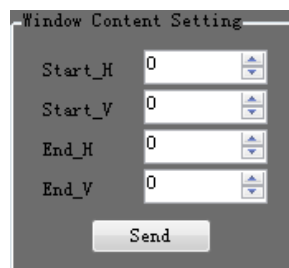


Figure 4.9 Settings of window content

The users can input different value in **【Start_H】** , **【Start_V】** , **【End-H】** and **【End-V】** , then click the button **【Send】** to obtain the needed window size and window content.

4.3.5 Mode saves and recall

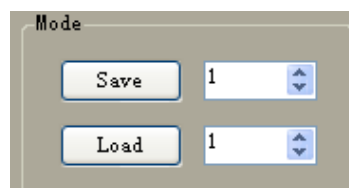


Figure4.10 Mode saves and recall

The system provides powerful and quick scene preset function. The users can save different application's window scene and recall. The users save and recall different modes by the button **【Save】** and **【Load】**. There are 32 kinds of modes in total.

4.3.6 Settings of system properties

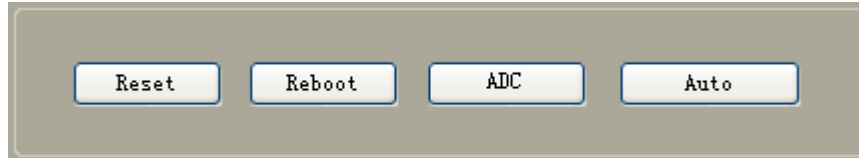


Figure 4.11 Settings of system properties

【Reset】 :Set the machine parameters to factory defaults.

【Reboot】 :Reboot the machine in current parameter,

【ADC】 : This function is professional and only can be operated in gray scale scene.

【Auto】 :Click this button to adjust window contents automatically.

5 、 TECHNICAL SPECIFICATION AND DESCRIPTION OF REMOTE CONTROL

5.1 Technical specification

Product model	CK4L-1000 Mini Full Color LED video processor		
Output signal	DVI/VGA	Connector	DVI-I, female, 24+5; D-sub, female, 15pin
		Resolution	1024*768@60hz~2048*1080@60hz
		Color depth	32 bits
		Sync	HV Sync
Input signal	VGA	Connector	D-sub, female, 15pin
		Resolution	640*480@60hz~1920*1200@60hz
		Color depth	32bits
		Sync	HV Sync
	CVBS	Connector	BNC
		Resolution	PAL/NTSC automatic identification
		Input impedance	75Ω
	HDMI	Connector	HDMI A type
		Protocol	HDMI 1.3, Support HDCP
		Resolution	1024*768@60hz~1920*1200@60hz
	YPbPr	Connector	3×BNC
		Resolution	720×480i@60Hz~1920×1080p@50Hz/60Hz
Impedance		Y= -0.3V ~ +0.7V (p_p) / 75 Ω	
		Pb= -0.35V ~ +0.35V (p_p) / 75 Ω	
	Pr= -0.35V ~ +0.35V (p_p) / 75 Ω		

Control connector	RS232	D-SUB, female, 9pin
Control software	WYSIWYG(What You See Is What You Get)	
Power supply	100-240V~, 60/50Hz, 0.5A	
Working condition	Temperature	-20℃ ~60 ℃
	Humidity	5-95%
Case cabinet	280mm(L)×220mm(W)×44mm(H)	
Weight	1.65KG	
Certification	3C	

Table 5.1 CK4L-1000 Mini Full Color LED video processor technical specification

5.2 Description of remote control



Figure 5.1 Remote control

Save: SAVE + MODE n + ENTER (SXGA+MODE Number button +VGA)

Recall: LOAD+ MODE n (XGA+MODE Number button)

Cancel: ESC(The red Power ON/OFF key)

source: Enter(VGA)

6、 FREQUENTLY ASKED QUESTIONS

1、 Cannot startup the machine (Power indicator does not light)

- 1) To confirm whether the power cord has damaged.
- 2) To confirm whether the power has connected to AC.
- 3) To confirm the power is on.
- 4) To confirm whether the power switch is damaged.

2、 Cannot run the control software

1. Confirm whether the COM port is correct, check every computer's corresponding COM port by management - device manager - port.
2. Confirm whether the serial cable is linked.
3. Confirm the selected baud rate is correct.

3、 No image

Possible reasons:

1. No video source input;
2. Signal switching is not correct, such an example: input video source is VGA, but the output channels is switched to AV input;
3. VGA input port and VGA output port reversed;
4. The display device do not adjust input channel. Need to adjust the mode to VGA or DVI
5. Output image is black background;
6. Output VGA or DVI cable is damaged

Solutions:

1. To check whether the input signal source is normal; (To detect by connecting the input signal source to the display device directly)
2. To confirm whether AV/VGA/HDMI channel input are normal; using control software or front panel buttons to detect channel switching;
3. To confirm the output of the processor connected to the display device properly, and the input signal is connected properly.
4. Adjust the display state of display device. Please refer to the user manual of the display devices for specific operation.
5. To adjust the content of output signal, suggest using the dynamic picture, do not use the monochrome screen output the content of the output signal, and suggest adopts dynamic picture for output rather than monochrome picture;
6. Use good quality VGA or DVI cable to ensure the stability and high quality images.

4、 The picture partial color phenomenon**Possible reasons:**

1. VGA or DVI port not connected well, bad contacts;
2. VGA or DVI cable has been damaged
3. Color adjustment is not correct;
4. Using the software toning excessively;

Solutions:

1. After VGA or DVI line is connected, please tighten the retaining bolt, to prevent losing because of pulling.
2. Please change higher quality VGA or DVI cable
3. If the input signal is VGA, to do ADC correction for the inputs. (For general users, the operation is not suggested)

Attentions:

1 The above listed is the common failure in after-sales maintenance. If you find the device failure phenomena are not in above range. Please notify the suppliers to solve as soon as possible. Please do not open the case without authorization, so as not to expand the fault or cause unnecessary safety accidents.

2 Our company reiterates: without the permission, you who take device apart will bear all the responsibilities that it may bring.