

The ST8 Sending box

Colorlight synchronous Sending box - ST8, is a professional Sending box for LED synchronized display, with the function of adapting resolution automatically. One ST8 Sending box can control the LED display with 2.6 million pixel (maximum columns is 3840 points, maximum lines is 1920 points), if over the maximum, the Sending boxs can be cascaded, and used with DVI or HDMI graphics card. This article focuses on the steps of setting Sending boxs.

$I \mathrel{\scriptstyle\diagdown}$ Connection Diagrams of Sending boxs



topological connection diagrams of Sending box

${\rm II}$ 、 Hardware structure





Sending box port defined

1. Power supply

- 100-240V (50Hz-60Hz) AC
- The red indicator light means the power supply correctly
- 2.Connection
 - Connect ST8 Sending box with graphics card, by a DVI cable, for transmitting image data

Connect ST8 Sending box' serial port with the computer's serial port, by a USB serial cable, for setting program to the Sending box.

- (Note: for the first time, need to install the serial driver. After install the Colorlight LED control system software: LEDShowT9 or LEDVISION, the "PL-2303 Driver Installer.exe" can be found in installation directory and install this file)
- Connect ST8 Sending box with receive card, by a network cable, for controlling the receive card and the screen

(Note: the connecting cables between Sending boxs and receive card, and the cables among receive cards are UTP cable or category six cable, the network cable plug comply with the line order of 568B international standard)

3.Button

- The front two buttons for brightness adjustment, the adjustment range is 0-16. Digital display shows the current brightness level
- Through the buttons adjust the brightness, the brightness values within the control system software will change accordingly.

	e LEDVISION 1.73	
	File(E) Control(C) Tools(T) Language(L) Setting(S) Test(D) Help(H)	
	Brightness Adjustment	
	Manual Brightness Adjustment	
(stem
	Enable Color Tempture 6000 Save	alt all and
	Detect no function card , The auto operation is invalid.	
	Permit auto adjust the Tune Curve Edit Current Set State	
	Brightness Exec 1 2 3 4 5 6 7 8	
	Send to Function Card	



III_{\sim} Graphics card settings

1.Graphics card model

Currently, there are two mainstream graphics cards series on the market:

NVIDIA's MX Series (model 400, 440, 5200 etc.

ATI's RADEON Series (Model 4670, 5550, 7000,7500,8500,9000 etc.)

Install the corresponding graphics card driver correctly.

2.ATI graphics card settings

1)First, we open the graphics card setting interface: Right-click the space on desktop, select [ATI Control Panel] in the menu, just as the following image shows

🚾 Catalyst(TM) Control Center	
Arrange Icons By Refresh	۲
Paste Paste Shortcut	
New	۲
Properties	

If there is no [ATI control panel] in the menu, we can also click on [Properties], as the following image

Catalyst(TM) Control Center
Arrange Icons By Refresh
Paste Paste Shortcut
New
Properties 1

In the [Display Properties] dialog box, click the [Setting], select the appropriate display resolution, and then click [Advanced] button, as shown below:

Colorlight	Quality Moving Color
Display Properties	? 🔀
Themes Desktop Screen Saver Appearanc	e Settings 2
Drag the monitor icons to match the physical arr	angement of your monitors.
Display: 1. (Multiple Monitors) on ATI Mobility Radeon H	2 ID 4300 Series
Screen resolution	uality
Highe	st (32 bit) 5. bmp 类型:1
1024 by 768 pixels 3	大小: 4
 Use this device as the primary monitor. Extend my Windows desktop onto this monit 	or.
Identify Trouble	shoot
	Cancel Apply

Then, click the [ATI ...] in the interface, as following shown

Colorlig	ht			Qua	lity Mo	ving Color
	(Multiple Monit	ors) and ATI M	obility Radeon	HD 4300 [?×	
	General Color Mana	Adapter gement	Monitor Catalyst(TM	Troubleshoo 1) Control Center	ot ≯5	
	ATI C Cont	Catalys rol Cer	t™ nter			
	The ATI Cat and settings ATI Cataly To open th ATI	alyst Control Cente for all your ATI GF st Control Center – ne ATI Catalyst Co Catalyst Control C	r is used to configur Us. ntrol Center, click or enter	e displays n this button:		
			OK Can	cel App	aly	

In the interface, click the [ATI Catalyst Control Center] as following image shows, also can open the graphics card settings interface

Colorligh	t Quality Mo	oving Color
(Multiple Monitors) and ATI Mobility Radeon HD 4300 ? 🔀	
ļ	General Adapter Monitor Troubleshoot Color Management An Catalyst(TM) Control Center	
	ATI Catalyst TM Control Center The ATI Catalyst Control Center is used to configure displays and settings for all your ATI GPUs. ATI Catalyst Control Center To open the ATI Catalyst Control Center, click on this button:	
	OK Cancel Apply	

In the ATI control panel, select [Monitors Manager], as following image shows, then right-click simulate monitor 2, click [Enable], select [Copy Mode], and click [Application], [OK].



The interface as shown in below image appears, click [OK] to finish the ATI graphics card setting.



3. (NVIDIA graphics card settings)

1)First, open the graphics card setting interface, and its operation is similar to opening ATI setting interface

2) In the [NVIDIA Control Panel], select [set up multiple monitors, and then select [Copy Mode], click [Application] button.





$I\!V$ 、 Set Sending box's parameters

1. Control interface

Open Colorlight control system software, click [Control screen] -[Management screen], select the [Send card send], passwords, [168], just as the following image of [Management screen] interface

reen Manage	ement							
Send Mode	By Net Card		() E	By Send Card				
Send Card Set	Auto CON	M selectio	n			Net Port	Area	Setting
Serial Port	СОМЗ	▼ Q7 1.00		Net Po	rt Area Setting			High Setting
Serial Port	Detect send ca	rd Detect	Receive	e Cards	X Y	Width	Height	righ Socialgini
	Detect Reci	eve Card		Port1	0 0	512	512	Sand
Port4:Detect	t 1 receive cards	i.		Port2	0 512	2 512	208	Denu
Port4:Detect	t the 1 card is 5	5A 9.36 card u	d = 64 2	Port 3	0 0	128	128	
Port3:Detect	t 0 receive cards	i.	×	Port 4	0 0	128	128	
Control Area - Screen Count X 0	1 v Y 0	Width	512 He	eight 256	Apply		Co	onfig Selected One
No.	X Y	Width	Height			Parameters F	File Path	
LED1	0 0	512	256	C:\)	Documents an	d Settings\Adr	ninistrator	/【桌面\1222.rcvp

2. Serial ports choice

Connect ST8 Sending box' serial port with the computer' s serial port, by a USB serial cable, for setting the program to the Sending box. When the serial ports communicates well, the status of serial port, in the software' s management interface, will be just as below image shown [found to send cards, can set parameters] (Note: For the first time, need to install the serial driver. After install the Colorlight LED control system software: LEDShowT9 or LEDVISION, the "PL-2303 Driver Installer.exe" can be found in installation directory and install this file.)



Quality Moving Color

end Mode —								
C	By Net Card		By Send Card					
nd Card Set Serial Port	COM3 -	1.0	Net Por	't Area S Custom	etting 🗸]		High Setting
ierial Port	COM1 COM2			x	Y	Width	Height	
	COM3 COM4	e Card	Port1	0	0	512	512	
	COM5 COM6		Port2	0	512	512	208	Jenu
	COM7 COM8		Port 3	0	0	0	0	
	COM9 COM10 COM11		Port 4	0	0	0	0	
	COM12 COM13							

3. Sending box resolution setting

Click [High Setting]

	Custom	-	· · · · · ·	High S	etting
	х	γ	Width	Height	
Port1	0	0	512	512	
Port2	0	512	512	208	Send
Port 3	0	0	0	0	

Click [Set Reslution As Current Monitor], also can select the same resolution to current monitor, in the drop-down menu of [send card resolution] and click [set], just as following image shows.

High Setting		<u>x</u>
Output Frame Rate	Auto Bright Tune	Send
Sending Card Reslutio	n	
12	280×768 💌 🚺	Set
Se	et Reslution As Current M	1onitor (1366×768)
DUIT To Course abies		
Frame Rate	79.33hz	(30~120)
Line Span	3752ns	(>1000ns)
Clock	108.475Mhz	(25M~225M)

After click [set] or [Set Reslution As Current Monitor], it will appear the progressing interface, as show below.

After the transmission, the software will prompt [send successfully,

please power off the Sending box, and restart! [Note: After restart the Sending box, need to do the steps of graphics card setting again, in Chapter III of this article]



4. Detecting receive card

For testing whether the receive card communicate well (or observe whether the green lamp on receive card flash quickly). If detect no receive card, or the quantity of detected receive cards does not match with the actual receive cards, please check whether the receive cards has been powered well, or whether the network cable is in good connection. The correct operation as shown in below image

19	iend Card Set		
	Serial Port	COM3 Q7 1.00	•
	Serial Port	Detect send card	
7		Detect Recieve Card	
1	Port4:Detect Port4:Detect	t 1 receive cards. t the 1 card is SA 9.36 card uid = 64	
	Port3:Detect	t O receive cards.	
	< III.		

1. network interface control area setting

According to the size of LED display, choose network interface control area, just as the image (a), then click [Send], send to the card. If the screen is a little larger, need to use dual network interface, also can use the custom mode, such as display (1344 * 672), set the network interface, just as image (b), then [Send], send to the card.

	Custom	-		Hig	h Setting
	1024 × 768 1280 × 720		Width	Height	
Port1	1280 × 1024		512	512	
Port2	1920 × 640 1920 × 1080		512	208	Send
Port 3	Custom		0	0	
Port 4	0 0		0	0	

network interface control area setting Above are all the steps for setting ST8 Sending box