



# S2 Sending Card



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## 1. Introduction



S2 sending card is a new generation of sending card, and its performance has improved significantly with the product chipset upgrades comprehensively.

S2 equips dual USB2.0 as the communication interface to achieve high-speed communication between the PC and sending card, also are convenient and reliable for multiple cards cascading. S2 possesses PCI-E 1X interface, which is more versatile.



## **2. Interface Description**

No	Interface	Function	Remarks		
1	Output Port A	RJ45, to transmit network signals	The control area		
2	Output Port B	RJ45, to transmit network signals	<ul> <li>of the two</li> <li>outputs can be</li> <li>separately set</li> </ul>		
3	Audio Input	Input audio signal and transmit to the screen via Ethernet cable	In conjunction with multifunction card		
4	USB TYPE-A	USB output			
5	USB TYPE-B	USB input			
6	DVI Input	DVI output interface, connect to the graphics card			
7	PCI-E 1X	Match with computer 1X PCI-E slot for sending card power on			
8	Power Supply	Connect to DC3.8V-12V			





## 3. Hardware Connection



#### 1) Power Supply (PCI):

Match with computer PCI slot, or DC 3.8-12V for power supply.

#### 2) Video Signal Input (DVI):

Connect PC with S2 via proper DVI/HDMI cable via DVI interface.

#### 3) Screen Configuration (USB):

Use a standard USB A/B cable to connect S2 with PC for S2 configuration.

#### 4) Ethernet Cable (RJ45):

Connect S2 sending card with the receiving card via Ethernet cable for controlling receiving card and the screen (Note: The Ethernet cable must be CAT5E or CAT6).



## 4. LEDVISION Installation and Preliminary Configuration

#### **4.1 Computer Configurations**

- CPU Frequency>= 2.0GHZ
- Host Memory>=1G
- Graphic card with DVI/HDMI interface: Memory ≥512MB
- The resolution of PC's graphic card should be equal to or larger than the actual LED display's.

Computer configuration can be adjusted according to the actual situation. Adjustment mainly aims at total pixels of LED display, the complexity of playing contents and whether playing HD video or not.



#### 4.2 USB Driver Installation

First download the installation package of LEDVISION software from Colorlight's official website <u>www.colorlightinside.com</u>, and complete the installation according to the diagrams shown below.

**1**. Run the software package, and select **[English]** for installer language. Click **[OK]** to move on.



**Note:** Run LEDVISION version 4.18 or higher while using S2.



2. After selecting a language, an installation wizard like below will appear. Click [ Next ];

Then choose installation location, click [ Browse ] to change default target location, then click [ Next ] after completing.

Choose components according to your own computer status, click [ Install ] to complete.

LEDVISION Setup – 🗆 🗙	🗧 LEDVISION Setup – 🗆 🗮
Choose Install Location Choose the folder in which to install LEDVISION .	Choose Components Choose which features of LEDVISION you want to install.
Setup will install LEDVISION in the following folder. To install in a different folder, click Browse and select another folder. Click Next to continue.	Check the components you want to install and uncheck the components you don't want to install. Click Install to start the installation.
Destination Folder	Select components to install: Common Files Dependens Files USB-to_Serial Driver Winpcap Usb Driver For Sending Ca
Space required: 100.8MB Space available: 239.9GB	Space required: 100.8MB
< Back Next > Cancel	< Back Install Cancel

After the installation is complete you are ready to use LEDVISION.



#### 4.3 Graphic Card Settings

Set up the working mode of the computer graphic card after completing hardware connection and powering S2 on, you can select **Duplicate** mode or **Extend** mode according to the different requirements.

• **Duplicate Mode:** That the contents displayed on LED screen are consistent with computer, that is to say, copy the computer contents onto LED screen, as pic below.



PC Screen

LED Screen



• Extend Mode: That the contents displayed on LED screen are inconsistent with computer's, that is, to extend a display image from the right side of PC screen, which was consistent with LED display's, we also call it "background playing", as pic below.





For different computers, there are different ways to change the mode. Take **WIN 7/8** system + **NVIDIA** graphics cards as an example, please read the following settings ways.

• Method 1: Hold down the WIN and P keys at the same time, and select the mode as you want in the pop-up

window.



• Method 2: Right-click and select "Screen resolution" to enter the page of "modify the display appearance"; if your graphics card is not NVIDIA and cannot find the setting interface please refer to the description of the graphics card.

	View	*
	Sort by	
	Refresh	
	Paste	
	Paste shortcut	
	cmd	
	New	•
	Screen resolution	>
1	Gadgets	
2	Personalize	



Change the appearance of your displays	
Detect Identify	
Display: 1. Mobile PC Display   Resolution: 1366 × 768 (recommended)	
Orientation: Landscape	
Duplicate these displays This is currently you Extend these displays Show desktop only on 1	
Make text and other items larger or smaller What display settings should I choose?	

**Note:** As for other kinds of graphic cards, if there is no corresponding window, please refer to the user manual of the graphic card.



## **5.** Parameter Configuration

First of all, please make sure the software under i Series

Mode before setting.

Click the **"Setting"** > **"Software Setting"** to enter the Software Management window, change the mode by inputting password: **168**.

Mode Settings	Mode Settings	Classic Mode			
Play Settings					
Startup Settings	Play Settings	Play Mode	Normal Play Mode	*	
LED Play Screen		Default Decode	Self Decoding First	•	
Timer Settings		Copy The	Program Into		]
Network Settings		Record Play Lo	og e Smooth Processino(Hi	oh Graphics Requirement	s)
Shortcut Settings					
Other Settings	Startup Settings	Run When Sy	stem Starts		
		Play When So	ftware Starts		
		Minimize After	Start		
		Wait for 30 se	conds if system start u	p less than 2 minutes	
		Permit Multi-In	istance		
		Note: Allow	ed to run one instance r	sach directory!	





#### **5.1 Confirmation on Hardware Connection**

Please make sure the correctness of the hardware connection before setting, use LEDVISION to detect sender and all

receiving cards.

#### 5.1.1 Detect Sender and receiving card

Run LEDVISION, click the "Control" > "Screen Control" to enter the Screen Control window.





Select [ Sender Card ] for sending device, Click [ Detect Sender Cards ] in Sender Card Settings. Please check the hardware connection or the installation of relevant driver if cannot detect sender cards.

Select network port and click "**Detect Receiver Cards**" respectively, the software will automatically acquire the Receiver (Receiving card) quantity for each network port of the sender card. Please check corresponding cable if the numbers of receiving card are inconsistent with actual status.

elect Sending Device			
Net Card	Sender Card	C-Series Play Box	LED Screen Settings
ender Card Settings			
Detect Sender Cards No	Sender Card Detected	Detect	Receiver Cards Port 1
16			



#### 5.2 LED Screen Setting

Click "LED Screen Settings" and input password [ 168 ] to enter the LED Screen Setting interface, and set up "Sending

device", "Screen parameters", "Connection parameters".





#### **5.2.1 Sending Device Setting**

Configure on the relevant parameters of the sender card.

g Device Screen Param	eters Connection	Parameters(L	ook From Front)						
Select Sending Device									
O Net Card	Sender Car	d C	C-Series Play B	DX	Detect Receive	r Cards	All 1	2 3	4
Toatal: 0 No Se	nder Card Detecte	ł	Detect		Port Index	Index	Version	Run Time	Support Chips
nput Signal Information					-				
Type No Sig	inal	Frame Rate	[						
Width		Height							
ender Card Resolution(EE	DID)								
Resolution 800	x 600 🗸		Set						
udvanced					· · · · · ·				
Zero Frame Delay		мти	Standard	~					
Loop Backup	1	Frame Output	Every Frame	~					
Enable HDCP	Ir	put Bit Depth	8 bit	¥					
Auto Switch (DVI, HDM	1)	Input Type	HDMI	v					
Better Graylevel On Lo	w Brightness	Sync Method	Auto	~					
			Send						
Test Mode Off		¥	Write Logo						
Work Mode Normal	Mode	~	3D Setting						
The state									

**Sender Card Resolution:** Generally, sender card resolution must be consistent with the graphic card's.



**Input Signal Information:** Display the sender info that auto acquired via the software, which only provided for reference, and did not support personally set up.

Advanced: Prepare for professionals for special applications settings, no operation allowed for non-professionals.

#### Advanced settings include the parameters listed below:

Zero Frame Delay: Default uncheck, and should be enabled by technician under special status.

**Auto Switch DVI/HDMI:** The sender only identifies the video signal that has been set up when unchecked; Auto identify the signal that has been connected first when checked.

Brightness adjustment via multi-function card: Auto adjusts screen brightness via the sensor of multi-function card when checked.

Maximum Transmission Unit (MTU): Default "Standard", and consult with the technician if you need to apply to "Long Frame".

Frame Output: Default "Every Frame", and consult with the technician if you need to apply to "Every Other Frame".

Input Bit Depth: Default "8bit".

**Input Type:** DVI/HDMI, according to the actual using status.

Sync Method: Default "Auto"

Write logo: Custom, display before video signal input. The image formats should be bmp, jpg or png.

**3D Setting**: Works only for the function setting of 3D sender, did not apply for S2.



#### 5.2.2 Screen Parameters

Observe the display screen with single cabinet as unit, if all cabinets display normally (it is normal circumstance even the picture between cabinets is not continuous), please ignore this step and directly go to the next step.

#### Otherwise, enter the following configuration:

Click [ Load ], choose the correct parameter file.

Click **[ Send ]**, to send the loading parameter to the receiving card. Each cabinet should display normally (it is normal circumstance even the picture between cabinets is not continuous), then click **[ Save To Receiver ]** to save the parameters to the receiver card.

If each cabinet cannot display normally, then contact with the LED screen engineers.

•						LED	Screen S	Setting LED1				- 🗆 🗙
Sending Device	Screen	Parameters Co	nnectio	on Parame	eters(Look Fr	om Front)						
Module Infor	mation	_										
Ch	nip Type	Normal Chip			Width	64		Inverted Data	No	Reverse		
Sca	an Mode	16 scan			Height	16		OE Active High	No	Reverse		
Box Setting												
	Width	64		<=146	Cascade	Left To Right	*	Data Group	Normal 20 g	roups v		
	Height	64		<=512	Fold Count	No Split	~		Data G	roup Swap		
Performance	Setting											
Refre	sh Rate	1920	~		Multiple	Refresh x 16	~	Calibration Mode	Disable	¥	Blanking Phase	
Gra	ay Level	8192	~		Gray Mode	Balanced Low Gray	y ~	Calibration	From Receiv	ver Cards 🗸 🗸	SCK Duty Ratio	
Seri	ial Clock	13.9 MHz	~	D	isplay Mode	Gray-level First	~	No Signal Action	Keep the La	st Frame 🗸 🗸	White Balance Setting	
Blankin	ng Value	0	\$0	<100ns)	Brightness	8	۷	Input Bit Depth	8bit	۷	Intelligent Module Setting	
	Brightn	ess Percent: 71	%		Minimum O	E: 90.8 ns		Enable Gradual	Disable	~	Custom Gamma Table	
								Gamma Value	2.8	¥	Other Settings	
	Hide	Advanced Settin	95									
1	Intelligen	t Setting		Scree	n Test		Send A	fter Modify				激活 W
Read	9	Load		Sav	e	Send	Save To	Receiver				转到"电脑



#### 5.2.3 Connection Parameters (Look from front)

You don't need to set up the control area of each net port respectively under i series mode, but set up the connection relationship of the receiver card aiming at each net port loading via the sender card, and the software will auto calculate and set up the control area according to the connection relationship. Detailed Setting Steps as follows:

#### 1) Set up the quantity of receiving card

Set how many Receiver (Receiving card) that one port manages in Row Count and Col Count (6\*6 as an example), how many pixels that one Receiver (Receiving card) manages in Width and Height (128\*128 as an example), you will see LED display mapping area from the right side (Viewing from the front of LED display).

ending Device Screen Parameters Connection Para	neter	s(Loo	k From Front)						
Sender Card Information	Ĩ.	5	여   원61	⊞ 3	Show	v Connection Lin	es 🖲 Standard	○ Complex	
		- P	1	2	3	4	5	6	Receiver Card Layout
Part		E.	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port No.:0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height 128	Port: No.: 0 Width: 128 Height: 128	Col Count 6
Reset the Current Port Number		CX	Port No.: 0 Width: 128 Height: 128	Port No:0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port: No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port: No: 0 Width: 128 Height: 128	Reset All Selected Card Informatic No. 1
Calculate  Auto Calculation  Manual Edit Sender Port X Y  Width Height		e	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port: No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height 128	Width 128
pantenanda jalanda jalandika jalandika jalandika jalandika jalan		4	Port No.: 0 Width: 128 Height 128	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height 128	Port: No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height 128	Operation Guide
	•	ß	Port No.: 0 Width: 128 Height 128	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height 128	Port No.: 0 Width: 128 Height 128	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height 128	
		9	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port: No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height 128	Port: No.: 0 Width: 128 Height: 128	Port No:0 Width: 128 Height 128	
< >									



#### 2) Receiver Card Parameters Setting

Select the target sending card and the net port from the left side, then select the corresponding cabinets of net port actual control area and set the connection lines in the mapping area.

Sender No. +-	Π,	0		ee far 18		v Connection Line	es 💿 standard	Complex	
2 3			1	2	3	4	5	6	Col Count 6
Part		+	Port 1-1 No. 1 Widtl S128 Height 128	Port 1-1 No.: 2 Width: 128 Height 128	Port 1-1 No.: 3 Width 128 Height 128	Port: No.: 0 Width: 128 Height 128	Port No.: 0 Width: 128 Height 128	Port: No.: 0 Width: 128 Height: 128	Row Count 6
Reset the Current Port Number		64	Port 1-1 No.: 6 Width 128 Height 128	Port 1-1 No.: 5 Width: 128 Height 128	Port 1-1 No.: 4 Width: 128 Height 128	Port No.: 0 Width: 128 Height: 128	Port: No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Reset All Selected Card Informatic No. 9
Calculate  Auto Calculation  Manual Edit Sender Port X Y  Width Height		m	Port: 1-1 No.: 7 Width: 128 Height: 128	Port: 1-1 No.: 8 Width: 128 Height: 128	Port 1-1 No.: 9 Widtl 28 Height 128	Port: No.: 0 Width: 128 Height: 128	Port: No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Width 128
1 1 0 0 384 384		4	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height 128	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port: No.: 0 Width: 128 Height: 128	Operation Guide
		S	Port: No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height 128	Port: No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height 128	
		9	Port: No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port: No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	
< >									

#### There are two methods to set up:

1. Use mouse to select one by one

# Colorlight

#### www.colorlightinside.com

A. In the mapping area, select the first receiving card based on the actual connection of the net port (view from the front), and then set up the actual loading width and height of the target receiving card in the right side (128\*128 as an example).

B. Click the Receiver (Receiving card) one by one until the last one for this network port loads.

#### 2. Connection Pattern

A. Aiming at the LED screen with standard connection lines.

B. First set up the receiving card information according to the actual loading width and height (128\*128 as an example).

C. Select the connection line you want from the right side, then cover the corresponding area of net port loading in the mapping area, finally complete setting.

As the cabinets have multiple specification (that is the inconsistent capacity of the receiving card), you can select the different one to adjust separately after completing setting.

Sender	No. +						$\sim$	110.		Superior Superior	w Connection Lin	es		
1	ī							1	2	3	4	5	6	Receiver Card Layout
Port							r.	Port 1-1 No.: 1 Widtl.S128 Height 128	Port 1-1 No: 2 Width 128 Height 128	Port 1-1 No.: 3 Width 128 Height 128	Port 1-2 No. 1 Widtl_ 128 Height 128	Port 1-2 No: 2 Width: 128 Height 128	Port 1-2 No.: 3 Width 128 Height 128	Col Count 6
1-1	Reset	1-2	ent Port	3	1-4		2	Port 1-1 No.: 6 Width 128 Height 128	Port 1-1 No.: 5 Width: 128 Height 128	Port -1 No.: 4 Width: 128 Height 128	Port 1-2 No.: 6 Width 128 Height 128	Port 1-2 No: 5 Width: 128 Height 128	Port -2 No:4 Width: 128 Height 128	Reset All Selected Card Informatic No. 1
Calculate	• A	ito Calci	ulation	() Mar	ual Edit		10	Port: -1 No.: 7 Width: 128 Height: 128	Port 1-1 No.: 8 Width: 128 Height: 128	Port 1-1 No: 9 Widt 128 Height 128	Port: -2 No:: 7 Width: 128 Height: 128	Port 1-2 No.: 8 Width: 128 Height 128	Port 1-2 No: 9 Widt 128 Height 128	Width 128
Sender	Port	X 0	0	384	Height 384	3		Port: 1-3	Port 1-3	Port 1-3	Port:	Port No : 0	Port No : 0	Operation Guide
1	2	384	0	384	384		4	Width 128 Height 128	Width: 128 Height: 128	Widtl 28 Height 128	Width: 128 Height: 128	Width: 128 Height: 128	Width: 128 Height 128	
	3	0	384	384	384	*	5	Port 1-3 No.: 6 Width: 128 Height: 128	Port 1-3 No.: 5 Width: 128 Height: 128	Port 1-3 No.: 4 Width 128 Height 128	Port: No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	
							9	Port 1-3 No.: 1 Widtl. 128 Height 128	Part 1-3 No: 2 Width 128 Height 128	Port 1-3 No.: 3 Width: 128 Height 128	Port: No.: 0 Width: 128 Height: 128	Port No.: 0 Width: 128 Height: 128	Port: No.: 0 Width: 128 Height: 128	



#### 3) Save to Receiver Cards & Save to Sender Cards

Set up all the receiving card parameters and connection line respectively, click [Send] to send the correct parameter to the receiving card, and the screen should display normally about this time.

Then click [ Save to Receiver ] to save parameters to corresponding receiving card after confirming.

nding Devic								L	LD Screen.	setting LED	100			
	ce Sc	reen Pa	rameters	Conne	ection Para	ameter	s(Look	(From Front)						
Condor N	Ser p. [+	ider Car	d Inform	ation			5	~   <b>No.</b>	⊞ 7	Short	w Connection Lin	es 💿 Standard		x
1	2		3					1	2	3	4	5	6	Receiver Card Layout
Port Port Reset the Current Port Number Calculate Auto Calculation Manual Edit							2 1	Port 1-1 No.: 1 Widtl\$ 128 Height 128 Port 1-1 No.: 6 Width 128 Height 128	Port 1-1 No.: 2 Width: 128 Height 128 Port 1-1 No.: 5 Width: 128 Height 128	Port 1-1 No.: 3 Width 128 Height 128 Port: -1 No.: 4 Width: 128 Height: 128	Port 1-2 No.: 1 Widti S 128 Height 128 Port 1-2 No.: 6 Width 128 Height 128	Port: 1-2 No.: 2 Width: 128 Height: 128 Port: 1-2 No.: 5 Width: 128 Height: 128	Port 1-2 No.: 3 Width 128 Height 128 Port 1-2 No.: 4 Width: 128 Height 128	Col Count 6 Row Count 6 Reset All Selected Card Information No. 9 Width 128 Height 128 128 128 13
							1 -	Port	X	Ŷ	Width	Height		
2	384	0	384	384	4									
3	0	384	384	384		Height 128		Height 128	Height 128	Height 128	Height 128	Height: 128		
4	384	384	384	384	*	5		Port: 1-3 No.: 6 Width 128 Height: 128	Port 1-3 No.: 5 Width: 128 Height: 128	Port -3 No.: 4 Width: 128 Height: 128	Port 1-4 No.: 6 Width 128 Height 128	Port 1-4 No.: 5 Width: 128 Height 128	Port -4 No.: 4 Width: 128 Height: 128	
						9		Port: -3 No.: 7 Width: 128 Height: 128	Port 1-3 No.: 8 Width: 128 Height 128	Port 1-3 No.: 9 Widtl. 128 Height 128	Port -4 No.: 7 Width: 128 Height: 128	Port 1-4 No.: 8 Width: 128 Height 128	Port: 1-4 No.: 9 Widtl 128 Height: 128	
٤					>		<						>	
Connection	n is mo	dified	25.25		11 .	1499		11						



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