

LedSet User's Manual

V2.6.1



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LedSetV2.6 is a software for setup only, such as generating .RCG&.CON file, brightness control and monitor, etc. For playing videos or pictures, please use LEDStudio.

1. Interface

After installing and launching LedSet on your computer, you will see the following interface.



Figure 1

Note: You have to connect the USB cable from PC to sending card **before** you do the setup (such as generating .RCG&.CON file, brightness control and monitor and etc.).

Linsn Technology

1.1. Option Menu

LedSet 2.6				_	×
Option(<u>O</u>)	Test(<u>T</u>)	Settings(<u>S</u>)	Help(<u>H</u>)		
Brightnesse Calibration Lock LED S		ation		function Tard	
H Change pa Logout(E)	ssword(U)		Com Port:	СОМЗ	~
Model	TS802D		Sender number	1	
			Detec	Disconnect	
Serial port State:	Connected			2017-10-09 1	L1:39:38
		Fig	ure 2		

- Screen Configuration: to generate/adjust .RCG/.CON file via sender/receiver/display connection inferface
- Brightness: to adjust brightness/contrast/color temperature/Gamma manually
- **Calibration**: a calibration remote server, works with LED Correction(Linsn's calibration software)
- Lock LED Screen Properties: to freeze what is currently being displayed on the LED screen
- **Turn off LED screen power**: works with multifunction board (EX902/EX906 and etc) to turn off the power of the LED screen; if no multifunction board connected, enabling this option will just turn off the video signal
- Change password: to manage the password for Screen Configuration and LedSet
- Logout(E): to prevent others from changing the settings in Screen Configuration

1.1.1. Screen Configuration

1.1.1.1. Instruction to Sender/ Receiver/ Display Connection

* Sender

Note: The key thing needs to be set on the sender page is **Resolution** when you are trying to set the sending card. Please adjust the resolution to the same as your **Official website: www.linsn.com**



computer's resolution. If you have video processor connected, please keep sender's resolution the same as the processor's output resolution. After everything is done, click **Save to sender**.

8 Hardware Setup	- 🗆 X
Sender Receiver Display Con	nection
Hardware Hardware:84.DB Model TS802D (COM Port COM3 V Sender No. 1 Check Hardware
Display Mode	Screen Parameters
Resolution 1920X1080 V	Set width
Sender frequency 60 V	Start X 0
Display frequency: 60.115HZ	Start Y 0
Custom Apply	Width coefficient 1
Other Options	Height coefficient
Enable Brightness Calibration	Manual brightness
Monitoring Card/Cabinet	Screen power Auto on/off off
Enable LED Error Detection	
Enable Auto-adjust Brightness	Rotation
Enable receiver read back	● 0 ○ 90 ○ 180 ○ 270 □ Mirror
Broadcast receiver card config	
Broadcast display connection	Default Save to Sender Advanced

Figure 3

• Hardware

If the sending card communicates with the PC well via the USB cable, infomation of **Hardware** and **Model** will be shown as in figure below.

Hard	Iware							
н	lardware:84.DB	Model TS8	302D CO	M Port o	сомз 🗸	Sender No.	1	Check Hardware

Figure 4

If 00.DB and Unknown appears like the following figure, please check the USB connection before you do the setup.

Hardware			
Hardware:00.DB		Model	Unknown
	D ¹ <i>E</i>		

Figure 5

• Display Mode

This option is to set the resolution/frequency of the sending card. Commonly keep it the same as your monitor's/video processor's output.



Display Mode					
Resolution		1920X1080		\sim	
Sender frequency		60		\sim	
Display frequency:	60.115H	Z			
Custom			Apply		
		-			



• Other options

- Enable Calibration: select it to use the loaded calibrating data
- Monitoring Card/Cabinet: select it enable the Cabinet Monitoring function
- Enable LED Error Detection: requires the LED module to use pixel-detection IC and new type of receiving card
- Enable Auto-adjust Brightness: select it to enable the auto- adjusting brightness function
- Enable receiver read back: reserved
- Broadcast receiver readback: reserved
- Broadcast display connection: reserved

• Screen Parameters

- Set width: use in some situation
- Start X/Y: set the coordinate of the display area
- Width/Height Coefficient: zoom in image of the desktop
 e.g. If you have a LED screen whose size is 512*256 pixels, and the resolution of you monitor is 1024*768 pixels. For zooming in the image of the monitor to fit into the LED screen, you need to: a.Calculate width coefficient=512/1024= 0.5; height coefficient=256/768=0.33. b.Input the width and height coefficient respectively. c. Click Save on Sender
- Manual brighness: set the brightness asjustment scale for sender box
- Screen power: Auto on/off is set by default

Linsn Technology							
Screen Parameters							
Set width	800						
Start X	0						
Start Y	0						
Width coefficient	1						
Height coefficient	1						
Manual brightness 🔘 16	○ 32	64					
Screen power 💿 Auto	on/off	Ooff					

Rotation

Figure 7

Rotate the image that the sending card connecting to.

✤ Receiver

Note: Do not click **Send to Receiver/Save to Receiver** if you are not familiar with Linsn's control system

🐻 Hardw	are Setup								-	×
Se	nder	Receive	er	Display Connection						
- Modul Driv File	ve IC:	General Jnknown file	~	Scanning mode : Si	ngle-color 1	6 scan 16 row	/s/zone		Module Info	
Act	Capacity Setup cual width cual height :	64 32	<=64 <=512	Cascade direction Out Mode	From righ	t to left v	1	Card Mode	Normal V Data exchange	
Refr Scan Phas Row Newl Brigh	s Setup esh FRQ n clock se of clock blanking time line time ntness efficiency (ii DE width(>40ns):	528 3.0 ~ 15 ~ 5 5 1453 ns]] ns	Synchro refresh Duty ratio Gray level Grey mode Grey equalize High Quality specify	50 32 low refre	Auto ~ sh-lower lit ~	Hz % Level		Four-color exchange Afterglow Blanking Chroma space Image control Other setup	
In	itelligent setup			New framework						
Pa	aram readback	Load from f	ile	Save to file Send to R	leceiver	Save to R	eceiver			

- Figure 8
- **Synchronous refresh**: Tick it to make the LED screen synchronize with computer, and refresh rate is multiple of graphic card frequency. If the module is using PWM IC, this option would be locked.



- Scan clock: It depends on the design and performance of the module. The better performance gets by higher scan clock, resulting in longer width of receiver supports. Generally 16.67 or 18.75 MHZ is recommended.
- **Gray level**: High gray level means high quality of display effect and stronger color expression of LED screen. Generally for dual-color screen 256 gray level is enough. For full-color screen, it is suggested to use 65536 (select high refresh mode in **Gray mode**).
- **Gray mode**: This can be switch between high and low refresh mode, in low refresh mode the refresh rate is lower, generally high refresh mode for full-color screen is recommended.
- **Row blanking time**: Effective value: 10-200000. If lower ghosting effect appears, changing this option can reduce it. Note: The higher low blanking time is lower brightness.
- Actual width/height: Load the correct .RCG file, before you send it to the receiver; please make sure that the actual width and actual height are the same with the panel of one receiver carrying. For example, you have a panel with W96*H96 pixels, so you have to input W96*H96 in software.

Display Connection

🐻 Hardware Setup				- 🗆 ×
Sender	Receiver	Display Connection		
Setting Mode OSOM Card		Normal O Comple	ex Display QTY 1 Update displa	y QTY Operation
Type real pixel display Sender No. I Network port IU) 2(D) Selected Carl information Extension cable Order No. Show Connection Lines Image: Show Connection Lines	GAMA	1 Order E3 Order No.:2 Or Width:-2 Width:72 Wi	Vertical card 1 All Reset	★ <i>▶</i> Q⊕ ⊠
Calibration Pane	FLASH	end color calibration Save color calibrat data data data	tion Load Data	
Param readback Load fro	om file S	Save to file Send to receiver	Save to receiver Compatib	le old program

Figure 9

- **Display QTY**: In most case just keep this to 1.
- Receiver No:
 - Horizontal card 8 :enter the number of the receiving cards in width (try clicking on the text box and scrolling the mouse wheel)

		sn Te tical card 2 y clicking All Reset : to cle	on the te to cle to cle	ext box a ear all the fo(order/	the numb nd scrolli info(ord width/he	ng the m er/width/ ight) for	ouse whe 'height) in the selec	g cards in eel) n each sq ted squar iginal siz	uare e
	eiver No. orizontal card	8	_			l Reset	⊗ ←	• E	Q⊕⊠
	1	2	3	4	5	6	7	8	
1	No.:1-U-1 Order No.:0 Width:0 Height:0	No.:1-U-1 Order No.:0 Width:0 Height:0	No.:1-U-1 Order No.:0 Width:0 Height:0	No.:1-U-1 Order No.:0 Width:0 Height:0	No.:1-U-1 Order No.:0 Width:0 Height:0	No.:1-U-1 Order No.:0 Width:0 Height:0	No.:1-U-1 Order No.:0 Width:0 Height:0	No.:1-U-1 Order No.:0 Width:0 Height:0	
2	No.:1-U-1 Order No.:0 Width:0 Height:0	Order No.:0	No.:1-U-1 Order No.:0 Width:0 Height:0						

Figure 10

• Sender No/Network port/Selected Card information

Sender No.							
1							
Network port							
1(U) 2(D)							
Selected Card inform	mation						
Extension cable	1						
Order No.	1						
Width	128	↔	1				
Height	128	↔	1				

Figure 11

- Sender No.: If there is more than one sending card connecting, please select the corresponding number.
- Network port: There are two ports on the TS802D sending card. The one next to the LED lights is U, and the other one is D.
- **Order No.**:The receiving card that connects to sending card directly is the No.1 card (Note:stand in front of the LED screen when checking the order)
- Width: Pixels' width that one receiving card connects.
- **Height**: Pixels' height that one receiving card connects.

Fill the above info depending on the real connection, click on a random square and the info will be filled out the selected square automatically.

	Technology
- Deceiver No	

Receiver No. Horizontal card	8	Vertical	card 2	A	ll Reset	⊗ ◆	► €
1	2	3	4	5	6	7	8
1 No.:1-U-1 Order No.:1 Width:128 Height:128	No.:1-U-1 Order No.:0 Width:0 Height:0	Order No.:0 Width:0	No.:1-U-1 Order No.:0 Width:0 Height:0				
2 No.:1-U-1 Order No.:0 Width:0 Height:0	No.:1-U-1 Order No.:0 Width:0 Height:0	No.:1-U-1 Order No.:0 Width:0 Height:0	No.:1-U-1 Order No.:0 Width:0 Height:0	No.:1-U-1 Order No.:0 Width:0 Height:0	No.:1-U-1 Order No.:0 Width:0 Height:0	No.:1-U-1 Order No.:0 Width:0 Height:0	No.:1-U-1 Order No.:0 Width:0 Height:0

Figure 12

- Show Connection Lines: select it to show the linking direction in lines
- Single-point link: set the order one by one by clicking the corresponding square
- Quick link:
 - a. Select one of the eight direction modes below depending on the real connection

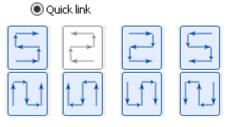


Figure 13

b. Click the first square (stands for the **first** receiving card of the area that you need to set), hold down the left mouse button and drag it untill the disired area is covered with black.

	eiver No. orizontal card	8	Vertical	card 2	A	ll Reset	⊗ ◆	A 10
	1	2	3	4	5	6	7	8
1	No.:1-U-1 Order No.:1 Width:128 Height:128	No.:1-U-1 Order No.:0 Width:0 Height:0	Order No.:0	No.:1-U-1 Order No.:0 Width:0 Height:0				
2	No.:1-U-1 Order No.:0 Width:0 Height:0	No.:1-U-1 Order No.:0 Width:0 Height:0	Order No.:0	No.:1-U-1 Order No.:0 Width:0 Height:0				



c. Release the mouse and the rest of the square will be filled out

Re	ceiver No. Horizontal card		_	nolog		l Reset	⊗ ←		€€
	1	2	3	4	5	6	7	8	
1	No.:1-U-1 Order No.:9 Width:128 Height:128	No.:1-U-1 Order No.:10 Width:128 Height:128	No.:1-U-1 Order No.:11 Width:128 Height:128		No.:1-U-1 Order No.:13 Width:128 Height:128	No.:1-U-1 Order No.:14 Width:128 Height:128	No.:1-U-1 Order No.:15 Width:128 Height:128	No.:1-U-1 Order No.:16 Width:128 Height:128	
2	No.:1-U-1 Order No.:8 Width:128 Height:128	No.:1-U-1 Order No.:7 Width:128 Height:128	No.:1-U-1 Order No.:6 Width:128 Height:128	No.:1-U-1 Order No.:5 Width:128 Height:128	No.:1-U-1 Order No.:4 Width:128 Height:128	No.:1-U-1 Order No.:3 Width:128 Height:128	No.:1-U-1 Order No.:2 Width:128 Height:128	No.:1-U-1 Order No.:1 Width:128 Height:128	

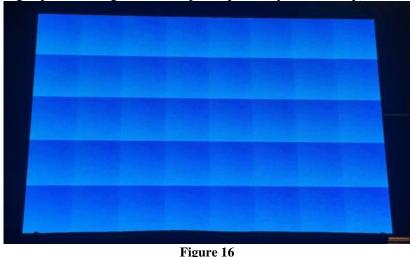
Figure	15
riguit	10

- Send to receiver: click it after you finish the setup
- **Save to receiver**: if the image is working on the LED screen, please click it to save the data to the receiver
- Save to file: you can also save the settings as a .CON file, so that you can just load the setting as you need it next time.

Note: go to page14-16 to check how to make a .CON file.

1.1.1.2. What is .RCG & .CON file

.RCG file is used to configuring the image of each single receiving card, and the .RCG file is already saved on each receiving card normally when you get the whole set of LED screen and control cards from the supplier. So the first time you set up the LED screen, you will get several repeated images whose number is the same as the number of the receiving cards (e.g. If you have 40 receiving cards, then you will have 40 repeated images on the LED screen). The LED screen below is working with correct .RCG file saving (showing repeated images of the top-left part on your desktop).





After you assemble the whole LED screen, you need to send a .CON file, in order to make the whole LED screen show image in one piece. You will get the perfect image below after sending a .CON file to the above LED screen.



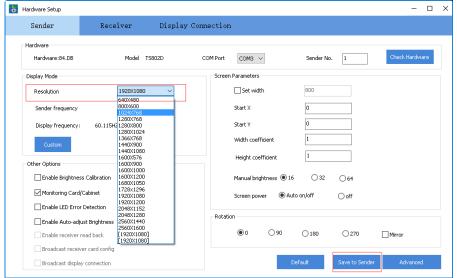
Figure 17

1.1.1.3. How to load a .RCG file

Note: Please do not send any random .RCG file to the cards if you are not familiar with Linsn's control system.

Procedure:

- a. Connect all the components well (PC->sending card->receiving card->LED screen)
- b. Click **Screen Configuration** to enter **Sender** tab, set the **Resolution** to the same as your PC's monitor and click **Save to Sender**. Go to the resolution settings interface on your PC and select the **duplicate/clone mode**.



Official website: www.linsn.com

Figure 18



c. Go to the **Receiver** page. Load the .RCG file from **Load from file** and click **Send to Receiver** to see if one cabinet is working or not. If working, click **Save to Receiver** (this button will be enabled after clicking **Send to receiver**)

Hardware Setup					-		×	
Sender	Receiver	Display Connection	Display Connection					
Module Info Drive IC : File	MBI5041B Et\Program Files\Linsn\LedSet	Scanning mode : Fi	ull-color real pixel 6 scan 12 rows/	zone	Module Info			
Load Capacity Setup Actual width	128 <=4539	Cascade direction	From right to left \sim	Card Mode	Normal ~			
Actual height :	128 <=192	Out Mode	Normal \sim		Data exchange			
Effects Setup Refresh FRO	<=	Synchro refresh	Auto V Hz		Four-color exchange			
Scan clock	18.8 ~ MHZ	Duty ratio	50 %		Afterglow Blanking			
Phase of clock Row blanking time	3 ~	Gray level Grey mode	65536 V Level low refresh-higher I V		Chroma space			
E Pin	Normal 🗸	Grey equalize	0		Image control Other setup			
Brightness efficiency Min OE width(>40ns	y (including blanking): 99.0% ;): 7453 ns	High Quality	40 ns		Extended			
Intelligent setup								
Param readback	Load from file	Save to file Send to F	Save to Receiver					
		Figure	19				-	

d. If the settings you adjusted are working, click **Save to file** to save the settings to an .RCG file, so that you can load the settings directly when you need it.

1.1.1.4. Generating a .CON file

Note: Please stand in front of the LED screen when you are checking the connecting direction of receiving cards.

After sending the corresponding .RCG file to the receivers, correct and repeated images will be shown on each cabinet as in the following picture.



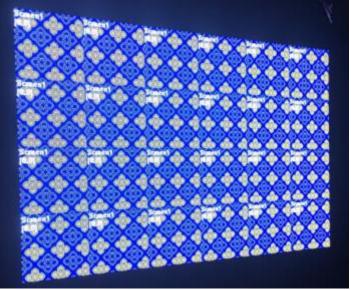


Figure 20

For connecting all the repeated images above together, you need to do:

isplay 1		Disp	lay QTY 1	Update display QTY Operation
Type real pixel display V GAMA	Receiver No. Horizontal card 6	Vertical card 4	All Reset	⊗ ♠ ≁ Q⊕ 🛛
1	1 2	2 3 4	5 6	
Network port	No.:1-U-1 No.:1- Order No.:0 Order I Width:0 Width: Height:0 Height:	No.:0 Order No.:0 Order N 0 Width:0 Width:0	o.:0 Order No.:0 Order No. Width:0 Width:0	:0
Selected Card information Extension cable 1	2 No.:1-U-1 No.:1-I Order No.:0 Order I Width:0 Width: Height:0 Height:	No.:0 Order No.:0 Order N 0 Width:0 Width:0	o.:0 Order No.:0 Order No. Width:0 Width:0	:0
Width 128 ₩ I Height 128 ₩ I	No.:1-U-1 No.:1-I Order No.:0 Order I Width:0 Width: Height:0 Height:	No.:0 Order No.:0 Order N 0 Width:0 Width:0	o.:0 Order No.:0 Order No. Width:0 Width:0	:0
Show Connection Lines	4 No.:1-U-1 Order No.:0 Order No.:0 Width:0 Height:0 Height:0	U-1 No.:1-U-1 No.:1-U No.:0 Order No.:0 Order N 0 Width:0 Width:0	-1 No.:1-U-1 No.:1-U-1 o.:0 Order No.:0 Order No. Width:0 Width:0	:0
다 다 다 다 다				
	color calibration Save co data • to file Send to rec	Ior calibration Load (data Save to receiver	ata	Compatible old program

Figure 21

- a. Input 6 in Horizontal card, and 4 in Vertical card
- b. Select U if the network port near the LED light on the sending card is connected
- c. Input 128 (pixels) in width and height separately (the above cabinet is 128*128 pixels)
- d. Click on the square that corresponds to the first receiving card, and click the second square stands for the second receiving card till all the squares are covered if you select **single-point link**

Linsn Technology

↔ ‡

↔ ‡

Sender No.

1 Network port 1(U)

Order No.

Width

Height

2(D)

1

1

128

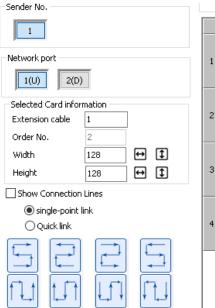
128

Selected Card information Extension cable

Show Connection Lines single-point link 🔿 Quick link

			_	L		
	1	2	3	4	5	6
1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1
	Order No.:0					
	Width:0	Width:0	Width:0	Width:0	Width:0	Width:0
	Height:0	Height:0	Height:0	Height:0	Height:0	Height:0
2	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1
	Order No.:0					
	Width:0	Width:0	Width:0	Width:0	Width:0	Width:0
	Height:0	Height:0	Height:0	Height:0	Height:0	Height:0
3	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1
	Order No.:0					
	Width:0	Width:0	Width:0	Width:0	Width:0	Width:0
	Height:0	Height:0	Height:0	Height:0	Height:0	Height:0
4	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1
	Order No.:0	Order No.:1				
	Width:0	Width:0	Width:0	Width:0	Width:0	Width:128
	Height:0	Height:0	Height:0	Height:0	Height:0	Height:128

Figure 22



	1	2	3	4	5	6
1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1
	Order No.:0					
	Width:0	Width:0	Width:0	Width:0	Width:0	Width:0
	Height:0	Height:0	Height:0	Height:0	Height:0	Height:0
2	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1
	Order No.:0					
	Width:0	Width:0	Width:0	Width:0	Width:0	Width:0
	Height:0	Height:0	Height:0	Height:0	Height:0	Height:0
3	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1
	Order No.:0					
	Width:0	Width:0	Width:0	Width:0	Width:0	Width:0
	Height:0	Height:0	Height:0	Height:0	Height:0	Height:0
4	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1	No.:1-U-1
	Order No.:0	Order No.:0	Order No.:0	Order No.:0	Order No.:2	Order No.:1
	Width:0	Width:0	Width:0	Width:0	Width:128	Width:128
	Height:0	Height:0	Height:0	Height:0	Height:128	Height:128

Figure 23

You can also select **Quick link** to finish the setup (see <u>page10-11</u> for detailed skills to set quick link).

Type real pixel display GAMA	Rec	OGY eiver No. Iorizontal card	6	Vertical	card 4	AI	l Reset
1		1	2	3	4	5	6
Network port	1	No.:1-U-1 Order No.:19 Width:128 Height:128	No.:1-U-1 Order No.:20 Width:128 Height:128	Order No.:21 Width:128	No.:1-U-1 Order No.:22 Width:128 Height:128	Width:128	No.:1-U-1 Order No.:24 Width:128 Height:128
Selected Card information Extension cable Order No. 1	2	Width:128	Width:128	Order No.:16 Width:128	No.:1-U-1 Order No.:15 Width:128 Height:128	Order No.:14 Width:128	No.:1-U-1 Order No.:13 Width:128 Height:128
Width 128 🕶 🗘 Height 128 🕶 🗘	3	No.:1-U-1 Order No.:7 Width:128 Height:128	No.:1-U-1 Order No.:8 Width:128 Height:128	Width:128	No.:1-U-1 Order No.:10 Width:128 Height:128	Width:128	No.:1-U-1 Order No.:12 Width:128 Height:128
 single-point link Quick link 	4	No.:1-U-1 Order No.:6 Width:128	No.:1-U-1 Order No.:5 Width:128	Width:128	No.:1-U-1 Order No.:3 Width:128	Width:128	No.:1-U-1 Order No.:1 Width:128
다 다 다 다 다 다 다		Height:128	Height:128	Height:128	Height:128	Height:128	Height:128
Calibration Panel FLASH Ser		calibration :	Save color calib data	pration	Load Data		
Param readback Load from file Sa	ve to fi	le Send	d to receiver	Save to re	eceiver		

Figure 24

- e. After filling out all the squares, click **Send to receiver**. Don't forget to click **Save to Receiver** if the image is working well on the LED screen.
- f. You can save the above settings as a .CON file, and load it when you need it.

Linsn Technology 1.1.2. Brightness

justment Mode							
Manual adju	stment	OLos	sless Grayscale ad	djustment			
splay 1							
rightness							
	<				> 2	55 (100.0	%)
Contrast							
	<				>	50%	Gamma Setup
Color Temper:	ature						
Customiz	e						
RGB bright	ness component						
Red	<				> 2	55 (100.	0%)
							~ ")
Green	<				> 2	55 (100.	U%)
Blue	<				> 2	55 (100.	0%)
Syn	chronize				L		
Default	~	Add	1				
		100					
Enable aut	o-adjust bright:	vess		Virtual scre	en		

Figure 25

- Brightness: adjust the brightness manually
- Contrast: asjust the contrast manually
- Color Temperature
 - Customize: check to enable RGB birghtness component
 - RGB brightness component: Adjust brightness of red, green and blue manually
 - Add: Customize the color temperature that you need, ranging from 1000K to 40000K
- Enable auto-adjust brightness: Enable adjusting brightness automatically by multifunction card

Linsn Technology 1.1.3. Calibration

This is a remote calibration sever which works with the LED Correction software. It is designed for the LED screen which is installed high or with large resolution but needs calibration in a far distance.

Remote Calibration				×
Network Setting Local	10 . 20 . 28 . 25	Connect		
Port	5000	Disconnect	Hide calibration window	
Communication Informa	tion			
2017-11-06 18:33:17				
L				

Figure 26

- Network Setting:
 - Local: IP address of the server which is connecting to the LED screen
 - Port: Comunication port (Keep it default)
- Comunication Information: Showing connection status of the server and client.

Liner	Technology			
	n Technology			
LedCorrection-Screen Set(S) Tool(T) Language(L) Perm DtColorSpace ColorData Split CabinetToScreen GreyTest FileTransPort NetCorrection Data Analysis	hission(A) Help(H)		100010	×
	[Prev	Next	

Figure 27

Run LED Correction software on client computer -> Click Tool -> select Net Correction

Net					
		ia		2	
	IP	10 . 20 . 28 . 25	Connect		
	Port	5000	Close		

Figure 28

- IP: IP address of server which is connecting to the LED screen
- Port: Comunication port (Keep the default value)

When the it is connected successfuly, the connection status will be shown in LedSet as the picture below

Remote Calibration				
Network Setting Local	10 . 20 . 28 . 25	Connect		
Port	5000	Disconnect	Hide calibration window	
Communication Informa	tion			
2017-11-06 18:33:17	Connecting success!			

Figure 29

After the above connection, you can do the calibration for the LED screen which is installed far away on the client PC.

Linsn Technology 1.1.4. Lock LED screen properties

뒹 LedSet 2.6			- ×
Option(<u>O</u>)	Test(<u>T</u>) Settings(<u>S</u>) He	elp(<u>H)</u>	
	Hint		1
Screen Configuration Hardware Informatio	Bri Are you sure you want to Lock the L	.ED Screen?	
Hardware Information	F		сомз 🗸
Model	YES	NO	1
		Detect	Disconnect
Serial port State :	Not Connected		2017-10-10 16:32:20

- Figure 30
- a. Go to Option->Lock LED screen properties->Hint
- b. Click **YES** to freeze the image on the LED screen and the button will turn into **unlock the LED screen properties.** You can click **unlock the LED screen properties** to resume the action on the LED screen.

Linsn Technology 1.1.5. Turn off the LED screen

150						
LedSet 2.6					_	×
Option(<u>O</u>)	Test(<u>T</u>)	Settings(<u>S</u>)	Help(<u>H</u>)			
Screen Configuration	Hint			<u>ک</u>	<	
-Hardware Informa		u sure you want to tur		Belli		
Hardware	ε			7	сомз ~	
Model	1	YES	NO	nambor	1	
				Detect	Disconnect	
Serial port State:	Connected				2017-10-10 16:37:4	5
		Fig	ıre 31			

This funtion requires multifunction board(like EX902, EX906 and etc).

After connecting the power supply for the LED screen to the relays on the multifunction board, you can turn off the power of the LED screen by LedSet:

- a. Go to **Option->Turn off the LED screen->Hint**
- b. Click **YES**
- c. The button will turn into **Turn on the LED screen**

Note: If you don't have multifunction board connected, it will cut off the video signal(indicated by green light on the sending card) rather than power by using this function.

Linsn Technology

1.1.6. Change password E. LedSet 2.6 \times Help(H) \times User Manager administrator Add User Delete Vser Edit User Cabinet Multi-function Monitoring Card 0k Cancel Com Port: COM3 \sim 1 Sender number Disconnect Detect Use Password when StartUp Serial port State : Connected 2017-10-10 16:38:47

Figure 32

- Add User: add a new user name and password
- Delete User: delete the selected user
- Edit User: edit the name and password for the selected use
- **Ok**: click ok to finish the setup
- **Cancel**: click cancel to exit
- Use Password when StartUp: it requires enter password when the software starts up

Linsn Technology	
1.1.7. Logout	

B LedSet 2.6				– ×
Option(<u>O</u>)	Test(<u>T</u>)	Settings(<u>S</u>)	Help(<u>H</u>)	
Screen Configuration	Brightness	Calibration	Cabinet Monitoring	n
-Hardware Informa	tion			
Hardware	84.DB		Com Port:	COM3 ~
Model	TS802D		Sender number	1
			Detect	Disconnect
Serial port State:	Connected			2017-10-10 16:46:58
		Fig	ure 33	

To prevent others from changing the settings by accident, you can click logout to disable the **Screen Configuration** feature.

Linsn Technology 1.2. Test Menu

LedSet 2.6 _ Settings(S) Option(O) Test(T)Help(H) Gray test1(G) Gray test2(Y) Grid test(R) Dot test(F) Cabinet Multi-function Screen Configuration Monitoring Card Color bar test1(C) Hardware Informa Color bar test2(A) Aging Com Port: COM3 Hardware \sim Check position(X) Check Color(O) 1 Model Sender number Orientation(P) Detect Disconnect Hide Test Window(H) Serial port State: Connected 2017-10-09 11:40:02 Figure 34

• Grey test1

It will shows the selected color's grayscale from level 1 to 255 automatically.

Grey test2 ٠

You can select to show a specific grayscale.

Grey Test			×	
◉ Red Value	⊖Green ⊖Blue 255 ★	○White □Auto Inor	ease Exit	
				Red(2

 \times

Lins	sn Te	chnology	/		
	Grey Test O Red Value	● Green ○ Blue 255 🔹	○White □Auto Increase	×	
					Green(255)

Figure 36

• Grid test

For testing the pixels' movement on the LED screen.

Grid		× 💥 💥
Color		
Background	•	
-Color Chang	e	
🔵 No Chang	e 💿 Two Color 🛛 🔿 Three Color	
Grid		
Time	200 Manual	
Gap	16	
🗌 Horizo	ntal Line 🗌 Vertical Line	
🗹 Left D	iagonal Line 🛛 Right Diagonal Line	
	Last Next Exit	

Figure 37

Linsn Technology Grid × Color Background Color Change 🔘 No Change O Two Color O Three Color Grid 200 🗌 Manual Time Gap 50 Horizontal Line Vertical Line 🗹 Left Diagonal Line 🗌 Right Diagonal Line Last Next Exit

Figure 38

• Dot test

A quick way to check if there is faulty pixel on the LED screen.

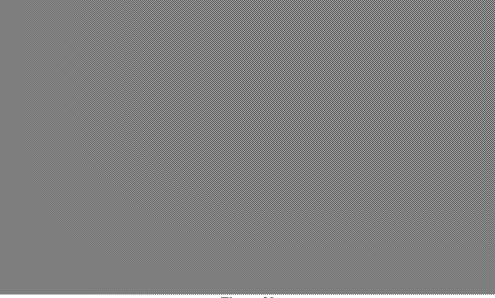


Figure 39

• Color bar test1

For testing different grayscale of different color (internal use)

Linsn Technology

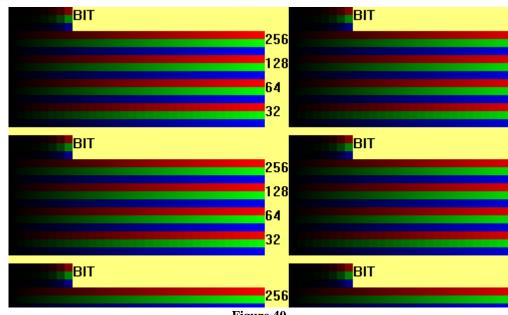


Figure 40

• Color bar test2

Grayscale test pattern for Red/Green/Blue/White

Select Color		×	
● Red ○ Green ○ Blue	○ White ○ Red+Green ○ Red+Green+Bl	OK	

Figure 41

• Aging

For customizing an aging pattern

Aging				×
Grid				
✓ Test	Time		5	s
Spacing 16	Noving ti	ime	100	MS
🗹 Horizontal Line	\checkmark	Vertical	Line	
🗹 Left Diagonal L	ine 🗹	Right Di	agonal	Line
Color				
Color1 -	Time	5	s	Begin
Color2	_ Time	5	s	Save
Color3	Time	5	s	Load
Color4	Time	5	s	Exit
Color5	Time	5	s	Aging
Color6	Time	5	s	0:0:0
Color7	Time	5	s	
Color8	Time	5	s	Number
Color9	Time	5	s	0
Color1C	Time	5	s	
Gray				
Test				
🗌 Red 📃 Green	🗌 Blue	🗌 Whi	te	

Figure 42

• Check position

For checking the showing area and the area for each data sets

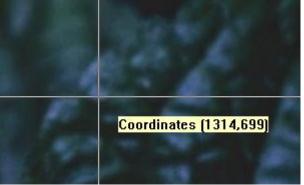


Figure 43

• Check color For reading RGB color codes



• Orientation

This	function	is for	locating	the fault	y module/	cabinet/card

Orientation							\times
Window					Module		
x	<		> [0	Width	16	
Y	<		> [0	Height	16	
Width	<		> [256			
Height	<		>	128	-Loading Modul	e of Receiving Card	
Color and Size					Row	8	
Module Line	,	-	1	\sim	Col	8	
Receiving Ca	rd Line	-	2	\sim			
Font Color			7	\sim			
Background o	color	-				Orientation	

Figure 44

• Window

X: start x of play window, and keep it to 0 commonly

Y: start y of play window, and keep it to 0 commonly

Width: pixels' width of play window, and keep it the same as your LED screen

Height: pixels' height of play window, and keep it the same as your LED screen

Window		
×	<	> 0
Y	<	> 0
Width	<	> 256
Height	<	> 128

Figure 45

Module

Width: pixel's number of one module in width Height: pixel's number of one module in height



Module	
Width	16
Height	16

Figure 46 Loading Module of Receiving Card

The number of modules that connected to one receiving card in height and width

- Loading Module of F	Receiving Card
Row	8
Col	8

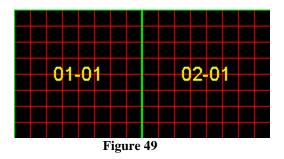


Color and Size

Color and Size	
Module Line	• 1 · ·
Receiving Card Line	2 ~
Font Color	7 ~ ∨
Background color	•

Figure 48

- **Orientation**: Click it to update the contents
- a. Set the pixels' width and height for module and LED screen, and the number of the modules that connected to one receiving card.
- b. Click **Orientation** to update your settings.
- c. The display window will show the grids on the LED screen for you to recognize each





• Hide test window: to hide/show the above window

1.3. Settings Menu

bedSet 2.6			- ×
Option(<u>O</u>)	Test(<u>T</u>)	Settings(<u>S</u>) Help(<u>H</u>)	
Screen Configuration	Brightness	Tool(T) > Software Setup Hardware Setup(Upgrade) Language(L) > Schedule Table	1
-Hardware Informat Hardware	84.DB	Demonstration Mode	COM3 ~
Model	TS802D	Sender number Detect	1 Disconnect
Serial port State :	Connected		2017-10-09 11:40:16
		Figure 50	

- Tool: Paint/Notepad/Calculator
- Software Setup: Other settings for software
- Hardware Setup(Upgrade): For upgrading the firmware
- Language: Other languages
- Schedule Table: For timing settings

1.3.1. Tool

For opening Paint, Notepad and Calculator.

Line Line	sn Tec	hnology	
B LedSet 2.6			– ×
Option(<u>O</u>)	Test(<u>T</u>)	Settings(<u>S)</u> Help(<u>H</u>)	
		Tool(T) >	Paint
	\bigcirc	Software Setup	Notepad
		Hardware Setup(Upgrade)	Calculator
Screen Configuration	Brightness	Language(L) >	File transfer
Hardware Informat	ion	Schedule Table	
Hardware	84.DB	Demonstration Mode	Auto ~
		ClearBlackLine	
Model	TS802D	Sender number	1
		Detect	Disconnect
Serial port State :	Connected		2017-11-13 11:35:12

Figure 51

Open Paint/Notepad/Calculator (Window's program) in LedSet

Linsn Technology 1.3.2. Software Setup

Software Setup			×
Mode Settings	Mode Settings	◯ Classic mode	^
Image Settings		• New mode	
Startup Settings	Image Settings		
Timing Settings		Screen power	
Network Settings			
Monitoring Settings	Startup Settings	Start When Windows Starts Up	
Zoom Settings		🗌 Auto Minisize	
Other Settings		Auto Login	
		Pop-up tips when the control cards ca	n not be found
		Allow multiple programs start	
	Timing Settings	Restart every day	15:36:23
		Auto restart software	120 Minutes
			¥

Figure 52

- Mode Settings:
 - Classic mode
 - New mode(recommended)
- Image Settings:
 - Lock screen: this option is unchecked by default, and you can check it to freeze the image of LED screen (same as Option->Lock LED screen properties, please check <u>page21</u> for detailed instructions)
 - Screen power: this option is checked by default, and you can uncheck it to turn off the power(same as Option->Turn off LED screen power, please check <u>page22</u> for detailed instructions)
- Startup Settings:
 - Start When Windows Starts Up: auto-start LedSet when your PC starts up
 - Auto Minimize: auto-minimize the software when launching LedSet
 - Auto Login: this option is checked by default, and you can uncheck it to keep logging out the software (same as Option->Logout, please check <u>page24</u> for detailed instructions)
 - Pop-up tips when the control cards cannot be found: check to show the prompt when the USB connection cannot be recognized.





Figure 53

- Allow multiple programs start: allow open several LedSet
- Timing Settings:
 - Restart every day: set to restart the software at certain time for every day
 - Auto restart software: restart the software every certain period of time
- Network Settings: Reserved
- Monitoring Settings
- Zoom Settings: Enable zoom-> When the resolution-height is less than a certain value
- Other Settings:
 - Auto restart software when fault occurs
 - Show prompt message when quit
 - No error message: to disable the 'LED screen system not found' prompt
 - Not allow closing software
 - Power off when close
 - Auto Update new software: reserved

1.3.3. Hardware Setup (Upgrade)

Hardware Setup(Upgrad	ie)		×
Load			
Name:	Name		_
Version:	Ver	Upgrade	<u>.</u>
Sequence:	SUM		
Path:	I	Load	
Type:	Туре		

Figure 54

- Go to **Settings->Hardware Setup->**Input password-> Click **Load** to select a correct firmware->**Upgrade**
- Power off and on the cards to check if the upgrade works or not

Linsn Technology 1.3.4. Language

당 LedSet 2.6			- ×
Option(<u>O</u>)	Test(<u>T</u>)	Settings(<u>S)</u> Help(<u>H</u>)	_
Screen		Tool(T) > Software Setup Hardware Setup(Upgrade)	
Configuration Hardware Informat	Brightness tion	Language(L) > Schedule Table	Simplified Chinese(zh-CN) Traditional Chinese(zh-CHT) Chinese(zh-CHT)
Hardware	84.DB	Demonstration Mode ClearBlackLine	Auto
Model	TS802D	Sender number Dete	
Serial port State:	Connected		2017-11-13 11:35:29
		Figure 55	

1.3.5. Schedule Table

No.	Command	Screen No.	program file/value	Execution time	Valid date	Valid day
2						
]Enable			Edit	Add Delete	Delete All	Exit

Figure 56

- Edit: to edit the existing command
- Add: to add a new command

Command	Turn on LED screen power	~
Execution time	15:41:38	
LED No.	1	
LED No.	1	
LED No. Valid Date	1 Valid Week	
Valid Date	Valid Week No Limit	🗹 Sunday
Valid Date	Valid Week No Limit Specified	🗹 Sunday 🗹 Tuesday
Valid Date	Valid Week No Limit Specified Monday	

Figure 57

• Command: select a command that you need

Command	Wake up Computer 🗸 🗸
	Turn on LED screen power
Execution time	Turn off LED screen power
	Lock LED screen property
	Unlock LED screen property
	Shutdown computer
LED No.	Adjust all LED Screen Brightness
	Adjust LED Screen Brightness
	Adjust LED Screen Contrast
	Adjust LED Screen Color
	Restart Computer
	Set the computer to sleep
Valid Date	Wake up Computer
	Control the relay on multi-function card
🔘 Every Day	No Limit

Figure 58

- Execution time: set a specific time
- LED No.: select the LED screen you need
- Valid Date/Valid Week: set a period of days to run the commands
- Delete: delete the selected command
- Delete All: delete all the commands
- Exit

1.3.7. ClearBlackLine(reserved)

1.4. Help Menu

LedSet 2.6				– ×				
Option(<u>O</u>)	Test(<u>T</u>)	Settings(<u>S</u>)	Help(<u>H</u>)	_				
Screen Configuration	Brightness	Calibration	Help Local IP Software Update Add Features About LedSet					
Hardware	Hardware 84.DB		Com Port:	COM3 ~				
Model	TS802D		Sender number Detect	1 Disconnect				
Serial port State :	Connected			2017-10-09 11:40:25				
Figure 59								

- Help: reserved
- Local IP: obtain IP address of the computer
- Software Update: reserved
- Add Features: reserved
- About LedSet: version and copyright





Configuration Shortcut for Screen Configuration, see <u>page5-16</u> for more details

1.6. Brightness



Brightness Shortcut for Brightness, see page17 for more details

1.7. Calibration



Shortcut for Calibration, see page18 for more details

1.8. Cabinet Monitoring





Cabinet monitoring is for showing the monitoring data of each cabinet rather than the whole LED screen.

The version will be shown after sending corresponding .CON file.

The other monitoring function(Temperature, humidity, smoke, fan speed, voltage, flat cable status and cabinet door close-open)works with receiving card which integrated with monitoring connectors.

Note: Humidity, smoke, fan speed requires extra monitoring module;

Flat cable detection requires custom hub board.

Cabinet/Card Monitor	_					_		>
Monitoring Info	Receiving	card type	Norn	nal card	⊖ so	M card		
Cabinet version No.	Unit:		Celsi		05-1	nrenheit		
Cabinet Temp	orac.		Ceisi	lur	Orai	irei II leic		
Cabinet Humi	Display 1				🗹 List	monitoring		
Cabinet Smog	No.	Version	Temperature	Humidity	Smog	Brightness	Fan1	
Cabinet Fan	3	XX	0.000000	0.000000	Normal	0	0	
	2	XX	0.000000	0.000000	Normal	0	0	
Cabinet Vol	1	XX	0.000000	0.000000	Normal	0	0	
Cabinet Cable								
Cabinet Door								
Capture span(/Second)								
Monitor temperature(degree)								
-148 Apply								
	<							

Figure 60

- **Receiving card type**: the model of receiving card beginning with RV is called **Normal card**
- Unit: select the unit for temperature
- List monitoring: uncheck to show the info cabinet by cabinet
- Monitoring Info: select to just show one type of monitoring info

Linsn Technology								
Monitoring Info								
Cabinet version No.								
Cabinet Temp								
Cabinet Humi	Monitoring Info			ving card type	Normal card			
Cabinet Smog	Cabinet version No. Cabinet Temp	U	nit :		Celsiur	(
Cabinet Fan	Cabinet Humi	Di	Display 1					
	Cabinet Smog			1	2	3		
Cabinet Vol	Cabinet Fan			No.: 3	No.: 2	No.: 1		
Cabinet Cable	Cabinet Vol		1	Version: XX	Version: XX	Version: XX		
Cabinet Door	Cabinet Cable							
Cabillet Door	Cabinet Door							

• Alarm setup: because of the server problem, this can only function in China

1.9. Multifunction Card

This function works with multifunction card for showing monitoring data of the whole LED screen. In the page below, you can set the sensitivity of light sensor and monitoring speed of multi-function card, etc.

emperature nner Dutdoor Amend an-on temperature	174.1 174.1 0 133.8000030517!	Speed 87.5	
Dutdoor Amend an-on temperature	0	87.5	
Amend ian-on temperature	0		
an-on temperature		-	
	133.8000030517!		
·			
sir conditioning-on emperature	133.8000030517		
an Status	off		
ir conditioning Status	off		
Init	Celsiur		
	◯ Fahrenheit		
3 PowerSw3			
6 FanSw2			
9 AirConSw3			
	ir conditioning Status nit 3 PowerSw3 6 FanSw2	an Status off ir conditioning Status off nit © Celsiur O Fahrenheit 3 PowerSw3 6 FanSw2	an Status off ir conditioning Status off nit OFahrenheit 3 PowerSw3 6 FanSw2

Figure 61



Note: After you finish installing and setting up the multifunction card and light sensor, enter this page. If the current brightness, temperature and humidity value changes automatically, it means the sensors are working.

1.10. Hardware Information

The hardware information shows correctly only when the USB cable is recognized well by the controling computer.

Hard	vare Informatio	n								
	Hardware	Hardware	Com Port:	COM3 ~						
	Model	Unknown	Sender number	1						
			Detect	Disconnect						
C .1	Figure 62									
		unicates with the PC well, the ha	rdware info will show	as follows						
Hard	ware Informatio	n								
	Hardware	84.DB	Com Port:	COM3 ~						
	Model	TS802D	Sender number	1						
			Detect	Disconnect						

Figure 63

And the USB status in Device Manager on your computer is working as follows

- 🗸 🛱 Ports (COM & LPT)
 - 💭 Silicon Labs CP210x USB to UART Bridge (COM3)

END