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ROPIX P18 Hardware

I. ROPIX P18 Profile Overview



Pic 1. Overview

A cabinet is composed of 64 LED Strips, 64 pixels on horizontal, and 32 pixels on vertical; the dimension is 1152mm×576mm.



Pic 2. Front-side Overview



Pic 3. Back-side Overview

1- Upper Beam	2- Bottom Beam	3- Left Side-board
4- Right Side-board	5- Left Side-fast lock1	6 -Left Side-fast lock2
7-Right Side-fast lock1	8-Right Side-fast lock2	9-Left Davit
10-Right Davit	11-Handle	12-Handle Holder
13-Upper Buckle	14-Bottom Buckle	15-LED Strips
16-Upper Beam2	17-Signal Switch	18-Signal Indicator and Tester
19-Fuse	20-AC Cable with Female Connec	etor
21-AC Cable with Male Connector	r 22-Left Fast lock	23-Right Fast lock

II. Parameters

Characteristic	Value	Unit	Condition
Supply voltage	220	V	AC
Maximum power consumption	250	w/m ²	-
Operating power consumption	90	w/m ²	-
Pixel pitch	18	mm	-
Brightness	≥4000	cd/m ²	-
View angle	120	deg.	120(vertical)
Gray scale	4096	Level	
Refresh frequency	900	Hz	-
Frame frequency	60	Hz	
View distance	15~180	m	-
Operating temperature	-20~60	°C	-
Operating humidity	10~90	%	-
Maximum control distance	100	m	without relaying

II. Accessories introduction

Sending Card



The *Sending Card* is to transmit data to receiving card on display. It has four kinds of interface, which are DVI interface, additional function interface, data output interface, and external power interface.

DVI interface: DVI interface is a data input port, which is exactly designed for Graphic card signal transferment.

Additional function interface: it is to control grey level, LED display power switch, locking display, and showing the area setup. To operate with LED Display, this interface is to connect with serial port for receiving card setup.

Data output interface: There are two output interface on each sending card. It is to connect with Receiving Card via pin-to-pin CAT5 UTP (4

unshielded twisted paired). The sequence of the twisted paired is: white-orange, orange, white-green, blue, white-blue, green, white-brown, and brown. It is shown as below. Both sides are the same sequence.



Data cable RJ45 connection sequence

External power interface: The power comsumption for sending card is 5V. If sending card is working without support from computer, external 5V power supply is needed to link to this interface. Besides, there are two indecators (one red, one green) next to this interface. Red indecator represents power supply, and green indecator represents data transferment. If the card is working properly, red indecator is on and green indicator is supposed to be flashing.

Receiving Card



Receiving card is building-in inside of each cabinet. The function is to receive data from sending card via Cat5 cable, then transfer data to led display signal. 5V power supply is required as well. The necessary setup is needed when a new receiving card is placed.

Maintenance Tools



Pry bar





The tools are shown as above. Each ROPIX P18 cabinet is composed of 32 LED Strips. All LED strips are fixed on cabinet by two buckles. When LED strips replacement is needed, before removing LED strips, pry bar is needed to pry strips out smoothly without any damage.

III. ROPIX P18 Installation

Cabinet Assembly

The design of ROPIX P181 is focused on fast and easy assembly. Two sets of bottom fast locks and two sets of side fast locks are adopted.



Bottom fast lock



As shown before, P18 LED curtain contains two fast locks on each side of the bottom. The ROPIX P18 needs to use these two fast locks to fix all panels on vertical.

Controlling System Installation

a) Cable connection method

Graphic Card ^{Via DVI} → Sending Card ^{Via Cat5 UTP} LED curtain wall

b) Install Sending Card





The *Sending Card* is installed in an unused PCI socket of control computer. Additional function interface is connected to Serial port. And

two signal output ports, U port and D port will connect ROPIX P18 via cat5 cable.



Sending card cable connection method

Three cables will be linked to sending card while the certain wall is working, which are DVI cable, Serial port cable, and Cat5E cable. DVI cable will be plugged to DVI port for data input to sending card; Cat5E cable will output signal data to receiving card; and proper Serial port connection is necessarily required when ROPIX P18 setup is needed.



One sending card can only support 1024×768 pixel dots, when you combine the cabinets, you have to make sure you does not exceed the maximum.

ROPIX P18 Software

I. Software Installation

Insert disc of LEDStudio into CDROM, click setup file to install LEDStudio to computer harddisk. The serial number and password are asked during installation. The Serial number is 888888, and password is: 168. Please refer to LINSN user's manual for software operation detaill

II. Software setup

After software installation completed, ROPIX P18 setup is needed to be launched by software. Two parts of setup are required, 'Receiver Setup', and 'Display Connection Setup'.

a. Receiver Setup

1. click 'option' menu, then click 'software setup' in the following picture.



2. After active 'software setup', type 'linsn' on keyboard, pop-up menu will come out for requiring password, which is '168'.

Software Setup	
Play Window Auto Networking Other	1
 Lock to LED Scree Multi-LED Combination/synchronism Combination/synchronism Setting 	
C Floating LED Numb	
Screen1	
Start X: -20 Width(W): 300	
Start Y: -20 Height(H): 220	
Alwayon top Frames: 30	
Save Setup Close #	助

Software	Setup 🛛	<						
Play Window	Auto Networking Other	1						
C Lock	to LED Scree							
C Float	Input Password							
Screen1 Start X:	Please input Password: Ok							
Start Y:	Cancel							
M Enab								
🔲 Alwa	yon top Frames: 30							
	Save Setup Close 帮助							

3. Setup hardware parameters menu will appear after key in password. Select 'receiver', click 'load from files' in the window.

Setup hardware parameters	X							
Sender Receiver Display connection								
Scan/drive mode								
Performance/effect setup								
Led display refresh frequency: 140 HZ 🔽 Synchronous refresh Gray level: Normal 1024 💌 level								
Scan clock: 6.5 💌 MHZ duty ratio: 85 %								
Row blanking time 300 ns Grey equalize: 1								
Virtual display								
L Use row signal D, twice pixel height								
Load capacity setup								
Brightness efficiency (including blanking): 57.1% Min OE width(>90ns): 3966 ns								
Intelligent setup								
Pixel by pixel/ module by module correction Correction mode								
Edit correction data Load from files Save on files Send to receiver Save on receiver								
Exit Helg	,							

4. Choose ready upload control system files which is provided.

Setup hard	are paramete	ers			
Sender Recei	ver Display con	nnection			
-Scan/drive n	4T TL				
Present so	41 XF			🗹 🔼	4
Performa	查找范围(I):	🚞 SetData	•	🗢 🗈 📸 🎫	
Led dis		. RCG			✓ level
Scan o	我最近的文档				%
Row b	B				
🗖 Vir	桌面				
🗖 Us	>				
-Load capa	我的文档				
Brightne					
Max wid	我的电脑				
	(1)				-
I	网上邻居				1
-Pixel by pixe				¥	
Correction		文件名(M):		▼ (打开,@)	
Edit o		文件类型 (I):	Receive-Card Files (*. RCG)		
				77	
				Exit	летр

5. Click 'send to receive' in picture to see mention window, then click 'yes'.

Setup hardware parameters							
Sender Receiver Display connection							
Scan/drive mode							
Present scan mode: Full-color real pixe 1 File: P40 curtain wall							
Performance/effect setup							
Led display refresh frequency: 140 HZ 🔽 Synchronous refresh	Gray level: Normal 1024 v level						
Scan clock: 6.5 MHZ	duty ratio: 85 %						
Row blanking time 300 ns Grey	y equalize: 1						
Virtual display							
Use row signal D, twice pixel height							
- Load capacity setup							
Brightness efficiency (including blanking): 57.1% Min OE width(>90n;	sy: 3966 ns						
Max width: 204 Actual width: 128 Max height: 256 Actual	Height 256						
Intelligent setup Load from files Save on files Set on files	Save on receiver						
Pixel by pixel/ module by module correction							
Correction mode 🖲 Single pixel 🔿 2X2 module 🔿 4X4 module 🔿 8X8 module							
Edit correction data Load from files Save on files Send to receiver Save on receiver							
	Exit Help						

6. Click 'yes' in the mentioned 'send data successfully' window. For example:

Present scan mode: Full-	color real pixe 1	File: P40	curtain wall			
-Performance/effect setup						
Led display refresh frequ	ency: 140	HZ 🔽	Synchronous refresh	Gray level:	Normal 1024	💌 level
Scan clock:	6.5	▼ MHZ		duty ratio:	85	%
Row blanking time	300	ns	G	rey equalize:	1	
–Load capacity setup Brightness efficiency (inclu Max width: 204 A	ding blanking): ctual width: 128		能 定 し	is): 396 Height 256	66 ns	
Intelligent setup	Load from files	Save on files	Send to receive	er Save or	receiver	
ixel by pixel/ module by modu	e correction xel	C 4X4 modu	ile C 8X8 module			

7. Click 'save on receiver' to show 'data save successfully' window.

Then operation is over.

Setup hardware parameters							
Sender Receiver Display connection							
Scan/drive mode							
Present scan mode: Full-color real pixe 1 File: P40 curtain wall							
Performance/effect setup							
Led display refresh frequency: HZ 🔽 Synchronous refresh Gray level: Normal 1024 💌 level							
Scan clock: 6.5 VIII MHZ duty ratio: 85 %							
Row blanking time 300 ns Grey equalize: 1							
Virtual display							
Use row signal D, twice pixel height							
Load capacity setup							
Brightness efficiency (including blanking): 57.1% Min OE width(>90ns): 3966 ns							
Max width: 204 Actual width: 128 Max height: 256 Actual Height 256							
Intelligent setup Load from files Save on files Send to receiver							
Pixel by pixel/ module by module correction							
Correction mode 💿 Single pixel 🔘 2X2 module 🖉 4X4 module 💭 8X8 module							
Edit correction data Load from files Save on files Send to receiver Save on receiver							
Exit Help							

b. Display Connection Setup

1. Click 'Display connection' and clicks 'load from files' in the

window.

Setup hardware pai	ameters and a second	
Sender Receiver Display Setmode: © Simple	connection C Normal C Complex	
Remark:for single display	.nly!	
Type: Single-color displ	ay Virtuel dispely	
Contraction Gama 2.8 Red brightness 255	Green brightness 255 Blue brightness 255	
Link setting	: down C right down	
Horizontal cards	PCS	
Line U vertical cards: Line D vertical cards	0 PCS	
Width of card	96 Piexl	
Height of card	Piexl	
	Load from file Save to file Send to receiver	ive to receiver
	Exit	Help

2. Choose ready files (*.CON) in the pop-up window.

Setup hardware par	ameters				×
Sender Receiver Display	connection				
Set mode: 💿 Simple	C Normal	C Complex			.
Remark:for 打开				? X	
-Screen si □ 査找范围(I): 🍋			* === -	
Type: S					
🖲 Gama [.con				
我最近的文	挡				
-Link setti 桌面					
Link mod					
Horizontz					
Line U ve					
Line D ve					
Width of					
Height o					
网上邻居					
	文件名 (M):	. CON	•	打开(0)	
	文件类型 (<u>t</u>):	Connect Files (*. CO)	1	- 取消	il l
		,			
		Load from file	Save to file	Send to receiver	ave to receiver
				Exit	Help

3. After loading the file, click 'Send to receiver' to update the setting, and the click 'Save on receiver' to save all setting. Then the operation is over.

Sender Set mode: Display	C Simple Normal C Complex 2TY: 1 Update display QTY	
Type	Image: real pixel display ▼ Horizontal card 3 Vertical card 2 Image: Virtual display ama 2.8 C define Edit Red brightness 255 Green brightness 255 Blue brightness 255	
1	123Network cableNetwork cableNetwork cableorder No. 6order No. 5order No. 4width:128width:128height:112height:112	
2	Network cableNetwork cableNetwork cable order No. 1 order No. 2 order No. 3 width:128 width:128 width:128 height:112 height:112 height:112	
Main Orde	Table 1 No. sender U cab 👻 Extension cable 1 No. 6 Width 128 Height 112 Screen area color correction	