

# Outdoor & Indoor Full Color LED Display Screen Installation Manual



Thank you for your selected Visual Lumen's outdoor & Indoor Full Color LED Display. For proper operation, you must carefully read this manual before using.

This LED display provides various functions and convenience. Proper operation can bring such profit to you and always keep product working well in its whole lifetime. Contrarily, improper operation will lead to short lifetime, malfunction, fire disaster or any other serious accident as well.

If product fails to work, at first, you should read the section Fault Detection in this manual for solution. If problem still exists, contact local dealer or service center for help.

Tel: +86-755-28704020 Mobile: +86-13802700271 Web: www.visuallumen.com Email: sale@visuallumen.com Online support: Msn: xiest9@hotmail.com Skype: leddisplayme Yahoo: leddisplayme Add: Dawang Industrial Park, Shiyan, Bao'an District, Shenzhen, Guangdong, China

# **Table of Contents**

I . Installation procedure	3
II. Unpacking inspection	4
III. Control System installation	5
IV. Unit cabinet Test	23
V. Cabling	
VI. Screen Test	
VII. Troubleshooting	29
VIII. Maintenance	

# I. Installation procedure



## **||. Unpacking inspection**

This section describes the procedure and notice during unpacking inspection.

The customer representative and engineering supervisor should be on site during unpacking inspection. Otherwise the side who opens packing boxes alone should take the responsibility of any missing or damage of goods.

The goods should be checked according to packing list as followings:

1). Checking of 《packing list》

2). Checking if there is any damage on goods box, and checking the goods have been dispatched to right site for installation.

3). Unpacking goods box and checking whether goods match packing list.

4). Any problem such as lacking of goods, wrong goods, or any damage of goods, desquamation of element should be feed back to supplier on time for fast processing.

5). If there is no any problem of the goods, customer representative and engineering supervisor should sign on report of 《Unpacking Inspection Report》.

6). Both sides keep one 《Unpacking Inspection Report》, and engineering supervisor is required to send 《Unpacking Inspection Report》 back to supplier for pigeonholing.

### [Notice]

1). LED display screen is an expensive equipment, good packing and water proof method is necessary during transportation, shockproof sign should be marked on packing box and exposing to sunshine or rain is not allowed.

2). It should take us at least 30 minutes to wait to open the box when the equipment is moved from a relative low temperature and dry place to hot and high moisture place, otherwise the equipment will be damaged due to agglomeration of moisture on to the surface of equipment. Install all screens by yourself now, Professional LED display technical support, website www.visuallumen.com +86-13802700271

# **III. Control System installation**

## 1. Installation of control computer

Installation of sending card and DVI graphic card inside control computer, and make the cable connection as the following chat:



Graphic card and Sending card inside computer Control system install steps are as follows:

1.

- Making sending card and graphic card inserted to the empty PCI slot.
- 2. Using DVI cable to connect sending card with graphic card.
- 3. Connecting USB cable between PC and sending card
- 4. Using a network cable to connect receiver card.



Note: If we want to setup the screen from *LED Studio* software, we'd input the network cable to the "U"

port (please check Image 3-7), If we input network cable to "D"port, it can play program correctly but can't setup in success by this port without any changes by software.



Default port by software, please connect to this port while do the screen setup

## 2. Graphic card setup

2.1 Install graphic card driver and setup graphic card as these steps.

1). Click right mouse on desktop, select "ATI CATALYST(R) Control Center", open ATI control center(Show as Image 3-7, Image 3-8)

Arrange Icons By Refresh	Jay.mo
aste ddis	P.
aste Shortcut	5 <b>.</b>
ndo Move	Ctrl+Z
044	•

Image 3-7



Image 3-8

## 2). Click and select "Displays Manager" on the left menu bar (Show as Image 3-9)

ATI CATALYST® Control Center	- ×
Freferences - Profiles - Preferences - Preferences -	
Graphics Settings Welcome Information Center Graphics Software Graphics Hardware Display Manager Display Options Monitor Properties 0 Solution Ocolor Video VVU Recover Welcome Main: Attached displays currently disabled: Desktop and Display Setup Main: Desktop and Display Setup	
Image: Selected Display on: RADEON 9200 SERIES - Secondary         Image: Selected Display on: RADEON 9200 SERIES - Secondary         PH107E/S/T7 [Single]         Desktop area:       Color quality:         1024 x 768       High (32-bit)         Botation:         Standard Landscape (0*)       Force         Desktop area:       OK         Apply       Discard	75 IS

**Image** 3-9

3). Right mouse click on the grey monitor which is described "attached displays currently disabled" showed in Image 3-9, then select and click "Clone Main with digital panel" from the pop-up menu (Show as Image 3-10), select "Yes" (Show as Image 3-11), you'll see the result from Image 3-12



Image 3-10



Image 3-11

ATI CATALYST® Control Center
Image: Settings       Image: Settings         Image: Settings       Image: Settings
Welcome Information Center Display Options Marke Descriptions Marke Descriptions Marke Descriptions Marke Descriptions Marke Descriptions Marke Descriptions Marke Descriptions Marke Descriptions
Image: Monitor Properties U         Image: Digital Panel Properties         Image: Digital Panel Panel Properties         Image: Digital Panel
Image: Contraction of the original of the display on the original of the display of the the display
Basic OK Apply Discard Defaults

Image 3-12

4). If we want to set "play in background" we'd select the menu "Extend Main onto digital panel", show as Image 3-13.

Ti catalyste c	ontrol Center - ×
Graphics Settings Welcome Information I Display Opti Monitor Prop Digital Pane SOD Color Wideo VPU Recov	Center Services 0 Properties er Attached displays currently Attached displays currently To make changes, drag or right-click the display rcons. Displays Display Cons. Desktop and Display Setup Main: Clone
Basic	Selected Display on: RADEON 9200 SERIES         PH107E/S/T7 + LED 1024×768 [ Clone ]         Desktop area:       Color quality:         Desktop area:       Color quality:         1024 x 768       High (32-bit)         Rotation:       Standard Landscape (0")         Standard Landscape (0")       Force         UK       Apply       Discard

Image 3-13

5). If we want to play video, please spread "Video" menu and click "Theater Mode", then select "Same on all", click "apply" (Show as Image 3-14)



Image 3-14

### 2.2 Setup for another interface

Press the right key of the mouse in the blank place of the desktop and click **[Property]** menu in the shortcut menu which has popped out. Select **[Set]** option in the **[Display property]** dialogue box which has popped out and click **[Senior]** button to select **[Display]** option. There is a red triangle button which will turn green when being clicked in the right side of FPD display and then click **[Application]** button.



#### Note:

If video is played, select [Cover] option in the senior property and click [Copy mode option] button, then select [Totally identical] and click [Application] button.

Properties	? 🗙
Theater Mode Options	
1	
These overlay settings are only available in dual-controller Clone mode and extended desktop configurations, and not single-display configurations.	
Overlay Display Mode	
Theater Mode Settings         Set video aspect ratio to         Same as source video         C Full screen video	
Display device aspect ratio C 16:9 (Widescreen)	
OK Cancel App	

### 2.3 NVDIA series of display cards

Press the right key of the mouse in the blank place of the desktop and click **[Property]** menu in the shortcut menu which has popped out. Select **[Set]** option in the dialogue box of **[Display property]** which has popped out and the property dialogue box will appear:



Click [Set] and then click [Senior] button, the senior dialogue box illustrated as the following figure will appear:

💶 Plug and Pl	ay Monitor and	NVIDIA GeForce4 MX 4 ?	×
Color Ma	anagement	GeForce4 MX 4000	
General	Adapter	Monitor Troubleshoot	
Display If your screet	n resolution makes s	creen items too small to view	
font sizes on DPI setting:	ly, click Cancel and	go to the Appearance tab.	
Normal size	(96 DPI)	~	
Normal size (	(96 dpi)		
Compatibility			5
Some progra computer aft	ms might not operate er changing display :	e properly unless you restart the settings.	
After I chang	e display settings:		
O Restart th	ne computer before a	applying the new display settings	
<ul> <li>Apply the</li> </ul>	new display settings	s without restarting	
O Ask me b	efore applying the n	ew display settings	
Some games and other programs must be run in 256-color mode. Learn more about <u>running programs in 256-color mode</u> .			
		OK Cancel Apply	

The left hand side will appear menu after clicking **[GeForce4...]** and the following figure will appear after clicking nView of the menu on the side of the left hand:

	Plug and Play Monitor and NVIDIA GeForce4 MX 4      General Adapter Monitor Troubleshoot     Color Management GeForce4 MC 4000
GeForce4 MX 4000  Performance & Quality Settings Color Correction Video Querlay Settings Tools NVRiotate Screen Resolutions & Relesh Rates Desktop Management Menu Editing	MALE this the primary display
Q	Disable auto-panning on secondary device (viewport lock)
	Detect Displays Device Settings >> OK Cancel Apply

Select to copy in the nView mode and click **[Application]** button. If video is to be played, click **[Troubleshooting]** or **[Performance]** property page in the senior property, which is illustrated as the following figure:

Plug and Play N	lonitor and NV	IDIA GeForce4	MX 4000 <b>? </b>
Color Management		🙆 GeFo	rce4 MX 4000
General	Adapter	Monitor	Troubleshoot
Are you having problems with your graphics hardware? These settings can help you troubleshoot display-related problems.			
Hardware acc	eleration		
Manually control the level of acceleration and performance supplied by your graphics hardware. Use the Display Troubleshooter to assist you in making the change.			
Hardware ac	celeration: N	one	Full
All accelerations are enabled. Use this setting if your computer has no problems. (Recommended)			
Enable write combining			
		DK Can	cel Apply

The hardware acceleration is established as the basic acceleration or acceleration without hardware and then click **[application]** button.

#### Note:

#### More specific installation explanation about the display card refers to the instruction of the display card purchased.

## 3. LED studio setup

- 3.1 Download software: http://www.leddisplay.me/software/Ledstudio.rar
- 3.2 Install Double Click here
  Sn: 888888
  Run software Double Click here
  Before you connect the system hardware, after running the software, there will be

After our connecting the system well, this window will not pop up And the version of LED studio should be over 10.0

Cancel

Retry

**Update**: If we want to use the latest software, just operate as below:



1.com +86-13802700271

## 4. How to Design Program



#### 4.2 Add step



#### 4.3 Add file window



4.4

	<ul> <li>Elay</li> <li>Play Lest</li> <li>Play Next</li> <li>Pause</li> <li>Stop</li> <li>Notify</li> </ul>	
Control	Position	Full Window         Horizontal 1/2         Horizontal 1/3         Horizontal 1/4         Vertical Full         Vertical 1/2         Vertical 1/3         Vertical 1/3         Vertical 1/4         Vertical 1/3         Vertical 1/4         Vertical 1/4         Vertical 1/4         Vertical 1/3         Vertical 1/4         Vertical 1/4 <tr< th=""></tr<>

Click here to add video or pic or .doc, .txt file etc

4.5.

📕 LedStudio8.88D - Screen1 - new.lsd	
<u>File Control Tool Option Test H</u> elp	
	- A A & G G
Screen1	Name: File   StartX: 0   Width: 171   Lock   StartY: 0   Height: 134   File   Display Path   Please add file to play.

#### 4.6 **Open the file from your computer**



## 5. How to Play Program

Click here to play	Click here to play all the time
LedStudio8.28D - Screen1 - net         File       Control       Tool       Section       Test         D       D       D       D       D       D       D	
Screen1	<ul> <li>✓</li> <li>Name: File Frame: Single ↓</li> <li>StartX: 0 Width: 142 Lock</li> <li>StartY: 0 Height: 134 Timer</li> <li>File Display Path Piloso654.wmv</li> <li>Backgi Center ↓</li> <li>Effect: Center ↓</li> </ul>

4. Set up play window

If we want to adjust the screen play window on PC monitor, change as list:

Eile Control Tool	Option         Test         Help           Screen         Combination/synchronism           Brightness/Contrast/Color(B)         Screen           Screen         Area (Y)           Play Background         Lock LED Screen Properties           Turn off LED screen power         Schedule Table           Schedule Hijde Setup         Language	e Frame: Single Width: 142 Lock Height: 134 Timer	
	LED Screen Monitor Hardware Setup		
	≦oftware Setup User Setup( <u>U</u> )		
	Backgr Effect:	Center	

Software Setup	×
Play Window Auto Networking Other	
Lock to LED Scree     Multi-LED Combination/synchronism Combination/synchronism Setting     Floating LED Numb     Update LED Numb	
Screen1 Start X: 0 Width(W): 256 Start Y: 0 Height(H): 128	
Alwayon top Frames: S0	
Change the screen play window position on the PC	
Save Setup Close 帮助	

Just install LED studio by double click the software and enter its serial number "8888888", then start up LED studio, design the program as the LED studio user's manual we provided.

### **Operating Environment**

Operating system Chinese/English Windows98/me/2000/NT/XP/VISTA Hardware Configuration Pentium 300MHz or above ROM: 64M or above Graphics Card: Standard VGA 256mode or above

### **Related Software**

Microsoft Media player compulsory OFFICE2000—in case of \*. doc files RealPlayer—in case of RealPlayer files

## IV. Unit cabinet Test

Test each unit cabinet to check whether it can work well before screen installation. Install all screens by yourself now, Professional LED display technical support, website www.visuallumen.com +86-13802700271





Image 4-4

Image 4-5

Image 4-6

Unit cabinet test steps are as follows:

- Before power on to unit cabinet, we'd check each power supply as Image
   4-3 Image 4-4, Image 4-5 to avoid short-circuit. If ok, go next step.
- 2. Supply power to the unit cabinet which has been checked as step 1.
- 3. Press reset button on the receiving card as Image 4-1, Image 4-2 to check whether the unit cabinet will work well, such as Image 4-6.
- 4. You also could connect the unit cabinet with control computer to test.

# **V**. Cabling

After your screen fixed well (Show as Image 5-3), then you can connect the power cables and signal cables now.









- 1. **Power cables** connecting: The power cables inside unit cabinet is ready before goods delivery; we just need to connect the power supply cables between each unit cabinet outside as the cad drawing or picture diagram we provided.
- 2. **Signal cabling**: The Signal cable inside unit cabinet is ready before goods delivery; we just need to connect the signal cable between each unit cabinet outside as the cad drawing or picture diagram we provided.

We could take Image 5-1, Image 5-2 and Image 5-4 for reference.

If there is some problem to understand the cad drawing or picture diagram, you could ask our sales to provide you some video of cabling.

# VI. Screen Test

To check and ensure that each unit cabinet is installed and fixed steadily, the surface of display screen is flat and to ensure the numbering of unit cabinet is compliant with numbering rule.

To check and ensure the power cables are connected correctly. (We could test as step IV)

To check the signal cables are interconnected correctly, ensure the pin sequence definition between the two ends is the same, and ensure the signal cable is inserted to jack with right order.

Power on the control computer, run the control software and power on LED display screen after ensuring all cabling is correct. To check if LED display screen is working normally. If some part of display is displayed upside down or some LED tube is not lighted on, please power off the display screen and check the cabling again, till the display is working normally.

Please refer to user manual of display software for operation and maintenance of LED display.

# VII. Troubleshooting

## Power and signal indicator light

Indicator	Color	Status	Problem
Power	Dad	on	Normal
	Ked	off	No power supply
Signal	Green	Glittery	Normal
		off	No signal
		On but no	Need to meeton a over over he
		Glittery	ineed to restart power supp

### Detail:

### **Power supply test**:

- 1. Check sending card's red light whether it is lighting, if it is lighting all the time, please go the second step, if not, please shut off the computer and put the sending card to slot again and start the computer again.
- 2. Check red light in each unit cabinet, if it is lighting all the time, it declares the power supply is normal, if not, there is now power supply, check the power connecting.

### Signal test:

- 1. Check sending card's green light whether it glitters regularly; if glitters, please enter the third step; if not, please restart the computer; before entering Win98/2K/xp/vista, please check sending card's green light whether it glitters regularly, if so, please enter the second step, and check DVI cable whether it is connected well. If the problem still exists, there must be something wrong among sending card, graphic card and DVI cable, please change them, then redo following the first step.
- 2. Please follow the Chapter III in the manual to set, or install again, then set; if the green light can't glitter regularly after doing so, please redo following the first step.
- 3. Check receiver card's green light (data light) whether it and sending card's green light glitter synchronously. If so, please enter the fifth step, and check red light (power) whether it is on; if so, please enter the fourth step, if not, please check red light (power protection) whether it is on; if not, please check power whether it is connected wrong or no power output; if the power is on, please check the supply voltage whether it is 5V; if so, please turn off the power, and move the hub card and 50P lines, then retry. If the problem still

exists after doing above, please change the receiver card, and redo following the third card.

- 4. Check network cable whether it is connected well, or whether it is too long; check network cable whether it is produced following standard. If the problem still exists after doing above, please change the receiver card, and redo the third step.
- 5. Check display power light whether it is on, if not, please enter the fourth step; check hub card interface definition line whether it matches with unit board.

## LED screen system not found



**Image 7**-1

If it alert "LED screen not found!" showed as Image 5-4, It tell us something wrong with the USB cable connecting, check USB cable connecting again, if problem still exist, check whether the USB port of computer works well, if USB port can't work, just change another computer or use one USB-RS232 cable to connect computer and the USB cable to sending card, then install the USB-RS232 driver, it will work now.

Note: If we click "cancel" as Image 7-1, or without connecting USB cable, The screen can show video well if all the setup is correct, but we can't change any setup of screen.

### All unit cabinet display the same content

If all unit cabinetes of your screen display the same content after connect them correctly, just load the "\*.CON" file we provided as the steps list:

- 1. Click "Option" "Software Setup" show as Image 7-2
- 2. Enter "linsn" and input the password "168" show as Image 7-3
- 3. Click "Display connection" then click "load from file" show as Image 7-4

4. Select the "\*.CON" file we provided and click "Send to receiver" and "Save to receiver" show as Image 7-5

👪 LedStudio9.14D	- Screen1 - new.lsd	_ 🗆 🗙
<u>File Control Tool</u>	Option Test Help	
	Screen Combination/synchronism Brightness/Contrast/Color( <u>B</u> ) Screen Area ( <u>Y</u> ) Play Background Lock LED Screen Properties Turn off LED screen po <u>w</u> er	
-	Schedule <u>T</u> able Schedule Hi <u>d</u> e Setup	
	Language Hide Play window	
	LED Screen Monitor Hardware Setup	
	Software Setup User Setup(U)	



Software Setup	×
Play Window Auto Networking Other	
C Lock to LED Scree C Multi-LED Combination/synchronism Combination/synchronism Setting Floating LED Numb	
Scree Input Password Star Please input Password: Ok Star ******* Cancel	
Prames: jou	
Save Setup Close 帮助	



ip nard	ware parame	ters						
nder   F	Receiver Dis	splay connec	tion Correc	ted				
mode:	C Simple	۲	Normal	C Comple	x		🔲 Use Auto-link	
Remark	(:The dialog of :	settings for sin	gle or multi reç	gulation led-scri	een.	Display QTY: 1	Update display Q	2TY
display	/1							
Type:	virtual pixel o	display 💌 Ho	rizontal card	4	Vertical card 3	Virtual disp	play	
€ G	ama 2.8	define Ec	fit Red brig	htness 255	Green brightness	255 Blue brightnes	s 255	
	1	2	3	4				_
1	Network cable order No. 12 width:64 height:64	Network cable order No. 11 width:64 height:64	Network cable order No. 10 width:64 height:64	Network cable order No. 9 width:64 height:64				
2	Network cable order No. 5 width:64 height:64	Network cable order No. 6 width:64 height:64	Network cable order No. 7 width:64 height:64	Network cable order No. 8 width:64 height:64				
3	Network cable order No. 4 width:64 height:64	Network cable order No. 3 width:64 height:64	Network cable order No. 2 width:64 height:64	Network cable order No. 1 width:64 height:64				
Main ( Order	cable empty No. 1	Vidth	Extension ca	ble 1 Iht 0		Abnormity	Screen area color correctio	n
		Save Ca	rd For maintain	Load fro	m file Sav	re to file Send I	to receiver Save to rec	ceive

Setup hardware parameters			×
Sender Receiver Display connection Corrected			
Set mode: C Simple   Normal	Complex	🔲 Use Auto-link	
Remark:The 打开		? × splay QTY	
display 1 查找范围 (I): [			
Type: vir		_	
<ul> <li>Gama</li> <l< td=""><td>.con ŧ.con</td><td></td><td></td></l<></ul>	.con ŧ.con		
Recent			
Net C			
widt 桌面			
Net 🔗			
2 widi 我的文档			
Net			
3 <mark>ord</mark> 我的电脑			
Main cable	2 1004-750 0-4	tππ(α)	
		ゴカモ prrection	
□ ↓	nnect Files (*.CON		
Save Card for maintain	Load from file Save to file Send to re	ceiver Save to receiver	1
			1
<b>Image 7</b> –5		Exit Help	

# VIII. Maintenance

• We provide free training for our customers, and provide the training video, pictures and files all the screen life time.

• As we promise, we provide one year warranty to our customer for LED display.

• During the warranty period, we will repair the equipment units free of charge unconditionally, if the deficiency caused by product quality problem or installation. We take no responsibility if the failure coursed by disobeying operation regulations of the clients or under the irrevocable exterior factors stipulated by our country.

• We promise a follow-up service for the life time of the equipment. When the warranty expires, we can continue to provide maintenance service for whole life of the equipment, and certain service fee will be charged.

• We can give the quick response for unit repairing and promise to complete repairing within 5 days after we receive the units. We can also dispatch engineer to site to support serious system deficiency on the request of the customer.

◆ After our customer purchases our LED electronic display, we will also provide our customer with the service of software upgrading free of charge. Our customer can download the new version from our website or by e-mail.

Tel: +86-755-28704020 Mobile: +86-13802700271

Web: www.visuallumen.com Email: sale@visuallumen.com

Online support: Msn: xiest9@hotmail.com Skype: leddisplayme Yahoo: leddisplayme

Add: Dawang Industrial Park, Shiyan, Bao'an District, Shenzhen, Guangdong, China