R

Hisense

RO026AW
RO029AW
RO039AW
RO048AW

USER MANUAL

Read the manual carefully and ensure you have fully understood its contents before operating this device for the first time.

English

Safety Precautions

Declaration

Any content and service accessed through this device shall be the property of the applicable third party and subject to protection by regulations and laws on copyright, patent, trademark and other intellectual property rights. No part of such content and service may be modified, duplicated, published, uploaded, distributed, translated, marketed, or used to make and distribute products derived from it without the prior permission of the content owner or service provider.

The manufacturer hereby declares explicitly that the manufacturer shall not be held liable for any guarantee and conditions implied related to this device and any content and service, including but not limited to warranty on marketability, satisfactory quality, fitness for a particular purpose, accuracy, quiet use and nonviolation of any third party's rights. To the maximum extent permitted by applicable law, the manufacturer gives no guarantee on the accuracy, validity, timeliness, legitimacy and completeness of any content or service provided through this device, or the fitness of such device, content or service for your particular requirement, or the protection from interruption and error during operation of such device, content or service.

To the maximum extent permitted by applicable law, in any case, including fault or neglect, the manufacturer shall not be held liable for legal actions or indemnity obligation arising from any consequence as aresult of or related to anyinformation loaded in this device or use of such device, content or service by you or any third party .

Any content or service provided as it is together with this device shall be the property of the applicable third party, therefore Manufacturer gives no declaration or warranty on modification, suspension, cancellation, termination or abortion thereof, and shall not be held liable for legal actions or indemnity obligation arising thereof.

Manufacturer reserves the rights to restrict the use or access of certain content or service. As the contents and services are transmitted through third party's network and transmission facilities, Manufacturer undertakes no customer service thereof or the obligation for such customer service.

Statement

- The pictures and instructions in this user manual are for reference only, and may be different from the actual product. Please subject to the actual product. (This statement is valid throughout the entire user manual.)
- Quality upgrades, product design and specifications are subject to change without notice.
- The software content service applicable to this product depends on the third party provider, and some software may not be used due to network, region, service cycle and other problems, which has nothing to do with the product quality. Please contact the third party provider for relevant details.

This symbol alerts user about the presence of a dangerous voltage not isolated inside the product which can be sufficiently powerful to constitute a risk of electrocution.

This symbol alerts user about the presence of important operating instructions and maintenance in the document enclosed in the package.

ATTENTION
RISK OF SHOCK ELECTRIC

Do not open the back cover.
In no case the user is allowed to operate inside the device. Only a qualified technician is entitled to operate.

AC voltage: This symbol indicates that the rated voltage marked with the symbol is AC voltage.

DC voltage: This symbol indicates that the rated voltage marked with the symbol is DC voltage.

Class I product: This symbol indicates that it requires a safety connection of protective earthing.

Disposal of Used Electrical & Electronic Equipment

Packaging and electrical goods should be recycled appropriately, and not treated as household waste. Please dispose of this equipment at your applicable collection point for the recycling of electrical & electronic equipment waste. By ensuring the correct disposal of this product, you will help prevent potentially hazardous to the environment and to human health, which could otherwise be caused by unsuitable waste handling of this product. The recycling of materials will help conserve natural resources. Please do not therefore dispose of your old electrical and electronic equipment with your household waste. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Safeguards

Please read the following safeguards for your device and retain for future reference. Always follow all warnings and instructions marked on the device.

1. A note about safety and operating instructions
Read and follow all safety and operating instructions, and retain them safely for future reference.

2. Heed Warnings

Adhere to all warnings on the appliance and in the operating instructions.

3. Cleaning
Power off the device before cleaning. Do not use abrasive, alcohol, or aerosol.

4. Cooling
If the customer want that the LED screen working normally for a long time, he should pay attention for the cooling system to control the temperature inside the steel structure, at least less than 50 degrees Celsius.

5. Ventilation
Slots and openings in the cabinet are provided for ventilation, to ensure reliable operation of the device and to protect it from overheating. Do not cover the ventilation openings in the cabinet and never place the set in a confined space such as built-in cabinet unless proper ventilation is provided. Leave a minimum 10cm gap all around the unit.

6. Power Source
This device should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your local area, consult your local power company. The installation location is easy to operate and the electric control box must be locked. Power and grounding requirements compliance professionals or consult your service dealer.

7. Power-Cord Protection
Ensure that power/data cords are not stepped on or clamped, especially plugs, device sockets and where they are connected to the equipment. If there is a damaged power/data line, replace it immediately.

8. Lightning
In order to prevent electric shock, equipment must be properly grounded. If not grounded, the connector will expose you to the threat of electric shock.

9. Overloading
Do not overload power input cable and extension cords as this can result in a risk of fire or electric shock.

10. Object Entry

Please do not use sharp objects, metal contact signal connector or extend into the heat sink hole, so as to avoid the short circuit caused by product damage or contact, electrical hazards.

11. Servicing
Do not attempt to service this device yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

12. Damage Requiring Service
Disconnect the power and arrange for maintenance by a qualified professional in the following cases:
(a) When the power supply cord or plug is damaged.
(b) If the device does not operate normally by following the operating instructions, adjust only that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the device to its normal operation.
(c) If the device has been dropped or the cabinet has been damaged.
(d) When the device exhibits a distinct change in performance - this indicates a need for service.

13. Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

14. Safety Check

Upon completion of any service or repair to the device, ask the service technician to perform safety checks to determine that the device is in safe operating condition.

15. Heat

The product should be situated away from heat sources such as radiators, heat registers, or other products (including amplifiers) that produce heat.

16. Off-gassing

The device smells of plastic is normal and will dissipate over time.

17. Installation

(a) Professionals carry out installation and removal, and execute safety inspection after installation.

(b) The installed power cord should be hidden or protected to avoid tripping, crushing cause damage.

(c) The product input/output connectors are designed with safety protecion fuction, but it is not recommended to connect and disconnect while working.

(d) The input/output adapter must be hidden inside the product after installation is completed to avoid user misoperation(including misoperation in case of emergency).

(e) The LED screen should be fixed reliably onto the bracket.

(f) Upon the competition of installation, make sure the front LED module is fixed reliably and cannot be removed directly by hand. The openings of cabinet in the metal housing should be blocked effectively (but never by plastic parts without flame-resistant effect or other flammable meterials).

(g) A circuit breaker must be installed as a reliable disconnecting mechanism.

(h) Make sure the power cord is at least 14AWG, and the input connector is fixed reliably to the product.

18. Use environment requirements:

(a) Outdoor

(b) The operation ambient temperature should be kept between -20°C and 50°C

19. Daily use

(a)Check the screen whether it is connected well or not before powering on.

(b)Turn off the power when the LED display is not in use.

(c)When the AC power is turned off, wait at least 1 minute before turning it on again in order to prevent problems of the device.

⚠ Main switch is used as the disconnect device, the disconnect device shall remain ready for operating.

⚠ Apparatus with CLASS I construction shall be connected to a MAINS power connector with a protective earthing connection.

CONTENTS

Other Information

Item		Specification			
Model		RO026AW	RO029AW	RO039AW	RO048AW
Physical Parameters	Pixel structure	SMD	SMD	SMD	SMD
	Pixel pitch（mm）	2.6mm	2.9mm	3.9mm	4.8mm
	Module resolution（W X H）	96×96	84×84	64×64	52×52
	Module size（mm）	250(W)×250(H)	250(W)×250(H)	250(W)×250(H)	250(W)×250(H)
	Modules in cabinet（W X H）	2×2/ 2×4	2×2/ 2×4	2×2/ 2×4	2×2/ 2×4
	Cabinet resolution（W X H）	192×192/ 192×384	168×168/ 168×336	128×128/ 128×256	104×104/ 104×208
	Cabinet size（mm）	500(W)×500(H) 500(W)×1000(H)	500(W)×500(H) 500(W)×1000(H)	500(W)×500(H) 500(W)×1000(H)	500(W)×500(H) 500(W)×1000(H)
	Cabinet area（㎡）	0.25/0.5	0.25/0.5	0.25/0.5	0.25/0.5
	Aspect ratio	1:1/1:2	1:1/1:2	1:1/1:2	1:1/1:2
	Maintenance type	Front & Rear	Front & Rear	Front & Rear	Front & Rear
	Cabinet material	Die-casting Aluminum	Die-casting Aluminum	Die-casting Aluminum	Die-casting Aluminum
Photoekectric parameters	Screen brightness（cd/ ㎡）	4000~5000	4000~5000	4000~6000	4000~6000
	Color temperature（K）	6500±500	6500±500	6500±500	6500±500
	Horizontal viewing angle（° ）	≥140	≥140	≥140	≥140
	Vertical viewing angle（° ）	≥120	≥120	≥120	≥120
	Max.contrast	≥4000:1	≥4000:1	≥4000:1	≥4000:1
	Frame rate（Hz）	60	60	60	60
	Refresh rate（Hz）	3840	3840	3840	3840
	Bit deoth（bits）	14	14	14	14
	Brightness control	Manual/Auto	Manual/Auto	Manual/Auto	Manual/Auto
	Drive type	Constant Current Drive	Constant Current Drive	Constant Current Drive	Constant Current Drive
	Rated power（W/ ㎡）	≤800	≤800	≤800	≤800
	Power supply	AC100-240V, 47~63Hz	AC100-240V, 47~63Hz	AC100-240V, 47~63Hz	AC100-240V, 47~63Hz
Operating conditions	Working/Storage temperature（℃）	-20~50/-30~60	-20~50/-30~60	-20~50/-30~60	-20~50/-30~60
	Working/Storage RH	10%~90%/10%~95%	10%~90%/10%~95%	10%~90%/10%~95%	10%~90%/10%~95%

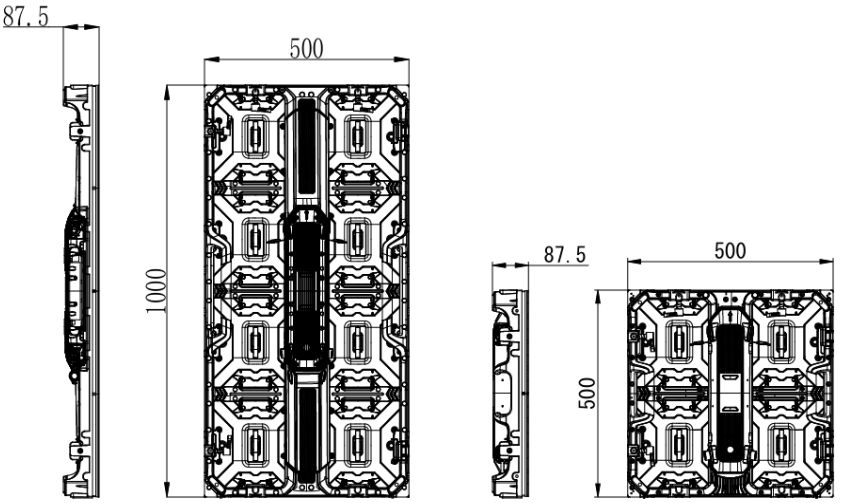
Connector Type	Connector Name	Description
Input	DVI IN	1x SL-DVI input connector • Resolutions up to 1920×1200@60Hz • Custom resolutions supported Maximum width: 3840 (3840×600@60Hz) Maximum height: 3840 (548×3840@60Hz) • Does NOT support interlaced signal input.
	HDMI IN	1x HDMI 1.3 input connector • Resolutions up to 1920×1200@60Hz • Custom resolutions supported Maximum width: 3840 (3840×600@60Hz) Maximum height: 3840 (548×3840@60Hz) • HDCP 1.4 compliant • Does NOT support interlaced signal input.
	AUDIO	Audio input connector
Output	4x RJ45	4x RJ45 Gigabit Ethernet ports • Capacity per port up to 650,000 pixels • Redundancy between Ethernet ports supported
Functionality	LIGHT SENSOR	Connect to a light sensor to monitor ambient brightness to allow for automatic screen brightness adjustment.
Control	USB	Type-B USB 2.0 port to connect to PC
	UART IN/OUT	Input and output ports to cascade devices. Up to 20 devices can be cascaded.
Power	AC 100-240V~50/60Hz	

Product Installation

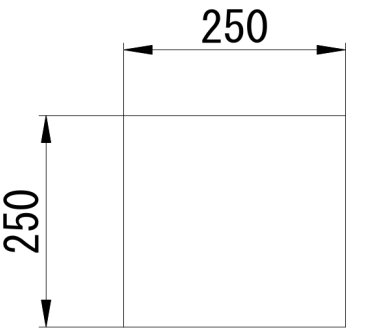
Cabinet Assembly

	Cabinet Assembly
Cabinet szie(mm) (W×H×D)	500 X 500 X 87.5/ 500 X 1000 X 87.5
Cabinet weight(kg)	8.0/14.2
Cabinet material	Die-casting Aluminum
Moudle size(mm) (W×H)	250 X 250

1. Cabinet Assembly Dimensions（mm）

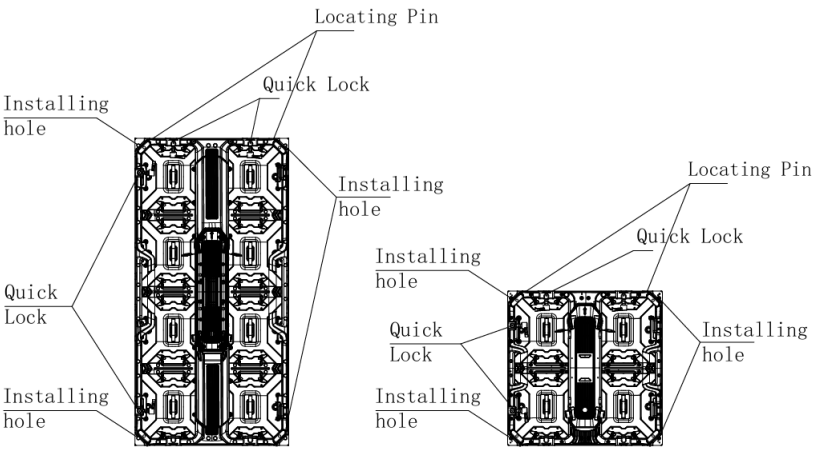


2. Module Dimensions（mm）



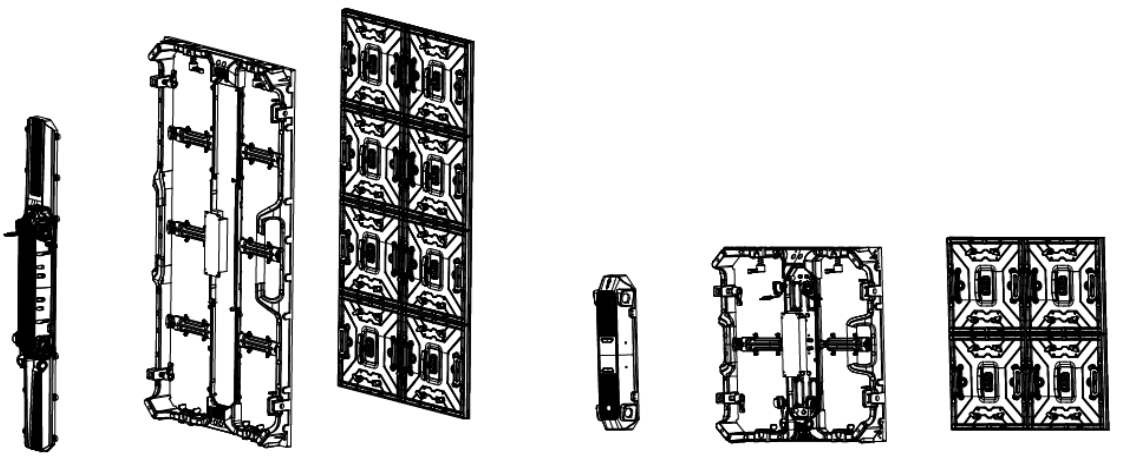
Product Componets

1. Cabinet



Notice:The cabinets are connected together by connecting plate, the upper and lower cabinets are positioned by locating pins when they are assembled.

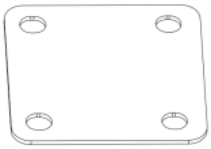
2.Display Unit Assembly



Module X 8 or 4; Cabinet X 1； Power box X 1（Including HUB board, RV card& PSU）；

Accessories

1 Product Accessories

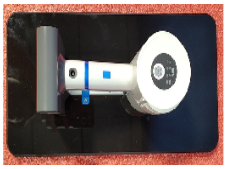


Connecting plate

Installing bolt

NOTE: these accessories are supplied with the product

2 Installation Tool Kit



Service Tool

NOTE: the installation tool kit(excluding Phillips screwdriver)is supplied with the product

Installation Precautions

1.Installation Environment

Before installing the LED Display, make sure the installation site is clean that has been properly prepared. Environmental requirements for the installation site: ambient temperature of -20℃ ~50℃ , 10%~90% RH. Make sure the bracket has been assembled at the installation site.

2.Module Installation Requirements

1)ESD Protection
Strict ESD protection is required during installation of the LED module. Please wear grounded anti-static gloves or wrist strap before touching the LED module.
2)Grounding
In order to protect the chip or LED module against damage caused by lightning or surge,all electric tools must be grounded reliably and SMPS (switch-mode power supply) housing and screen body in the cabinet must be properly grounded and separated from the heavy-current ground, during installation of the LED module.
3)Module Cleaning
Wipe the surface of the LED module gently with clean soft cloth damped with water. Do not wipe chemical liquid,so as to avoid damage or corrosion of the plastic parts, housing or surface adhesive of the LED module. Do not power on the LED Display until the cleaned surface of the LED module gets completely dry.
4)Preventing of Falling and Bumping
During installation and transportation of the LED module, do not drop, crush or compress the package, so as to prevent the LED module from falling and bumping and avoid such problems as kit breaking, LED module damage, scratching and breakage, or component fall-off.

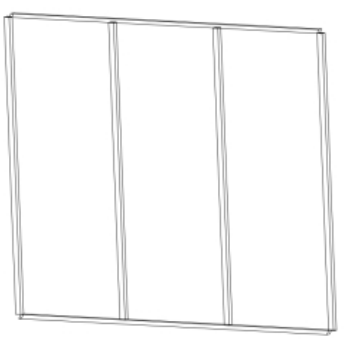
3. Installation Safety Requirements

1)Ambient Temperature
To ensure stable operation and fulfill its designed service life, the LED Display should work in the following environment ambient temperature of -20℃ - 50℃ , 10%-90% RH. Implement necessary cooling measures, such as using a fan or air conditioner, depending on the actual operating environment.
2)Power Connection
Always use a specialized SMPS for the LED Display, the total current of multiple cabinets connected to the same SMPS should not exceed 80% of the rated maximum output current of the SMPS.The ground terminal of the power input must be connected to an eligible grounding wire. Poor grounding may cause abnormal signal, unstable display or even blown fuse.
3)Screen Edge Wrapping
The wrapped edges of the screen body should be kept at an appropriate distance from the LED module, so as to prevent a short circuit. No edge wrapping or bracket welding is allowed after installation of the screen body.Use a separate cable to connect the screen body with heavy current to the distribution box, so that no other equimpment can affect the screen body due to electric leakage.The screen body should be grounded reliably.

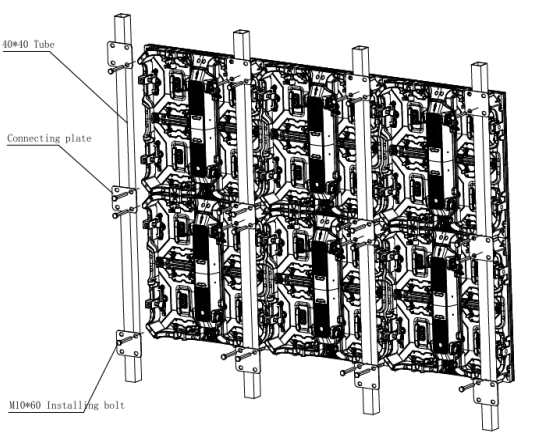
Instructions for installation of Steel Bracket(For example,3X2)

1.Installation Requirements for Recommended 40 x 40 Profile

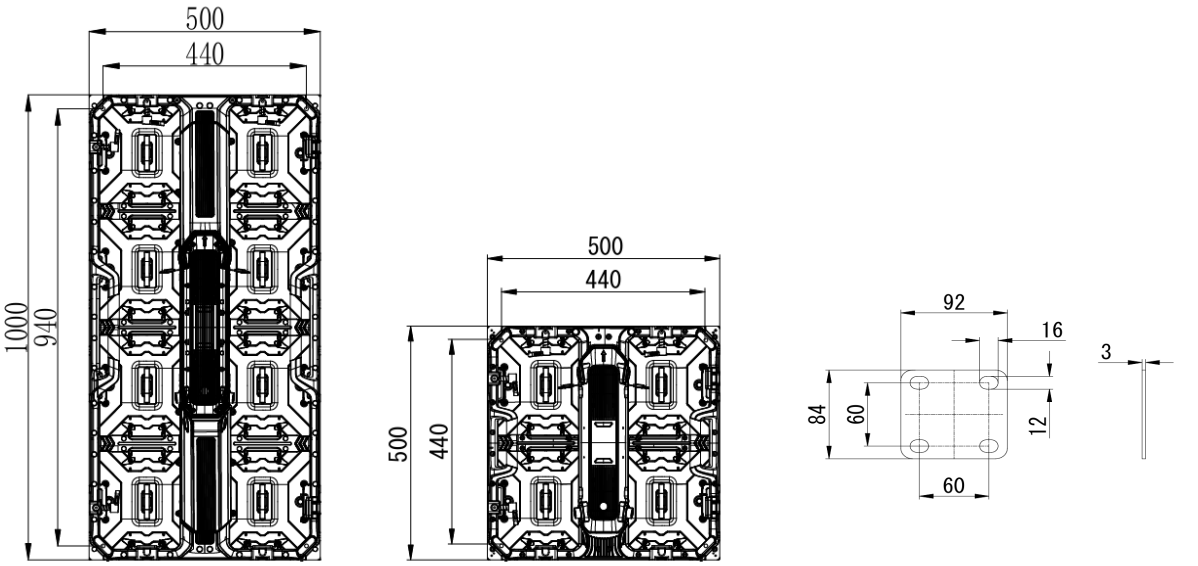
Check the installation flatness: when the bracket is finished, use a laser level to check whether the cabinet installation surface is flat, if not, make fine adjustments until it is smooth, if a cushion is required to ensure flatness during installation, do not use a wooden cushion or other cushions that are easy to deform.
Check the perpendicularity of the bracket: measure the vertical level by a vertical ruler or laser level, and make sure that the mounting holes will not be affected by the European-standard profiles during installation of the cabinet.



2.Fixation of cabinets to profile



3.Dimensions of Cabinet and Connetion Piece, Fixing Position of Cabinet on Profile(For reference)



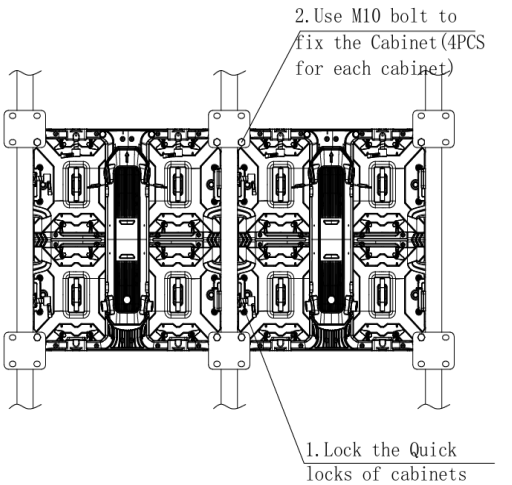
1)Take two pieces of cabinet assembled with hub board and power adapter board,and place them.

Connection of Cabinets(from the middle to two sides)

1.Connection of left and right cabinets：Standard gap between cabinet: ≤Pixel pitch*5%，misalignment≤0.2mm

1）Put the left and right cabinets on the steel structure.

2）Take the connecting plate, install it on the back of the joint of two cabinets, and pre-fix it with M10 bolts.

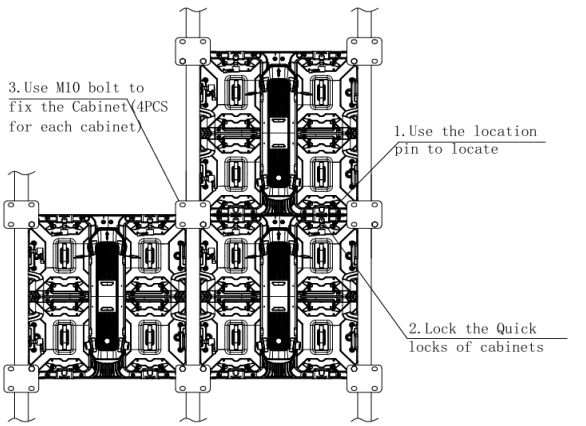


3）After confirming that the gap and section difference between the cabinets meet the standard, tighten M10 bolts behind the connecting plate to fix the cabinet.

2. Connection of upper and lower cabinets：Standard gap between cabinet: ≤Pixel pitch*5%，misalignment≤0.2mm

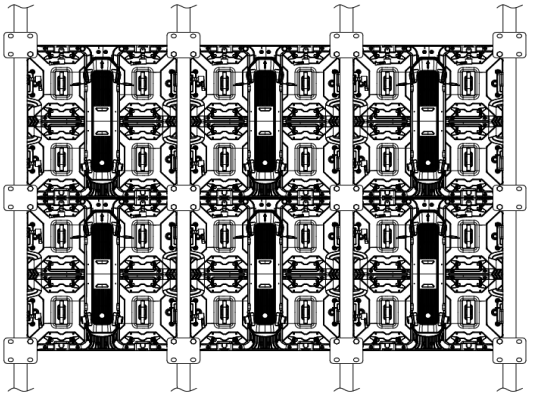
1) Put the left and right cabinets on the steel structure.

2) Take the connecting plate, install it on the back of the joint of two cabinets, and pre-fix it with M10 bolts.

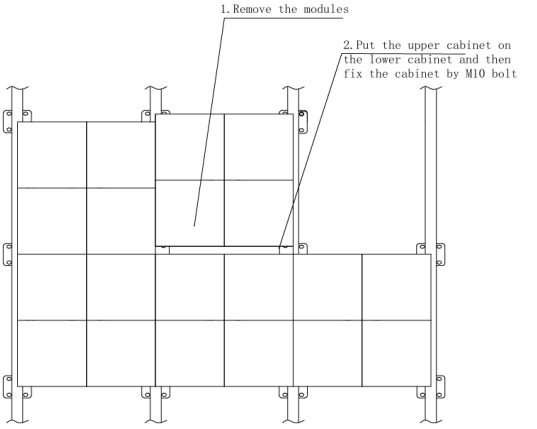


3) After confirming that the gap and section difference between the cabinets meet the standard, tighten M10 bolts behind the connecting plate to fix the cabinet.

Cabinets should be connected from the middle to two sides and from the bottom to the top,as shown below:

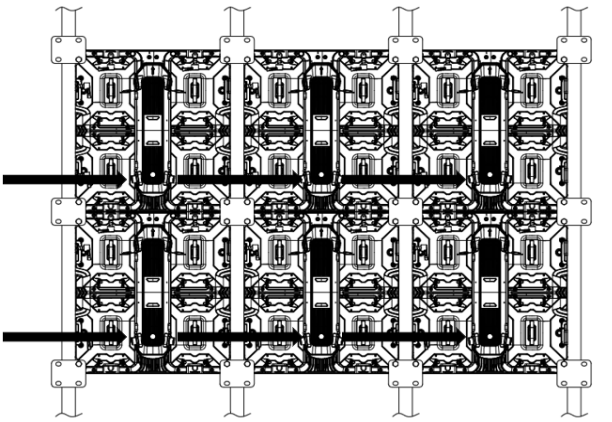


Schematic diagram of front installation

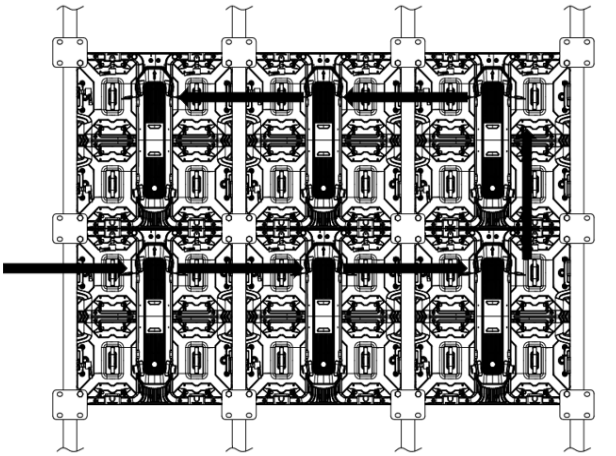


Connection of Power Cord

Insert the power plug in the direction of the arrow

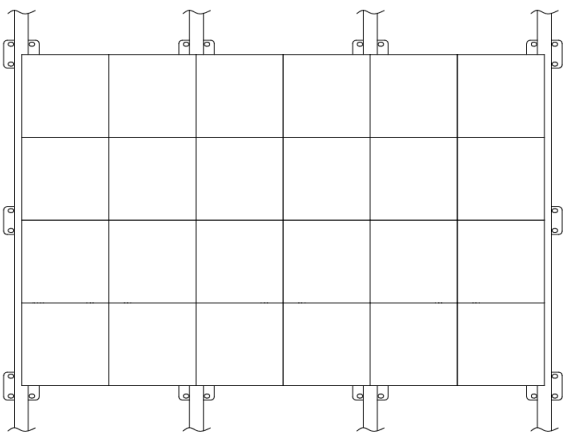


Connection of Signal Cable



Perform power-on inspection to test if the display is normal

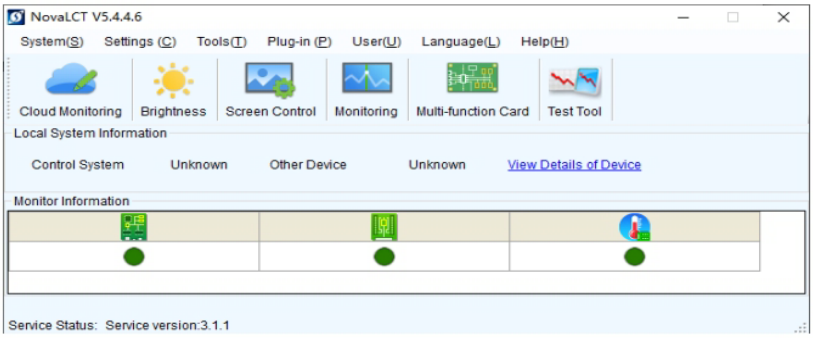
The test screen is normal, and the whole installation and test process is finished as shown in the following figure



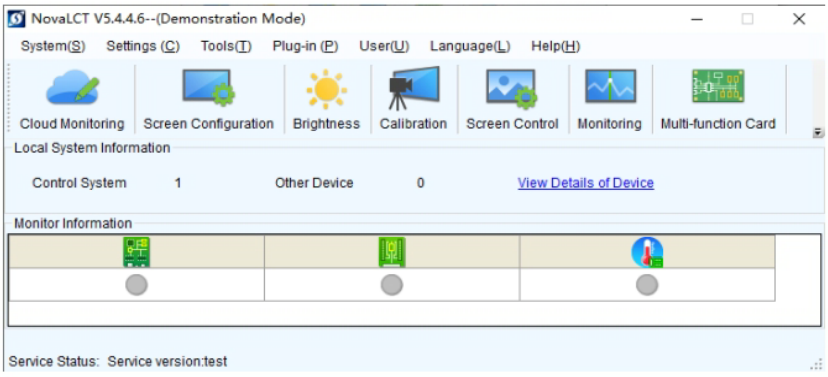
Software Operation Instructions

Enter into the settings of screen

① Open the software interface

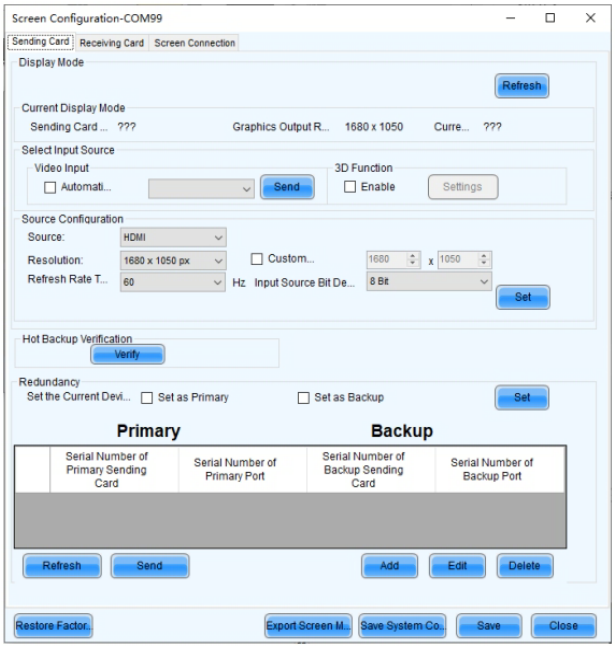


② Select"Login>synchronize advanced login", enter your password and click login. The default passwords are “admin” and “666”



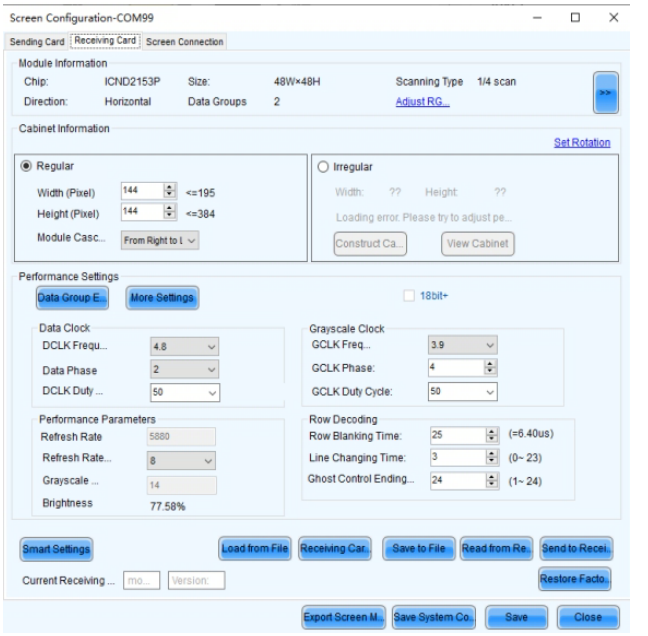
Settings of Sending Card

The interface can set the relevant parameters of the sending card such as resolution, input source signal, backup information and so on



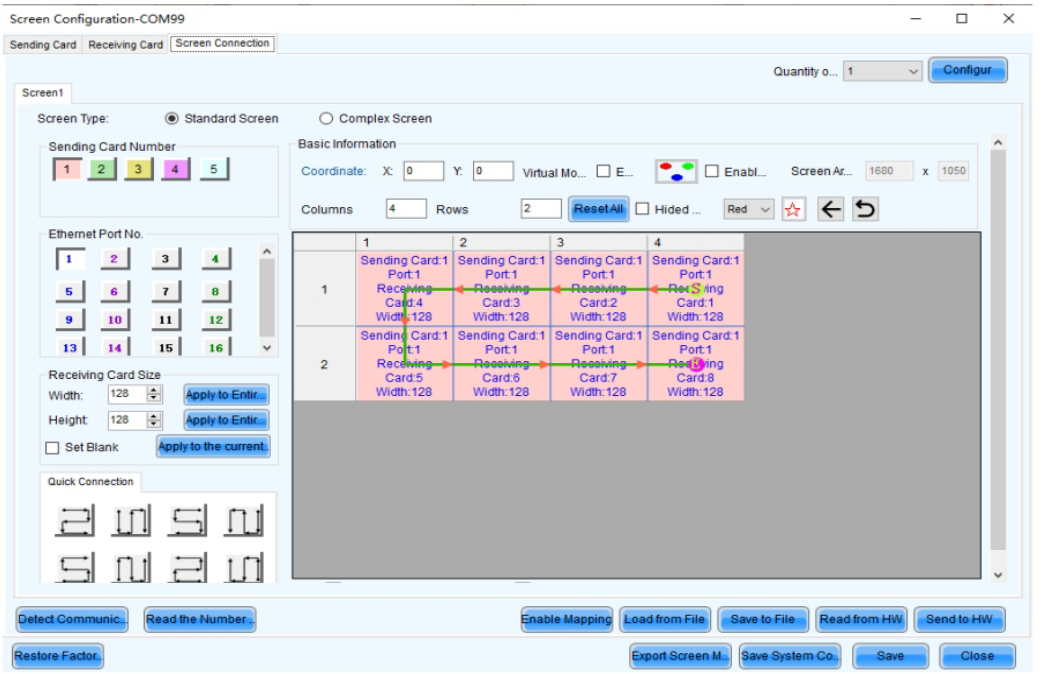
Settings of Receiving Card

The interface can set the relevant parameters such as the number of load points, refresh rate, gray level and so on, and also can load, read, save, send, solidify the receiver card configuration program.



Settings of Connection Table

The interface can set the whole screen connection file, can set the screen body position, receive card size and position and other parameters, but also can load, read, save, send, solidify connection table configuration procedures.



Other Infomation

Recycling/Licenses

WEEE (Waste Electronic Electric Equipment)

European Directive 2012/19/EU

This symbol on the product or on its packaging indicates that this product must not be disposed of with your household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment.

The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Batteries

In accordance with the Battery Directive, used batteries should not be disposed of in the domestic waste. Dispose your batteries in the collection containers specific for this purpose in retail stores.

ROHS (Restriction of Hazardous Substance)
European Directive 2011/65/EU

This European directive limits the use of dangerous and hazardous substances which are difficult to recycle.

This allows recycling easily the EEE and contributes to the safeguard of the environment.

Substances included in this product match to the RoHS directive.

Trouble Shooting

Before preparing for repair, check according to the table below to see if you can find the cause of the problem. If you strictly follow the instructions but still can't resolve the problem, you can turn to professional servicemen for help.

Fault Phenomenon	Cause of failure	Solutions
No display for the whole screen	The AC power is off	Power on the screen
	The computer is not on	Open the computer and start the control software
	The communication line is broken	Check the communication line and make the correct connection again
	The control system is bad	Replace the control system
	Software setup error	Re-change the software settings that match the control system
	Damage to internal parts of distribution cabinet	Check and replace defective parts
The whole screen flashes	The control system is bad	Replace the control system
	A signal is missing from the communication line	Check the communication line and make the correct connection again
	Software setup error	Re-change the software settings that match the control system
The unit cabinet is not bright	Hub board is damaged	Replace the Hub Adapter Board
The unit module is not bright	The signal lines between the cascades are not connected	Connect the cascade signal cable
	Input or output driver chip HC245 bad	Replace HC245
A set of data is not bright(Unit module)	The signal of the unit module	Check if the various signals are normal
Unit module out of control	Input or output HC245 bad	Replace HC245

Point out out of control	LED lights out	Replace the LED module
	Incomplete welding	
	Short Circuit	
	Circuit breaker	
	Light not off	

LED Display Maintenance

The maintenance of LED display system mainly includes the maintenance of LED display system, communication system and power system.

Precautions for LED display screen

LED display screens are high-precision, high-density electronic products, which belongs to precision protection products category. It needs special protections in daily use such as protections from static electricity, dust, moisture and physical impact.

1. Static electricity

LED is an electroluminescence device, which is very sensitive to current. Human body carries static electricity which can break down the internal PN junction. Do not touch the LED display screen without wearing gloves.

2. Dust

The LED display screen is designed according to the outdoor IP6X standard, but due to outdoor use the LED display screen are exposed to all kinds of weather conditions.

Sand, dust, smog and other dirty things on the LED display and because of that the performance of the LED display may be effected, so regular cleaning on LED display is recommended.

3. Water vapor

Short circuits in components caused by moisture may also occur during product use.

Pay attention to the following points when using to maintain product quality.

Dehumidify the product if any of the following conditions are met during operation:

-The operating environment exceeds the product humidity specification

(Operating Temp/Humidity:-20 - 50℃ / 10% - 90%rh)

-If you don't use the screen for a week, please play the video at least once for 2hours..

4. Physical impact

The LED display screen is a very delicate device. It needs protection from any kind of physical impact, as it may resulting damage to LED beads or circuit board.

Maintenance of LED display screen

1. The control PC, video processor and other equipment shall be placed in a dry and clean environment with good ventilation. Avoid direct sunlight to all the equipment. The ambient temperature should be kept between 18˚C and 25˚C.

2. Do not place any containers containing liquids on computers and control equipment to prevent water damage to equipment.

3. Turn off the power supply of the corresponding equipment before unplug the cables to prevent damage to the interface components.

4. Avoid the interference of electromagnetic field (such as non magnetic speaker, loudspeaker, etc.).

5. In order to prevent the instantaneous current pulse from affecting the computer, it is advised to turn on the power of the LED display screen first and then the power of the computer.Turn off the power of the computer before the power of the LED display screen when it is shutting down.

6. Always back up important data and files.

7. Do not plug and unplug the communication plugs to prevent damages.

8. External protection measures shall be taken when laying communication cables.

9. Using Frequency of LED: At least twice a week power-on and more(no less than 2 hours each time). It is suggested that the product can also be kept in standby mode at ordinary times.

10. The LED display shall be well ventilated. The temperature differences between the inside and outside of the LED display shall not be greater than 10 degrees;

Maintenance of power system

1. Daily inspection on power supply system is advised to detect any problems on time.

2. Clean the interior of the distribution cabinet with leather blower or air pressure gun regularly. Fasten any loose screws in the distribution cabinet, it is advised to clean it once a month.

3. Shut off the power supply of the system when it is not being used for a long time.

4. The maintenance of power system shall be carried out only by certified electricians.

Transportation and storage

1. Transportation

The LED display is required to be transported after packaging. During transportation, it is strictly prohibited to put the packaging upside down; Avoid rain and snow; Keep out of long-time sun exposure; Do not contact with corrosive gas and mechanical damage; Strictly stacking limitation applied(up to three layers). The transportation of PC and power distribution cabinet should be stable, handle with care. Do not put it upside down, keep out of rain and moisture, avoid mechanical damage as well.

2. Storage

The storage temperature of the display module is :- 30 °C - 60 °C, and the relative humidity is: 10%-95% RH, without condensation. No acid-base and corrosive gas at the storage place, No strong mechanical vibration and do not close to magnetic field. Free of fire and explosion hazards. The storage time shall not exceed 3 months..