AURORA SIGNAGE



LDC1000WPR Series Fixed Display User Manual

Version: V1.0

This manual systematically introduces the product components, interfaces, specifications, etc., as well as operating instructions for installation, functional use, etc., designed to enable you to use the product quickly and efficiently;

This manual takes a 4*3 project as an example and can be applied to all LDC1000WPR Series projects.

Warning!

It is a Class A product that may cause radio interference in living environment.

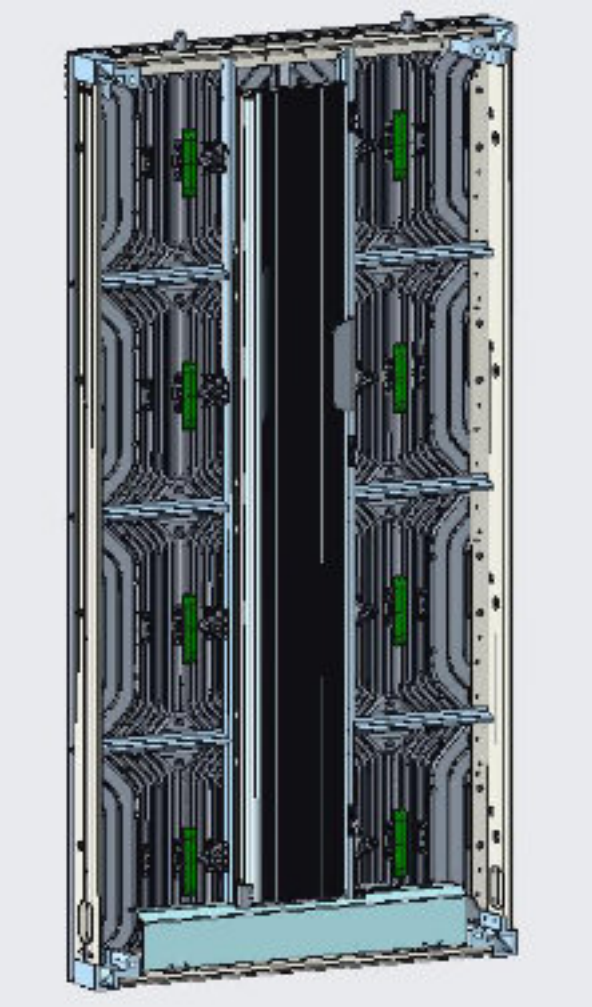
1. Be sure to read this manual thoroughly before using this product;
2. There is a high possibility that the device will be damaged and cannot be recovered due to ignoring the warning;
3. The manufacturer is not responsible for incorrect, illegal, or unsafe product operation;
4. During installation, the device must be properly grounded, and the role of the grounding wire should not be ignored, otherwise there will be a risk of electric shock;
5. Please unplug the product from the AC power supply when not in use and before disassembling, installing, or performing maintenance, as not doing so increases the risk of electric shock;
6. The AC power supply used must comply with local building and electrical codes and standards. It must be equipped with overload and ground fault protection, otherwise prone to electric shock hazards;
7. In case of abnormalities, such as peculiar smell, smoke, electric leakage and abnormal temperature, do not fix by yourself, please cut off the power supply immediately, and then contact professional.
8. Ensure that the display and auxiliary equipment are correctly and reliably grounded before use;
9. Pay attention to personal safety during installation to prevent touching sharp edges;
10. Do not use electrical accessories not certified by the device manufacturer;
11. Do not invert or throw the device during handling and storage;
12. Do not tilt and collide the device during installation to avoid scratches;
13. Do not drench or soak the device;
14. Do not close the air outlet of the air conditioner to the display;
15. Do not place or use the display in the environment with volatile, corrosive and flammable chemicals;
16. Do not use the product in environments with humidity exceeding 90%;
17. Do not use water or chemical solvents to clean display device.

Caution!

The probability of not getting the best display due to ignoring the precautions is extremely high.

1) There is strong electricity inside, non-professionals are prohibited from opening it;
2) Good ventilation on the back of the display must be considered when designing the cooling solution;
3) The LED module is designed for branching power supply, and the supporting power supply certified by our company must be used;
4) The display should be equipped with an axial flow fan or air conditioning for heat dissipation to ensure long-term stable work of the product;
5) The product shall not be modified without permission, so as not to affect the performance and reliability of the product;
6) The average power of the display in normal use (normal display of pictures or video signals) is about 20%-30% of the maximum power consumption (show full white screen with the highest brightness). Distribution power must be reserved for the power distribution of the display based on the maximum power consumption, rather than the average power consumption, so as to prevent that in extreme cases (long time display of full white screen in the highest brightness) power supply line heating brings hidden dangers;
7) The air inlet and outlet for heat dissipation on the back of the display shall not be covered and blocked, so as not to cause poor heat dissipation and overheating protection;
8) The installation and construction process shall be carried out gently, bumping will cause damage or deformation, which will lead to poor installation seams, damage to display module or water leakage;
9) The door lock on the back of the display must be locked tight after installation is completed to avoid damage from water leakage;
10) During the use of the display, please use our matching brightness sensor or brightness timer to ensure that the display keeps the proper brightness during the all-weather work, so as to avoid light pollution;
11) During working, the rear power supply unit of the cabinet may generate localized high temperatures. The screen is typically installed on building surfaces or fixed steel structures, making it inaccessible to non-personnel.
12) This product is only suitable for safe use in areas below an altitude of 5000m;
13) The working environment temperature of the display screen should not exceed -30~60 ℃

I. Product Features



1) OEM own brand high-efficiency PFC power supply and high-efficiency voltage conversion techniques, as well as innovative LED module circuit design, reduce power supply current and transmission loss;
2) All ROHS-certified raw materials, lead-free manufacturing process, undertaking the responsibility of environmental protection, meet the requirements of CCC, CQC, CE, ETL, FCC, and CB certifications;
3) 18bit color depth, 10000:1 high contrast, 6000cd/m^2 brightness (Note 1), ensure display of color image in strong direct sunlight and dark environment;
4) Only 68mm screen thickness and only 16kg/cabinet weight save the cost of steel structure and occupy less space. Slim screen is integrated with the building;
5) Highly integrated minimalist power box design reduces internal connections, devices and shell closely fit, ensuring uniform heat dissipation, and improving product reliability;
6) Fully sealed cabinet (front and rear IP66), meets the requirements for use in harsh environment, not afraid of wind and rain;
7) Fully compatible with front and rear maintenance, meet different installation

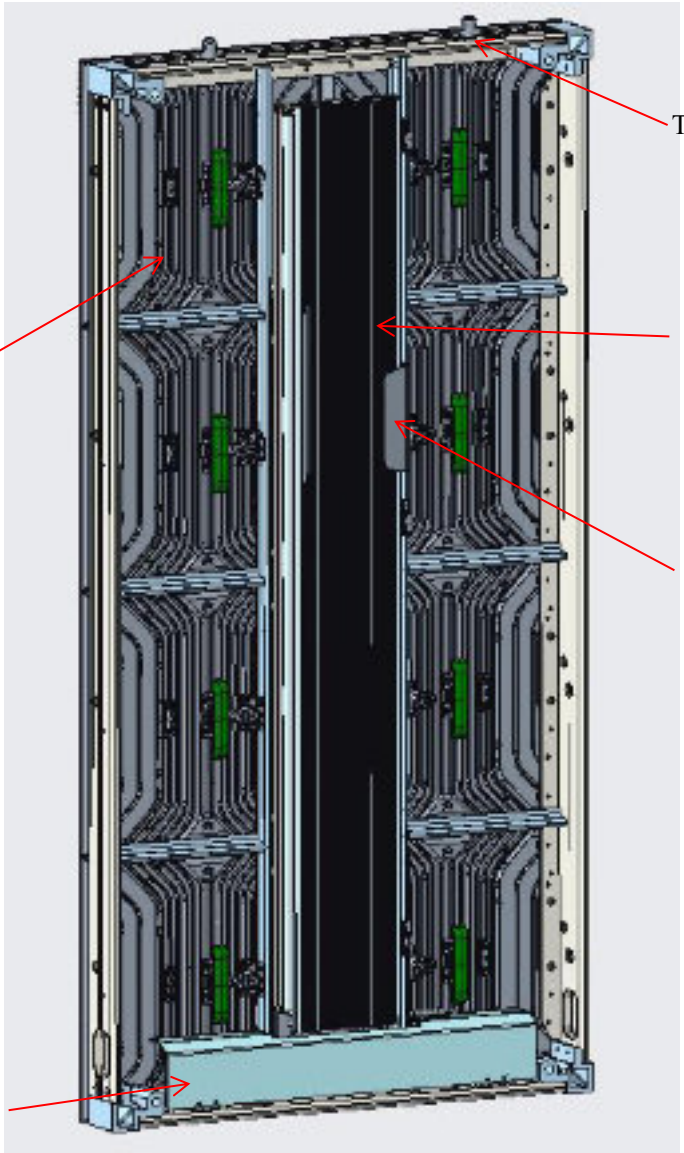
environments, outdoor naked-eye 3D arc, right-angle large display can be customized;

8) Multi-terminal status real-time monitoring, and fault alarm, for peace of mind (Note 2).

Note 1: Brightness varies with different configurations. See parameter table for details

Note 2: Hardware environment support is required.

II. Cabinet Components



III. Product Installation

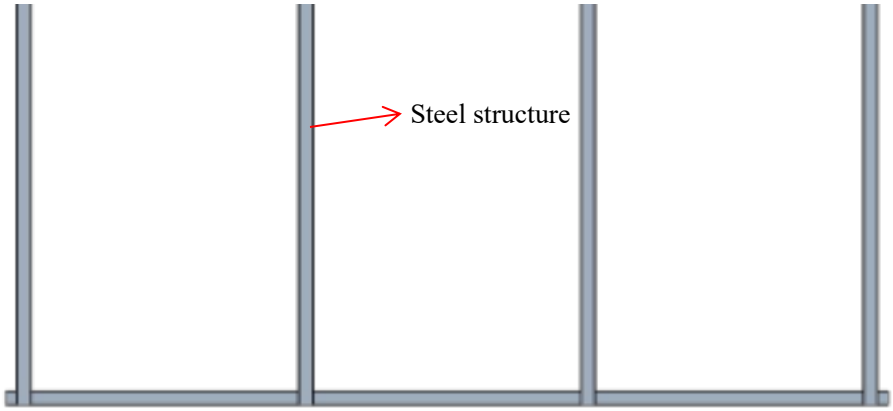
3.1 Installation Tools and Accessories

M8 hex socket head cap screws, 6mm Allen wrench, M10 bolts, 16mm hex sockets, connection plate.

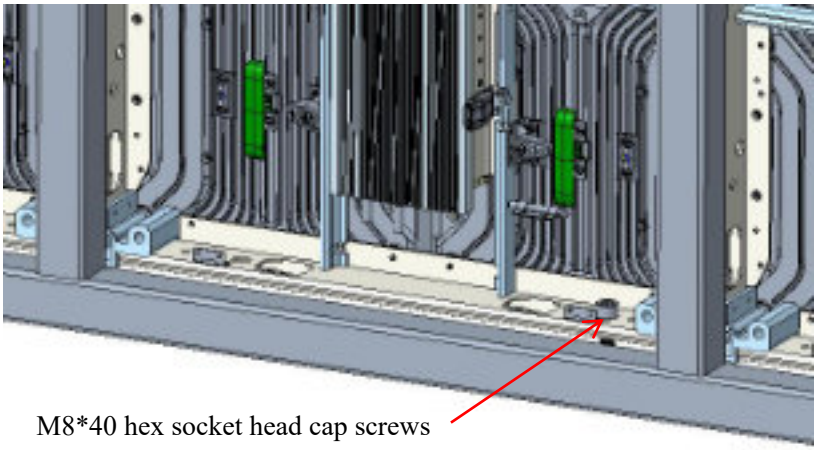
3.2 Installation Steps

Precautions before installation: disassemble the wooden case and take the cabinet out of the wooden case. Take care to avoid bumping during the process to avoid damage to the cabinet.

① Customize the steel structure according to the size of the product to be installed.

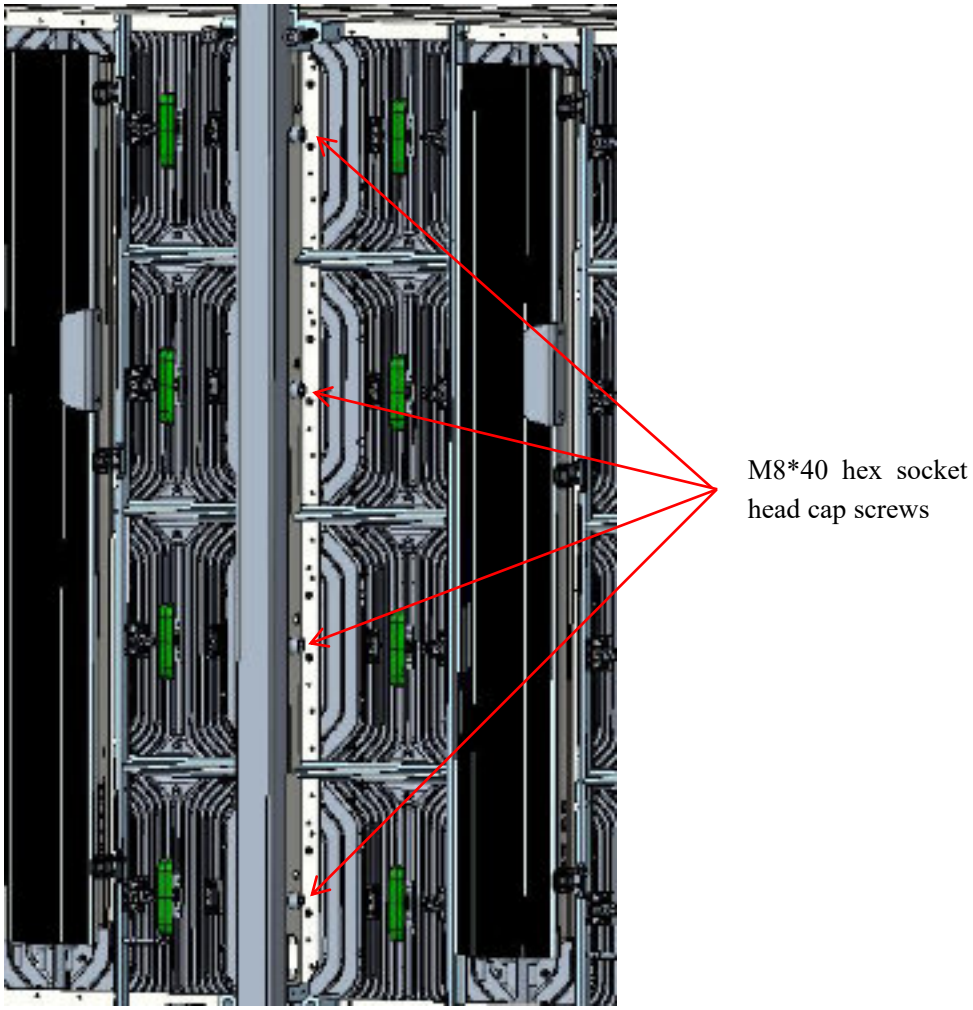


② Place the first row of cabinet on the base of the steel structure, and fix the cabinet with M8*40 hex socket head cap screws.



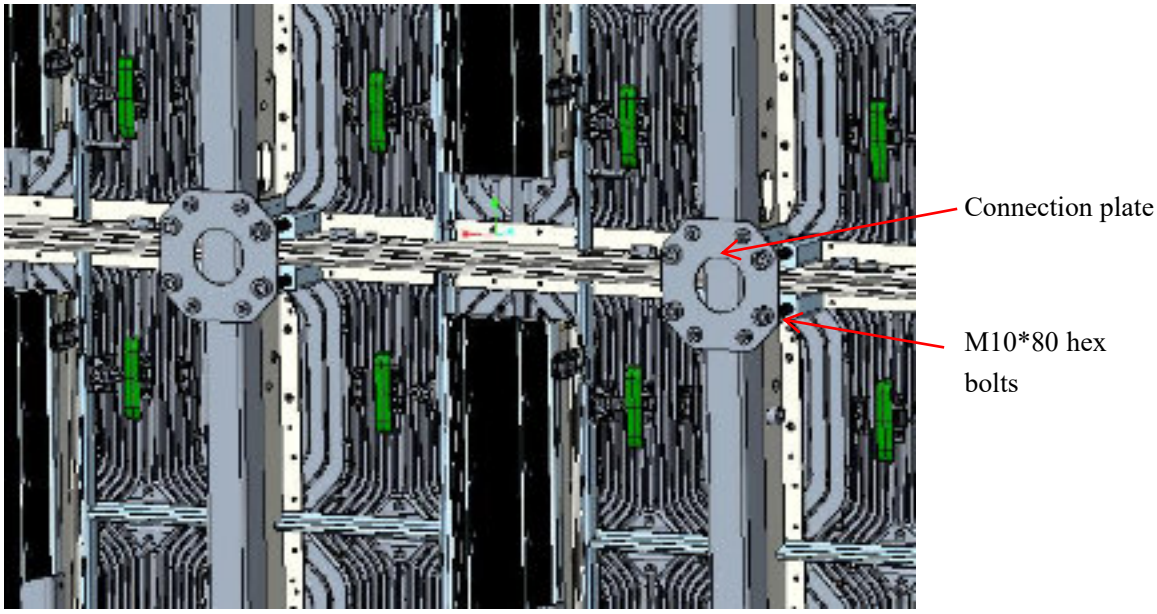
Note: The hex socket head cap screw here should be adjusted to ensure the level of the first row of cabinet.

③ Between the two adjacent cabinets, use 4 M8*40 hex socket head cap screws to lock.

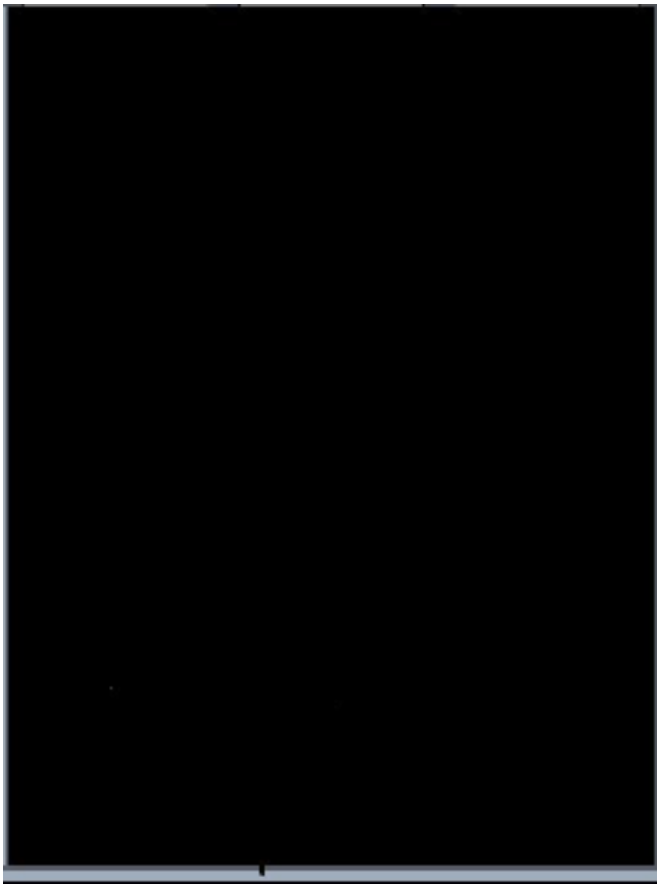


④ Follow steps ② and ③ to install the second row of cabinet.

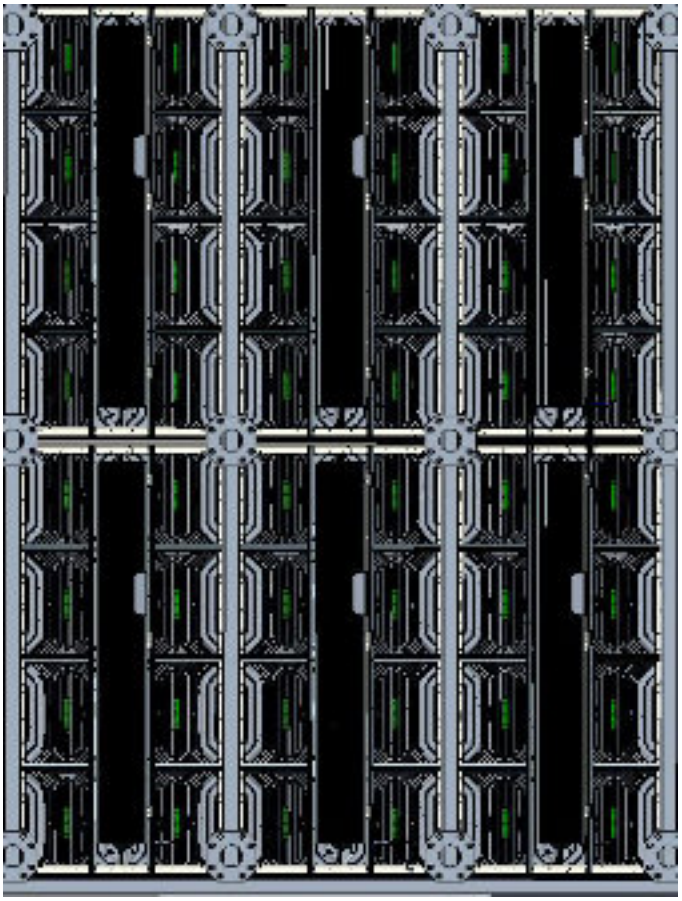
⑤ Use the connection plate and M10*80 hex bolts to lock the adjacent 4 cabinets by holding the square pipe.



⑥ Follow the above steps to install all cabinets, and the overall installation effect is shown as follows:



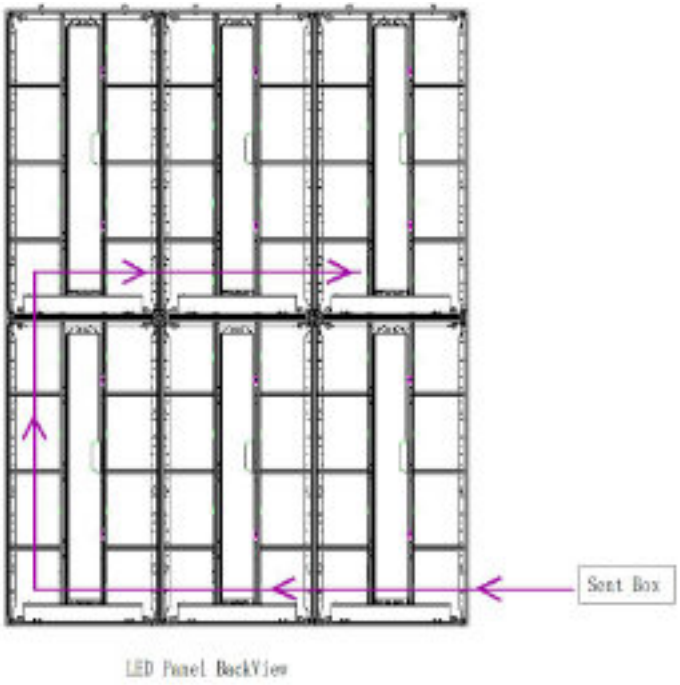
Front view



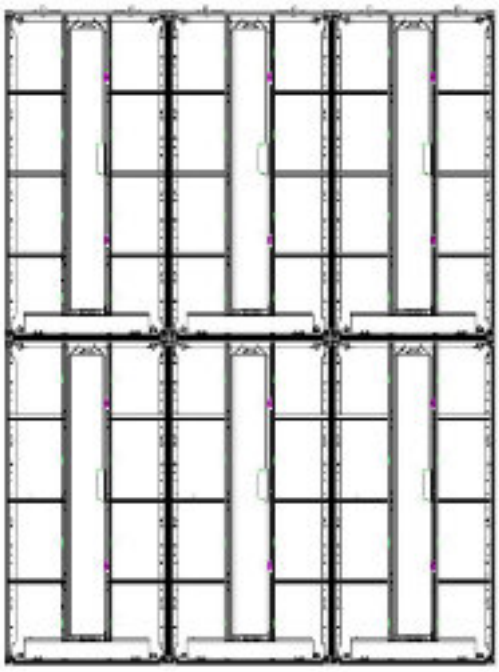
Back view

Note: The installation instructions in this manual are for reference only. For specific projects, install according to the project installation drawings.

3.3 Signal connection diagram



3.4 Power connection diagram



LED Panel BackView

3.5 Installation environment requirements

In order to ensure the stability and security of the system during operation, the following suggestions are put forward for the operating environment:

① Hardware environment: CPU frequency ≥ 2.0GHZ, memory ≥ 1G, discrete graphics card, video memory ≥ 512MB, DVI or HDMI output port.

② Software environment: Client operating system: XP, Win7, Vista, Win8 or Win10, etc.

③ Network environment: The network must be connected when the display is calibrated online.

3.6 Sequence of Display Power On and Off

① Display power on: please turn on the computer first, enter the system normally, and then turn on the LED display power;

② Display power off: first turn off the power of the LED display, then turn off the control software, and finally turn off the computer.

3.7 Check Before Commissioning

① Before powering on the display, use a multimeter to check whether the live wire, neutral wire, and ground wire of the AC power input terminal are connected;

② Ensure that the ground wire is reliably connected to the earth and has an appropriate distance from the neutral wire. The input power supply shall be kept away from high-power electrical equipment;

③ Check whether the power cable and signal cable of the display are connected as consistent with the system connection diagram;

④ When the three-phase five-wire system is used for power supply, the loads of the phases shall be evenly distributed to ensure the three phases are balanced as far as possible;

⑤ The input voltage must meet the cabinet voltage requirements.

IV. Software system

(1) The LDC1000WPR series product supports Novastar system;

(2) Control software

PC side host software name: subject to factory default configuration.

Note: For specific software operation, please refer to the relevant software instruction manual.

(3) Device Operation and Maintenance Management System

Based on the IoT platform, the equipment management system supports multi-terminal access, enabling uniform and efficient remote control and monitoring of equipment within enterprises, schools and other organizations. The equipment includes but is not limited to the following intelligent devices: intelligent electric curtain; LED display, LCD large screen; lighting, etc., supporting WAN/LAN.

Note: The software and software manuals mentioned above are available for download from the official website of Novastar.

V. Common Troubleshooting

5.1 Common faults of control system

No.	Fault	Solution
3	Display error	First, check whether the transmitter resolution on the transmitter page is the same as the output resolution. If not, set the resolution to the same. If the resolutions are the same, check whether the parameters in the intelligent setting wizard are correct.

5.2 Common faults of hardware

No.	Fault	Solution
1	Part of the display is not lit after power on	① Check whether the network cable in the cable is in poor contact. ② Check whether the power cable in the cabinet is in poor contact.
2	Screen crash after replacing the module or bridge board	Power off and then restart the display, so that the bridge board reads module data again.
3	White stripes appear in the display area	Relocate the module or bridge board in the fault display area, then power off and restart the display.
4	Whole screen or part of the screen splicing disorder	① Check the ports connection sequence of the receiver on the display. ② Check the connection sequence of signal cables on the display.

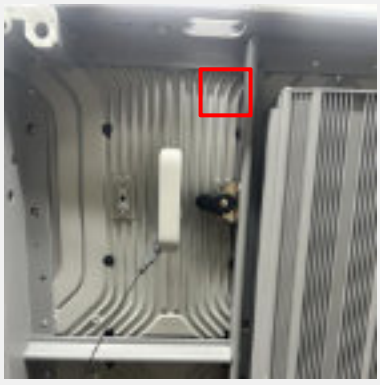
VI. Parts Replacement

Pneumatic suction (with magnetic suction) tool:

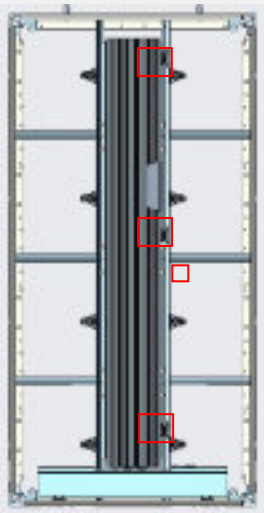
Safety reminder: The tool is equipped with strong magnets. Do not allow it to come into contact with ferrous objects during use to avoid injury by pinching!!

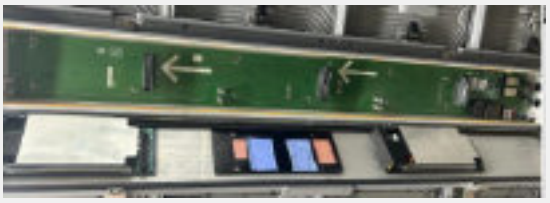


6.1 LED module replacement

Illustration	Solutions & steps
 Front maintenance  Back maintenance	1. Find the specific location of the faulty module; 2. Front maintenance: Align the pneumatic suction tool with the faulty LED module. The magnet inside the tool will automatically release the lock on the back of the module. Then, turn on the switch of the pneumatic suction tool to detach the module; 3. Back maintenance: Rotatethe black lock 90° manually and keep it in place. Then, apply outward force to push the module and remove it; 4. Align the four corner magnets and the installation positioning pins/locks on the back with the corresponding mating structures in the cabinet to securely install the new module.

6.2 Adapter board and bridge board replacement

Illustration	Solutions & steps
 Back maintenance  Front maintenance	Locate the corresponding faulty cabinet: Back maintenance: Unlock the latches from the back, slightly lift the rear cover, and remove the power supply. Then, you can perform maintenance on the faulty HUB board; Front maintenance: After removing the LED module, use a Phillips screwdriver to loosen the eight fixing screws of the power box. Then, you can remove the entire power box for maintenance;

	After taking out the power box, remove the three external cables from the faulty adapter board/bridge board;
	Use a Phillips screwdriver to remove the set screws (the set screws are cross-recessed pan head screws M3*8 combined with flat spring washers).

6.3 Power supply replacement

Note: The replacement of power supply must be carried out in the case of power off. Do not operate with live power.

Illustration	Solutions & steps
	Find out the cabinet corresponding to the faulty power supply, turn the power off, remove the 4 set screws of the protection shell of the power board
	After replacing the power supply, install the set screws

VII. Special Statement

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