



NanoBanner Installation Manual

Document

Revision: 0.1

Nanolumens, Inc.

Please Review the Section 2 Safety Warning Prior to Installation

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I. Document Overview

This manual provides installation and service instructions for the NanoBanner display. Please follow the safety precautions and installation instructions carefully.



II. Safety Warnings

Warning: Maximum tilt angle cannot exceed 13 degrees.

Warning: This Class A product may cause radio interference when operated in residential environments.

Equipment Damage Risk: Read and follow all warnings in this section before handling, installing, operating, or servicing the product. Failure to comply may result in permanent equipment damage.

- 1) Handle the display with care. Do not invert, drop, throw, or subject the device to shock during handling, transport, or storage.
- 2) Prevent impact damage. Do not tilt, strike, collide with, or scratch the display during installation.
- 3) Keep the display dry. Do not expose the device to water, soaking, rain, or other sources of moisture.
- 4) Do not direct an air-conditioning outlet toward the display.
- 5) Do not install, store, or operate the display near volatile, corrosive, or flammable chemicals.
- 6) Do not use the product in environments with relative humidity above 80% or in outdoor rainy conditions.
- 7) Do not clean the display with water or chemical solvents.
- 8) Use only electrical accessories certified or approved by NanoLumens.
- 9) Before use, verify that the display and all auxiliary equipment are correctly and reliably grounded.
- 10) If abnormal odor, smoke, electrical leakage, or abnormal temperature is observed, disconnect power immediately and contact qualified service personnel.
- 11) Connect the product only to a 100–240 VAC power supply.
- 12) Unpacking and installation of each NanoBanner display shall be performed by no fewer than two qualified personnel.

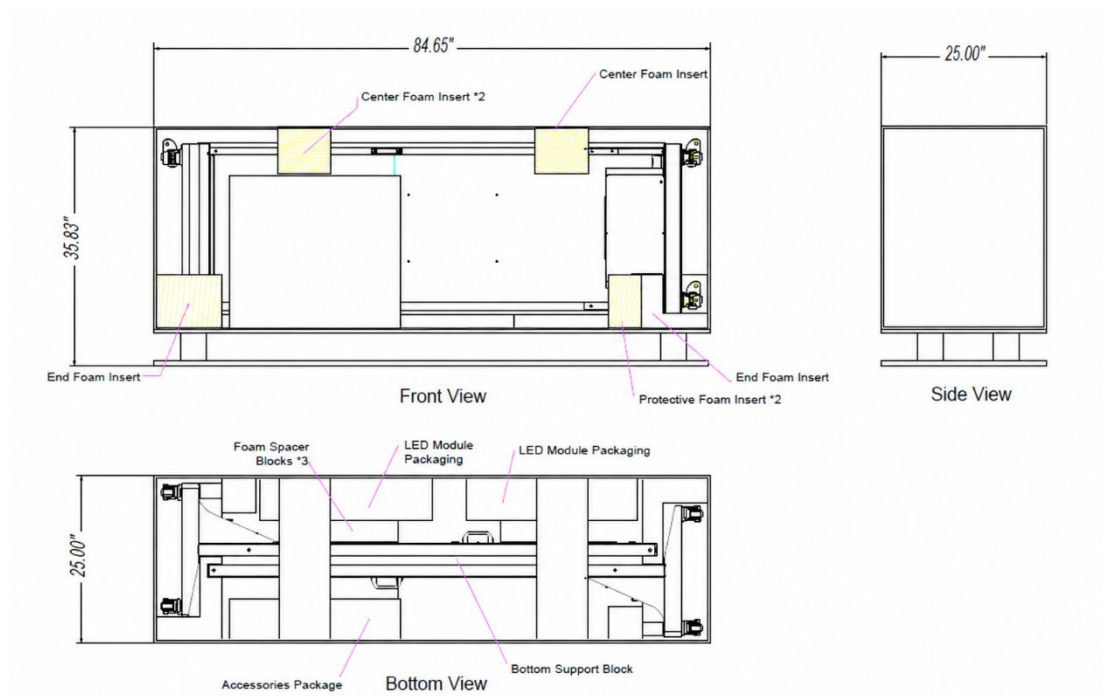
Installation Precautions: Observe the following precautions to maintain display performance and ensure reliable operation.

- 1) Wear anti-static gloves or an anti-static wrist strap when installing or servicing the product.
- 2) Provide adequate ventilation behind the display for proper cooling.
- 3) Store the display in a dry, well-ventilated environment where temperature with in –4°F to 140°F, and humidity does not exceed 85%.
- 4) Under normal operating conditions, power on the display at least twice per week for a minimum of 2 hours per session.
- 5) Installation in seaside or high-salinity areas, sulfur-rich environments, locations near kitchen exhaust fumes, or sites with significant indoor/outdoor temperature differences may cause equipment failure or reduce service life. If these conditions cannot be avoided, consult NanoLumens technical support team before installation.
- 6) This product is intended for safe use only at altitudes below 5,000 m.

III. Product Specifications

Model	NanoBanner 1.5	NanoBanner 1.9
Pixel Pitch	1.5mm	1.9mm
Brightness (cd/m2)	550 nits	800 nits
Resolution (px)	384 x 1080	320 x 900
Power Consumption (Max./Avg.)	460/142 W	425/142 W
LED Technology	SMD	
Refresh Rate	3840 Hz	
Overall Dimensions (W x H)	24.6 in x 75.2 in. / 624mm x 1910mm (including base)	
Display size (W x H)(mm)	24.02 in. x 67.52 in. / 610mm x 1715mm	
Weight (excluding base)	83.8 lbs / 38kg	
Maximum Cascade Display Quantity	5	6
Maximum Tilt Angle	13 Degrees	
Working Voltage	AC100-240V 50/60Hz	
Maintenance Access	Front Only	
Protective Coating	Glue-On-Board (GOB)	
Ingress Protection Rating	IP30	
Operating Temperature/Humidity	14º ~ 104º F / -10 ~ 40 C, 10~80% RH	
Installation Mode	Rolling Base / Hanging / Wall Mount	
Warranty	2 Years	

IV. Crate Layout



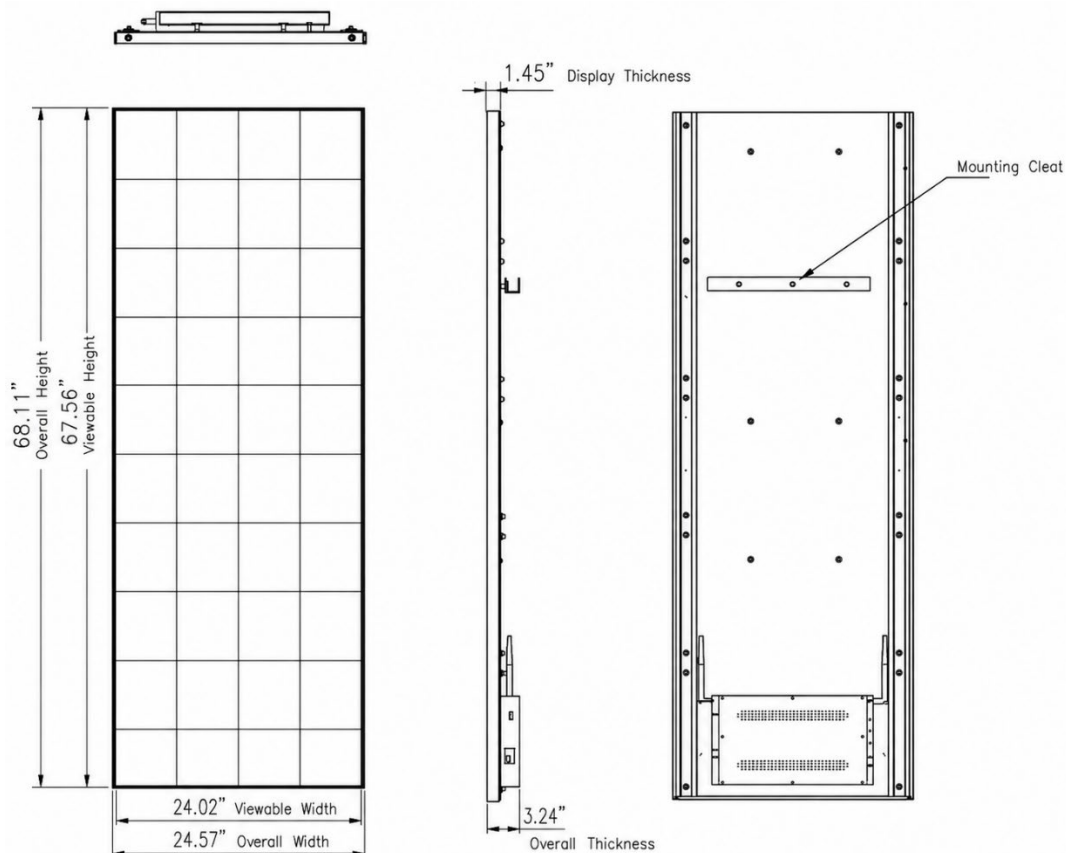
V. Mounting Options

In addition to the rolling stand, the NanoBanner supports vertical wall mounting, horizontal wall mounting, and ceiling hanging installation methods.

Remove the rolling stand before installing the display using any alternate mounting method.

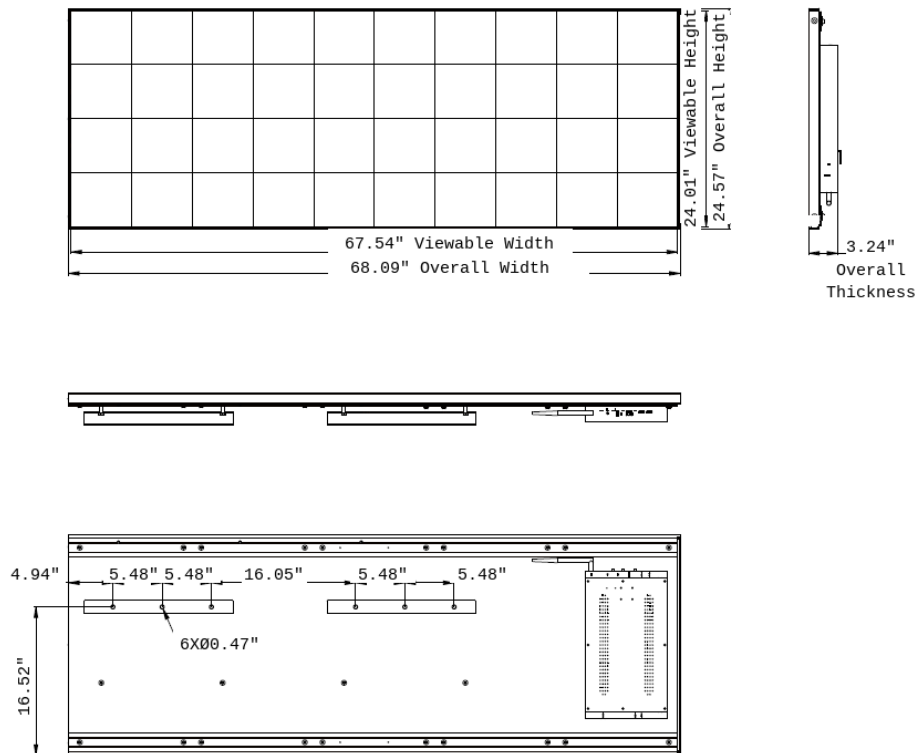
Vertical Wall Mount

- 1) Mark and drill three mounting holes in the target wall. Each hole must be 10 mm in diameter, with 140 mm spacing between holes.
- 2) Insert the M8 expansion bolts. Verify that the exposed stud length is less than 20 mm.
- 3) Position the wall mount over the expansion bolts and secure it with three M8 nuts.
- 4) Lift the screen body onto the wall mount. Verify that the hook is fully seated in the mounting bracket before releasing the display.



Horizontal Wall Mount

- 1) Mark and drill two sets of mounting holes in the target wall. Each set must include three holes, each 10 mm in diameter and spaced 139.3 mm apart. The distance between the two hole sets must be 407.7 mm.
- 2) Insert the M8 expansion bolts. Verify that the exposed stud length is less than 20 mm.
- 3) Position the wall mount over the expansion bolts and secure it with the required M8 nuts.
- 4) Lift the screen body onto the wall mount. Verify that all hooks are fully seated in the mounting bracket before releasing the display.

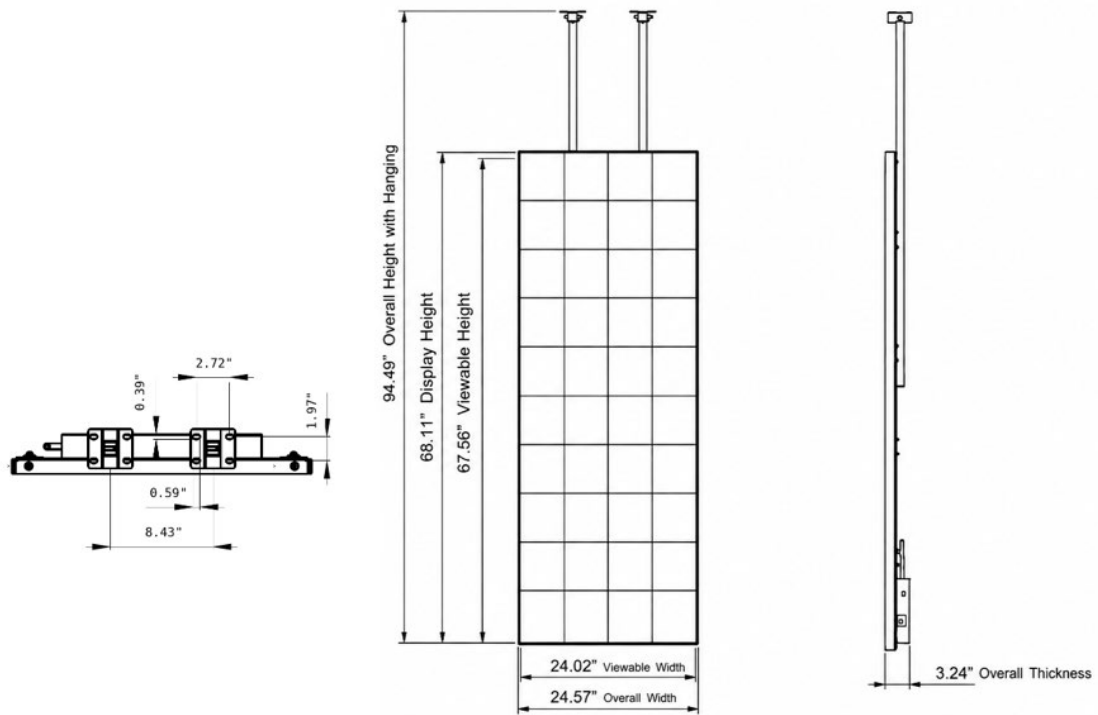


Ceiling Hanging Mount

- 1) Attach the two mounting rods to the screen body using M8 × 25 screws.
- 2) Mark and drill eight holes in the target mounting surface. Each hole must be 10 mm in diameter.

NanoBanner Installation Manual

- 3) Insert the M8 expansion bolts. Verify that the exposed stud length is less than 20 mm.
- 4) Install the mounting rods and secure them with eight M8 nuts.



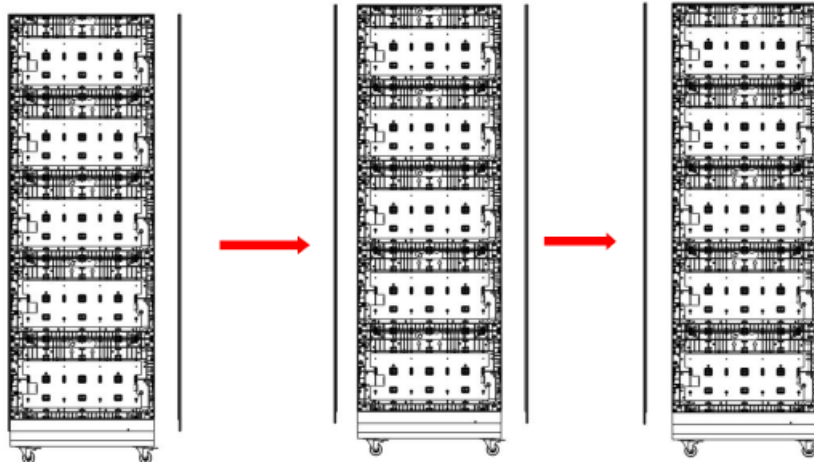
VI. Connecting Multiple Displays

For a single connected group, do not exceed five NanoBanner 1.5 displays or six NanoBanner 1.9 displays.

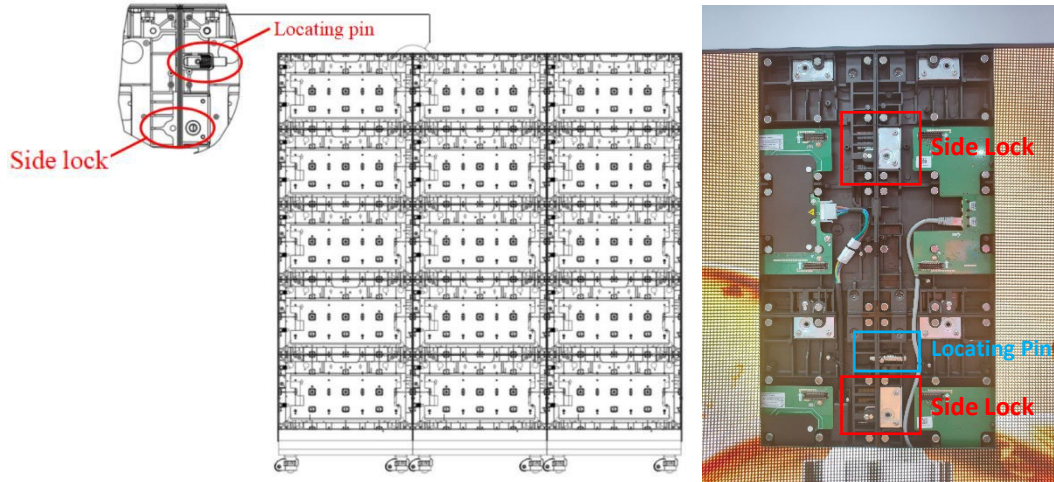
Installation of Multiple Displays

Complete the steps below to mechanically join the displays and configure multi-screen splicing.

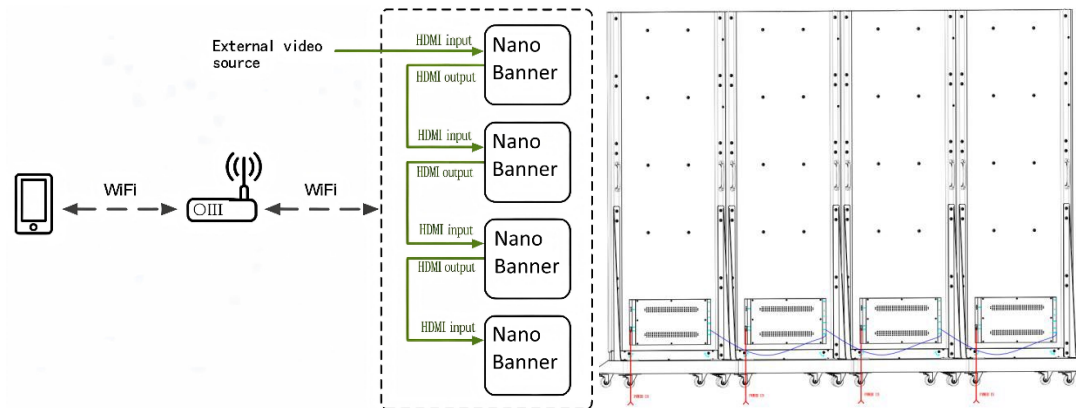
1. Refer to the sequence shown in the figure below. Unlock the décor fastener, then remove the décor panel from the side of each display that will connect to an adjacent display. Retain all removed panels and hardware for future use.



2. Move the displays into position one at a time. Insert the locating pins to align and secure adjacent cabinets. Install two pins per cabinet column, located inside the second and fourth cabinets. Tighten the side locks with a hex wrench as shown.



3. Connect the display control boxes with the HDMI cable so that the video source connects only to the first display. The system can play internal content stored on the display or content from an external video source. Configure the splicing parameters in Display Wizard using a mobile device or PC. Mobile configuration is typically faster. A mobile device running Display Wizard can connect directly to the display Wi-Fi AP or to the same wireless LAN as the display.





Display Wizard Parameter Settings

1. Verify that all displays in the spliced group are the same model and specification. Splicing may be configured from left to right or from right to left. Set the splicing parameters only on the starting-position display. The display automatically detects the video source and applies the required picture offset based on the configured splicing parameters.
2. Complete the setup sequence below.

Step 1: Open Display Wizard and access the local connection screen.

Step 2: In the local device list, select **Connect** for the starting-position display, enter the password, then select **OK**. The default password is 123456.

Step 3: After the connection is established, select the device name to open the **Device Management** screen.

Step 4: Select **Multi-screen Splicing**.

Step 5: Enable **Multi-screen Splicing**, then set the parameters to match the physical installation layout.

- **Splicing Direction:** Select the direction of the display array, either from left to right or from right to left.

- **Splicing Mode:** Select by Quantity or by Width.

- **Splicing Quantity:** When Splicing Mode is set to by Quantity, enter the number of displays in the connected group.

The quantity cannot exceed the rounded value calculated by dividing Video Source Width by Poster Display Width with Load.

- **Splicing Width:** When Splicing Mode is set to by Width, enter the total width of the spliced display array.

Step 6: After all parameters are set, select **Finish** in the upper-right corner of the screen.

Note: The splicing direction selected in Display Wizard must match the physical HDMI cable direction on the display body.

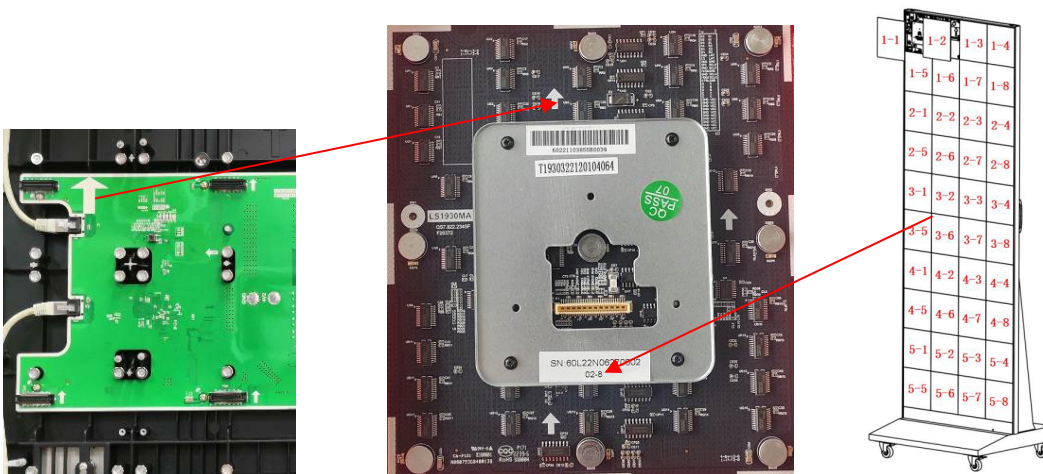


VII. LED Module Installation and Removal

LED Module Installation

Install each LED module only in its assigned location. LED modules are factory-calibrated for specific positions. Before installation, verify the location number on the rear of each module and confirm that it matches the required position on the display.

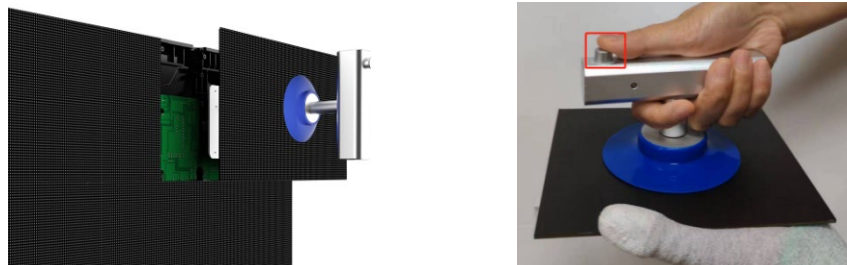
Verify that the arrow direction on the LED module matches the arrow direction on the hub card before seating the module.



LED Module Removal

Remove an LED module only with the supplied suction cup removal tool. Press the suction cup firmly against the LED module, then pull the module away from the display.

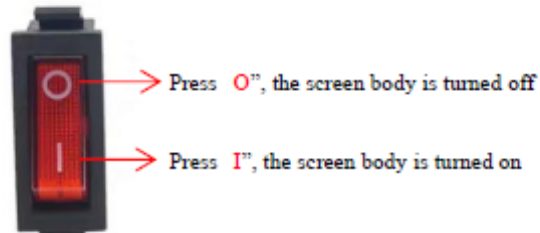
To release the LED module from the suction cup, press the release button on the suction cup as shown.



VIII. Power On and Network Connection

After installation is complete, connect the display to the approved power source.

Turn on the power button located on the side of the control box.



The NanoBanner display supports the connection methods listed below. Select the method that matches the site network configuration and installation requirements.

Network Connection

Ethernet Connection

- 1) Connect the NanoBanner display to the computer using an Ethernet cable. The Ethernet port is located on the side of the control box.
- 2) Confirm that DHCP is enabled on display or in the control software.
- 3) If the connection is unstable, assign a static IP address to the computer.
- 4) Before enabling DHCP service, disable the computer firewall or configure the ICMP echo policy to allow communication with the display.

Wi-Fi / Hotspot Connection

- 1) On the mobile device or computer, open Wi-Fi settings and connect to the display default hotspot.

Network name: "AP" followed by the last eight digits of the display serial number.

Password: SN2008@+

- 2) After connecting to the hotspot, refer to the Control Software section for instructions to configure Wi-Fi settings for the site network.

IX. Control Software

Mobile Connection

1) Download and install the NovaStar ViPlex Handy mobile app on an iOS or Android device.

<https://vnnox.com/download>

2) Open the app, then create an account or sign in to an existing account.

3) From the local device list, select the NanoBanner display. If the display ID is not known, locate the ID on the T50 sending card inside the control box. When prompted, enter the default password: SN2008@+.

4) To configure the Wi-Fi network, go to Screen Management > Network Settings > Wireless Network, then enter the required Wi-Fi network information.

5) For additional setup information, refer to the ViPlex Handy Mobile App Instruction Manual on the One-Stop Cloud Platform.

Desktop Connection

1) Download and install the ViPlex Express desktop app from <https://vnnox.com/download> .

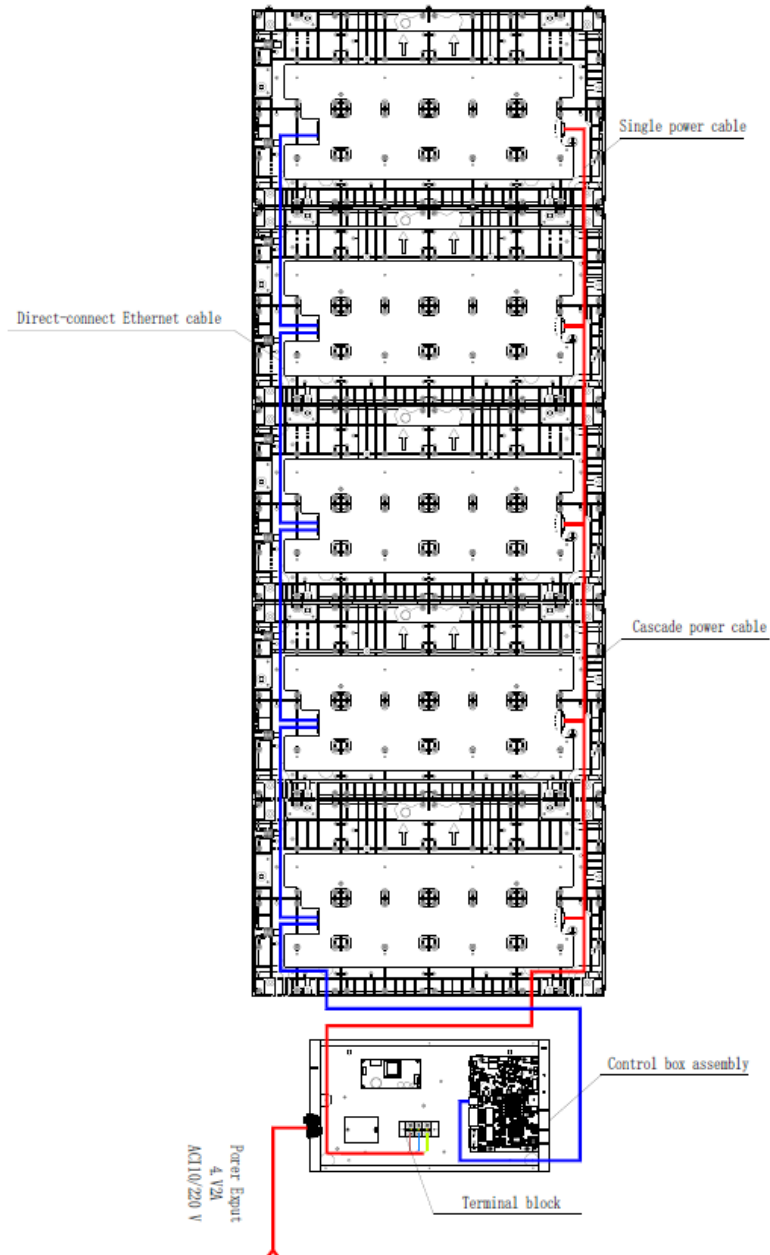
2) To configure the Wi-Fi network, go to **Control > Network Configuration > Wi-Fi Network**. Change the Wi-Fi mode from **AP** to **STA Mode**, select the target network, and enter the correct SSID and password.

Note: As a security feature, Hotspot and Wi-Fi can be disabled through the desktop application. To enable Wi-Fi again, connect to the display with an Ethernet cable and repeat the applicable configuration steps above.

3) For additional setup information, refer to the ViPlex Express Desktop App Instruction Manual on the One-Stop Cloud Platform.

X. Troubleshooting and Part Replacement

The display is pre-assembled with all required wiring. If any cable must be replaced or wiring must be modified during installation or service, use the following diagram as the reference before disconnecting components.



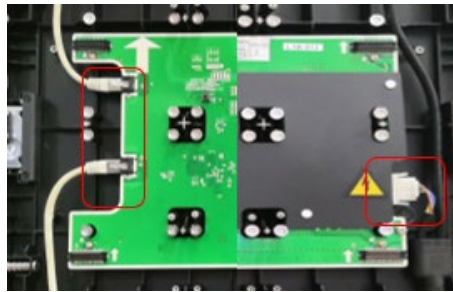
Hub Card Replacement

Disconnect display from power source prior to part replacement

- 1) Remove all 8 LED modules from the applicable cabinet.



- 2) Disconnect the power cable and data cable from the hub card.



- 3) Remove all 8 screws from the hub card.
- 4) Replace the hub card.
- 5) Tighten all screws, then reconnect the power cable and data cable.

Control Box Part Replacement



Disconnect display from power source prior to part replacement

Please use the table below to help with contacting Nanolumens Technical Support and part replacement

NO.	Nanolumens Part Number	Part Description
1	VCS-013251	NanoBanner T50 Sending Card
2	PSS-013249	NanoBanner Control Box Power Supply
3	PSS-013254	NanoBanner Solid State Relay