INFiLED
Present Excellence

Installation and User's Manual

Wallpaper Series
Fixed Solution
Indoor

2020
English Version

Safety Information

WARNING!
Read the safety precautions in this section before installing, powering, operating or servicing this product.

Read this manual before installing, powering or servicing this product. Follow the safety precautions listed below and observe all warnings in this manual and pay attention to the warnings printed on the product.
If you have questions about how to operate the panel safely, please contact your INFiLED supplier.
The following symbols are used to identify important safety information on the product and in this manual.

PROTECTION FROM ELECTRIC SHOCK

- The product must be powered with AC power within the range of 100 – 240 V nominal at 50/ 60 Hz only.
- Disconnect the entire installation from power before carrying put installation or maintenance work. Make sure the power cannot be reconnected, even by accident.
- Double-pole/neutral fusing is used. If the installation is not completely disconnected from power, parts may remain live even if one of the two mains fuses has blown.
- When not in use, the product should be disconnected.
- Always ground (earth) the product electrically.
- Use only a source of power that complies with local building and electrical codes and has both overload and ground (earth) -fault protection.
- Connect the Header to power using only the cables supplied by INFiLED for this product.
- Protect power cables from water and rain.
- Connect the Header to power using only 32 amp-rated industrial Type B power plugs and socket outlets that comply with IEC 60309 (or a comparable national standard) and provide an electrical connection to ground (protective earth).
- External power switches or socket outlets used to supply Headers with power must be located near the product and easily accessible so that the product can easily be disconnected from power.
- Do not connect any other device than Wallpaper series panels to the power throughput connector in the base of the product.
- Connect no more than seventeen Wallpaper panels in total to one main power cable
- Before using the product, check that all power distribution equipment and cables are in perfect condition and rated for the current requirements of all connected devices.
- Do not use the product if the power cable or a power plug is in any way damaged, defect or showing signs of overheating.
- Do not attempt to open any cover.
- Refer any service operation not described in this manual to a qualified technician.

Safety Information

PROTECTION FROM FIRE

- Provide a minimum clearance of 8.5 cm (0.39 in) around the cover at the back of the panel base.
- Do not stick filters, masks or other materials directly onto LED modules.
- Do not modify the product in any way not described in this manual.
- Install only genuine INFiLED parts in or on the product unless an alternative is described in this manual.
- Do not operate the product if the ambient temperature exceeds 45° C (116° F).

PROTECTION FROM INJURY

- Ensure that any structure used for support as well as all fastening and connecting hardware can hold at least 10 times the weight of all supported devices and equipment.
- Do not suspend panels using any other method of attachment than those described in this manual.
- Create an installation by installing panels starting from the top and working downwards. Disassemble an installation by removing panels at the bottom and working upwards.

- Check that all external covers and rigging hardware are securely fastened.
- Block access below the work area and work from a stable platform whenever installing, servicing or moving the product.
- Do not look at lit LEDs from a distance less than 40 cm (1 ft. 4 in.) without suitable protective eyewear.
- Do not view lit LEDs with optical instruments that may concentrate the light output.

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1. Product Overview

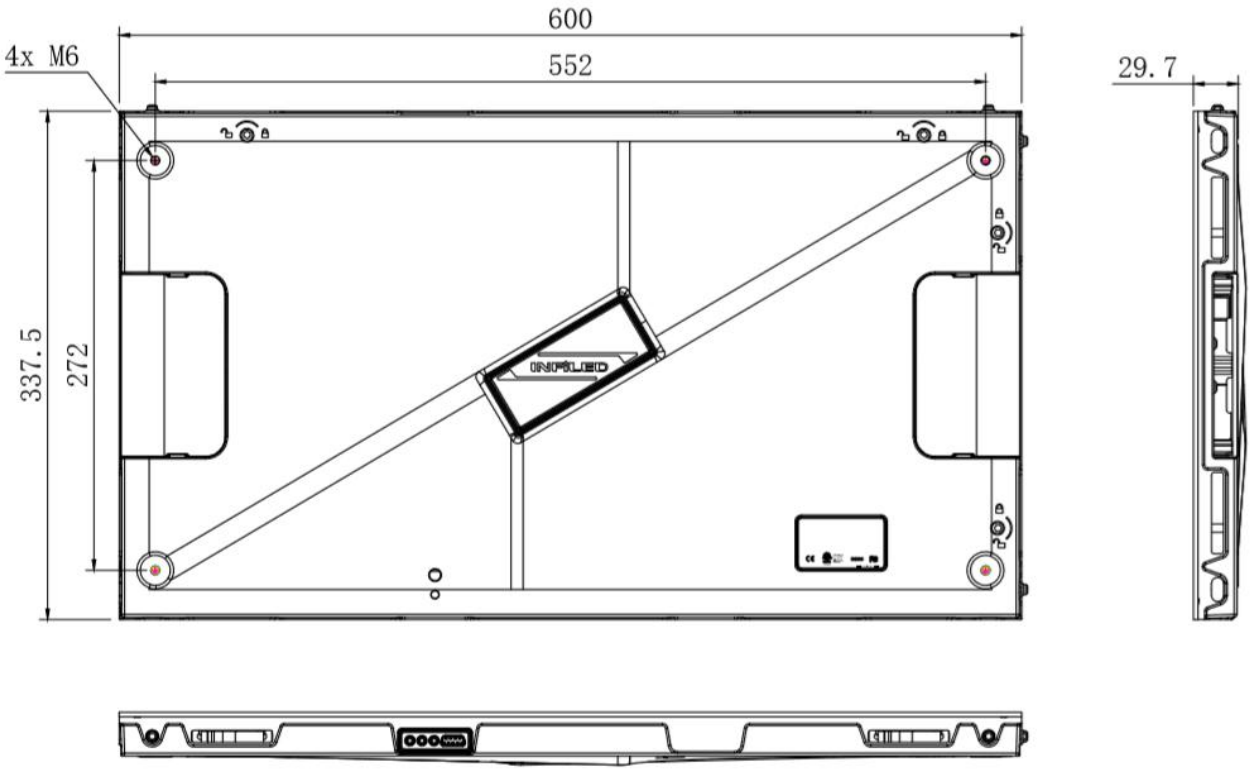
1.1 Features

The ultra-thin wallpaper series can be fixed closely onto the wall and achieves to save as much space as it can with its 35 millimetre thickness. Front installation and maintenance is affordable for an easy operation and neat environment. With its 16:9 panel ratio and narrow pixel pitch, the wallpaper could easily build 2K and 4K screens. Seamless connection and high definition solution ensure perfect visual effect of images and videos.

The recessed power and data connector provide an integrated cable-free interlink. The wallpaper can be controlled independently when its off-line due to the available USB Data option.

1. Product Overview

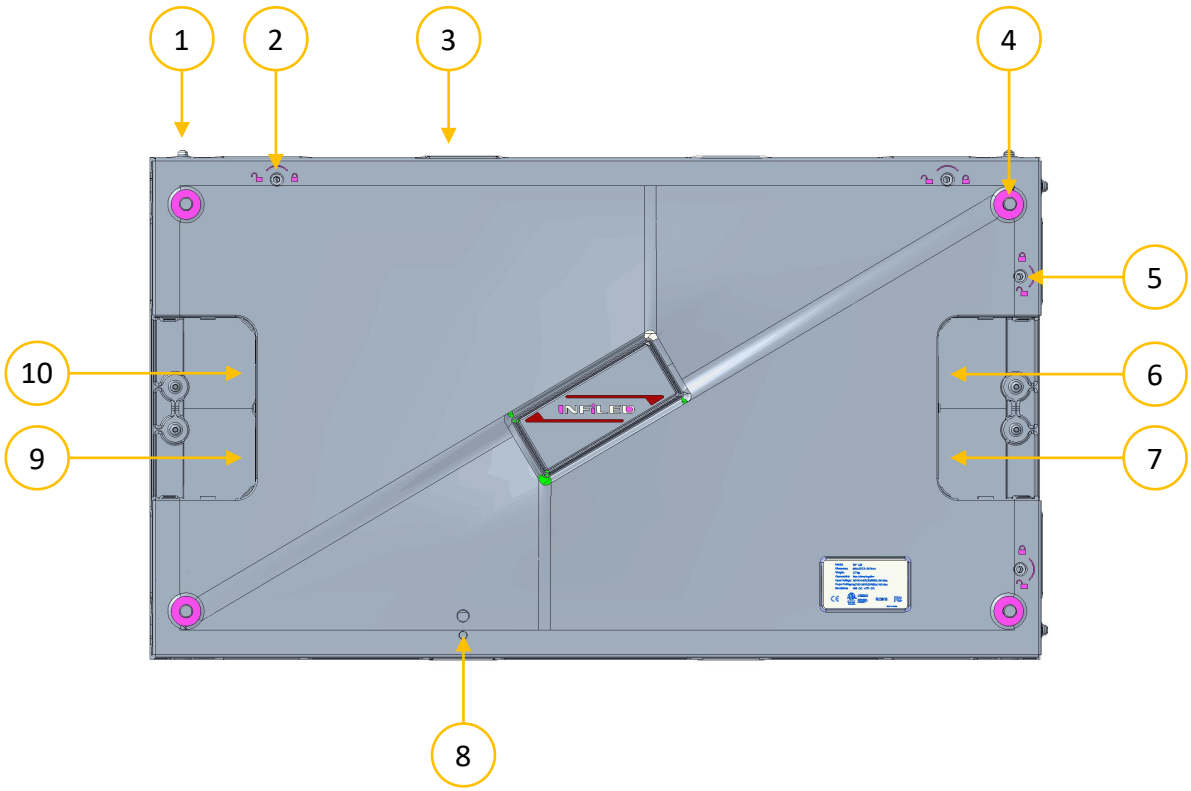
1.2 Dimensions



Cabinet height:	337,5 mm (13,29 in)
Cabinet width:	600 mm (23,62 in)
Cabinet depth:	29 mm (1,14 in)
Weight:	6 kg (13,23 lb)

1. Product Overview

1.3 External Components



Pos.	Name	Note
1	Position pin	Easy cabinet alignment
2	Vertical “Rolling”- Lock	Mechanical connection to upper panel
3	Cable-free power socket	Recessed power socket
4	Hanging pin	Hanging point for fixed installation (4x)
5	Horizontal “Fast”- Lock	Mechanical connection to lateral panel
6	Data socket	Socket for data input
7	Power socket	Socket for power supply
8	Cable-free power connection	Recessed plug for power interlink
9	Power connection	Additional power socket
10	Data connection	Socket for data interlink

1. Product Overview

1.4 Specifications

Modul Number	**IL-FISS-IRWP 0.9COB**	**IL-FISS-IRWP 1.25**
Pixel Pitch	0.9375 mm	1.25 mm
Physical Density	1,137,777 pixel/m²	640,000 pixel/m²
LED Arrangement	COB	3in1 SMD
Module Resolution	320X360pixels	240 x 135 pixels
Module Dimensions	300 x 337.5mm (11.81 x 13.29 in)	300 x 168.75mm (11.81 x 6.64 in)
Cabinet Resolution	640X360 pixels	480 x 270 pixels
Cabinet Dimensions	600 x 337.5 x 38.5 mm (23.62 x 13.29 x 1.14 in)	600 x 337.5 x 29.5 mm (23.62 x 13.29 x 1.14 in)
Cabinet Weight	6.2 kg (13.67 lb)	5.2 kg (11.46 lb)
Brightness	1,000 cd/m²	700 ~ 800 cd/m²
Max. Power Consumption	180 W/m²	180 W/m²
Ave. Power Consumption	60 W/m²	60 W/m²
Visual View Angel	160° / 160°	160° / 160°
Operating Power Source	100 - 240 V, 50 - 60 Hz	100 - 240 V, 50 - 60 Hz
Operating Temperature	-10 °C - +45 °C	-10 °C - +45 °C
Refresh Rate	≤ 3.840 Hz	≤ 3.840 Hz
Life Span	100,000 h	100,000 h
IP Rating	IP30	IP30
Signal Input Source	Composite s-video, Component, VGA, DVI, HDMI, SDI, HD-SDI	

1. Product Overview

1.4 Specifications

Modul Number	**IL-FISS-IRWP 1.5**	**IL-FISS-IRWP 1.5m4**
Pixel Pitch	1.5625mm	1.875mm
Physical Density	409,600pixel/m²	284,444pixel/m²
LED Arrangement	3in1 SMD	4in1 IMD
Module Resolution	192x108 pixels	192x108 pixels
Module Dimensions	300 x 168.75mm (11.81 x 6.64 in)	300 x 168.75mm (11.81 x 6.64 in)
Cabinet Resolution	384x216 pixels	384x216 pixels
Cabinet Dimensions	600 x 337.5 x 29.5 mm (23.62 x 13.29 x 1.14 in)	600 x 337.5 x 29 .5mm (23.62 x 13.29 x 1.14 in)
Cabinet Weight	5.2 kg (11.46 lb)	5.2 kg (11.46 lb)
Brightness	600~800 cd/m²	800 cd/m²
Max. Power Consumption	180 W/m²	180 W/m²
Ave. Power Consumption	60 W/m²	60 W/m²
Visual View Angel	160° / 160°	160° / 160°
Operating Power Source	100 - 240 V, 50 - 60 Hz	100 - 240 V, 50 - 60 Hz
Operating Temperature	-10 °C - +45 °C	-10 °C - +45 °C
Refresh Rate	≤ 3.840 Hz	≤ 3.840 Hz
Life Span	100,000 h	100,000 h
IP Rating	IP30	IP30
Signal Input Source	Composite s-video, Component, VGA, DVI, HDMI, SDI, HD-SDI	
Verification	CE, RoHs, ETL, FCC	

1. Product Overview

1.4 Specifications

Modul Number	**IL-FISS-IRWP 1.8**	**IL-FISS-IRWP2.3**
Pixel Pitch	1.875mm	2.34375mm
Physical Density	284,444pixel/m²	182,044pixel/m²
LED Arrangement	3in1 SMD	3in1 SMD
Module Resolution	160X90 pixels	128X72 pixels
Module Dimensions	300 x 168.75mm (11.81 x 6.64 in)	300 x 168.75mm (11.81 x 6.64 in)
Cabinet Resolution	320X180 pixels	256X144 pixels
Cabinet Dimensions	600 x 337.5 x 29.5 mm (23.62 x 13.29 x 1.14 in)	600 x 337.5 x 29.5 mm (23.62 x 13.29 x 1.14 in)
Cabinet Weight	5.2 kg (11.46 lb)	5.2 kg (11.46 lb)
Brightness	600 ~ 800 cd/m²	1,000~1,300 cd/m²
Max. Power Consumption	180 W/m²	180 W/m²
Ave. Power Consumption	60 W/m²	60 W/m²
Visual View Angel	160° / 160°	160° / 160°
Operating Power Source	100 - 240 V, 50 - 60 Hz	100 - 240 V, 50 - 60 Hz
Operating Temperature	-10 °C - +45 °C	-10 °C - +45 °C
Refresh Rate	≤ 3.840 Hz	≤ 3.840 Hz
Life Span	100,000 h	100,000 h
IP Rating	IP30	IP30
Signal Input Source	Composite s-video, Component, VGA, DVI, HDMI, SDI, HD-SDI	
Verification	CE, RoHs, ETL, FCC	

1. Product Overview

1.4 Specifications

Modul Number	**IL-FISS-IRWP 2.5**	**IL-FISS-IRWP3.1**
Pixel Pitch	2.5mm	3.125mm
Physical Density	160,000ixel/m²	102,400pixel/m²
LED Arrangement	3in1 SMD	3in1 SMD
Module Resolution	120x135 pixels	96x54 pixels
Module Dimensions	300 x 337.5mm (11.81 x 13.29 in)	300 x 168.75mm (11.81 x 6.64 in)
Cabinet Resolution	240x135 pixels	192x108 pixels
Cabinet Dimensions	600 x 337.5 x 29.5 mm (23.62 x 13.29 x 1.14 in)	600 x 337.5 x 29.5 mm (23.62 x 13.29 x 1.14 in)
Cabinet Weight	5.2 kg (11.46 lb)	5.2 kg (11.46 lb)
Brightness	1,200~1,500cd/m²	1,200~1,500 cd/m²
Max. Power Consumption	180 W/m²	180 W/m²
Ave. Power Consumption	60 W/m²	60 W/m²
Visual View Angel	160° / 160°	160° / 160°
Operating Power Source	100 - 240 V, 50 - 60 Hz	100 - 240 V, 50 - 60 Hz
Operating Temperature	-10 °C - +45 °C	-10 °C - +45 °C
Refresh Rate	≤ 3.840 Hz	≤ 3.840 Hz
Life Span	100,000 h	100,000 h
IP Rating	IP30	IP30
Signal Input Source	Composite s-video, Component, VGA, DVI, HDMI, SDI, HD-SDI	
Verification	CE, RoHs, ETL, FCC	

1. Product Overview

1.5 Package

Pack the cabinets in INFiLED Wallpaper Series flight case for transportation. This will provide protection against the physical damage during transportation or storage. Ensure all flight cases are transported or stored in upright position. To reduce the impact of vibration in transit, please package the cabinets using the EPE foam provided.

Any damage sustained by incorrect packaging or storage is not within the scope of warranty!

Notifications for packing and storage:

- Always dry the panels before packing or storage
- Make sure the cabinet or flight case doesn't show any signs of damage
- Look the case as soon as all cabinets, which need to be stored, are inside
- When the cases are stacked, make sure the wheels are looked and in the wheel recesses of the case below
- Carry the flight case by an suitable forklift and take safeguard procedures to avoid injury if necessary
- Prior to normal operation, please allow long- term stored displays two hours of warming at 50% brightness, followed by two hours of warming at 100% brightness level

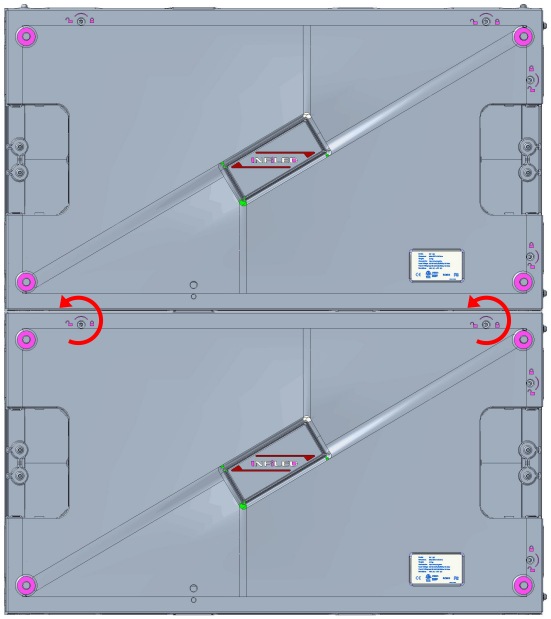
2. Mechanical Installation

2.1 Vertical Connection

The mechanical connection between Wallpaper panels is fastened by rolling-locks. Position pins helping to align the cabinets correctly. The supplied Allen key is required for turning the lock into the fastened position.

Front and rear service can be provided on the WP series. It is recommended to use the special assembling adapter, whenever it is possible. It is necessary to remove the LED modules in order to use the adapter, which ensures, that the panels are aligned correctly without any gaps or inaccurate positioning.

The connection adapter can only be used when front service is practicable. Under given circumstances, that's relies on the projects environment, the mechanical connection must be secured from the back, without the assembling device.



Back-mounted

1. The lock is in open position when the hock is recessed in the frame, ensure that this position is applied.
2. Align the panels carefully.
3. Insert the supplied Allen key or use another suitable one.
4. Turn the key counter-clockwise to secure the lock. The lock must be rotated till the stopping point is reached.

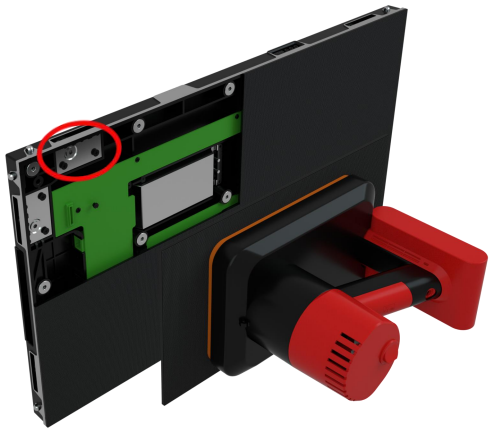
2. Mechanical Installation

2.1 Vertical Connection

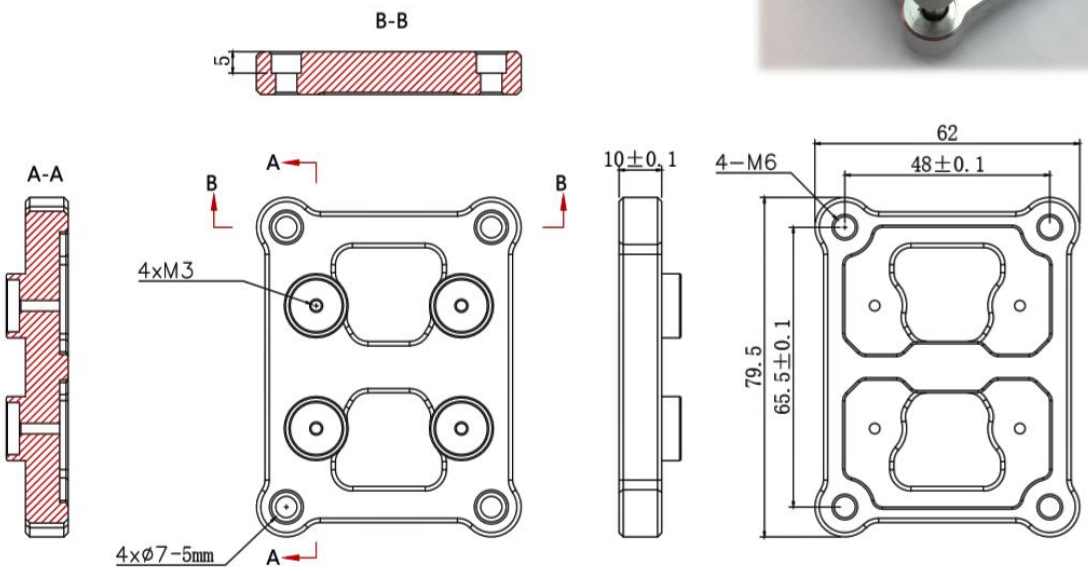
The mechanical connection should be fastened from the front whenever it is possible. The LED-modules cover the locking system inside the cabinet, which means that the corresponding modules must be removed before implementing the fastening. The modules are connected to the frame by magnets, therefore we can remove them easily with a suction tool.

LED-module removal

1. Apply the vacuum suction tool in the middle of the module.
2. Run the tool, ensure that the module sticks to it.
3. Pull carefully and detach the module. Take out the modules one after another.



The special designed assembling adapter should be used when the panels are connected vertical. With the use of the adapter, it is ensured, that the panels are aligned correctly. Each device has four captive screws and four recessed magnets. The magnets atomically attach the adapter to the corners of the panel.

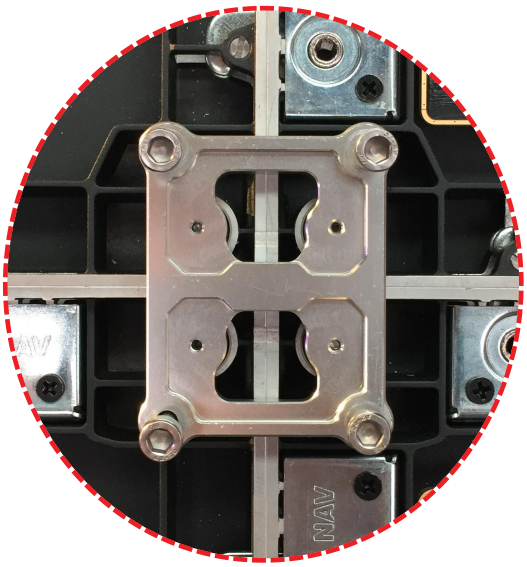


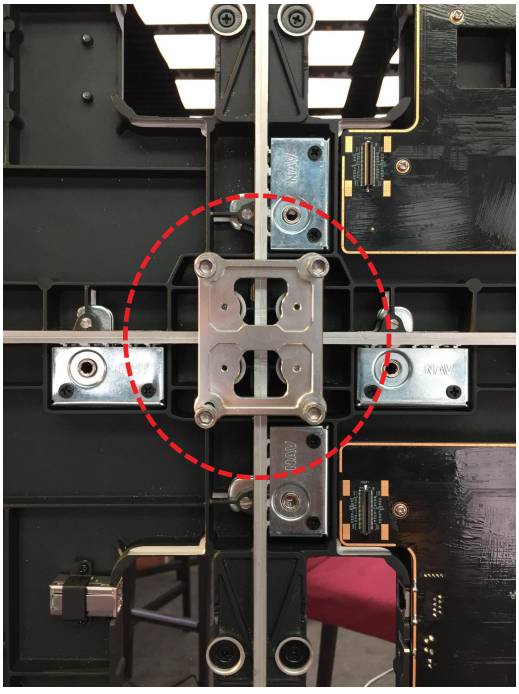
2. Mechanical Installation

2.1 Vertical Connection

In addition to the adapter specific screws are provided, which can be inserted in the adapter. The screws attach the adapter to the cabinet and provides by that the perfect positioning of to cabinets towards each other.

1. The rolling fast lock is in open position when the hock is recessed into the frame, ensure that this position is applied.
2. Remove all LED-modules that cover the locking system. (At least both top modules of the lower panel)
3. Align the cabinets.
4. Set the assembling adapter over the corresponding thread holes of the cabinets. The magnetic attraction will place the adapter in the correct position.
5. Attach the screws and fix the cabinets tightly to the adapter. Ensure that the adapter and panels are aligned correctly before execution.
6. Insert the supplied Allen key or use another suitable one.
7. Turn the key clockwise to secure the lock. The key must be rotated till the stopping point is reached.
8. Remove the adapter and put the removed LED-Modules back on.





2. Mechanical Installation

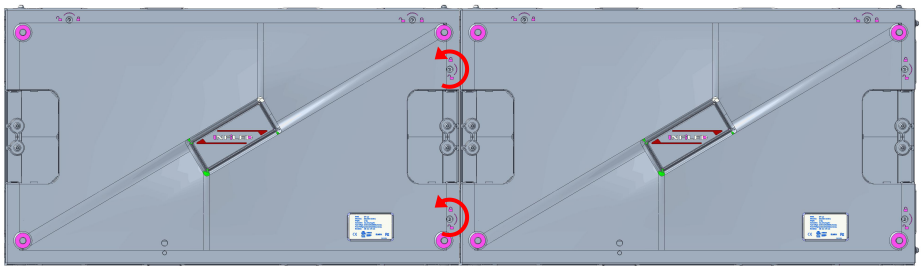
2.2 Horizontal Connection

The lateral connection between two panels is fastened by the same rolling-lock system as the vertical joining. The panels feature position pins on the side as well.

The technical procedure for the horizontal connection are the same as performed for the vertical. LED-modules must be removed prior if the space behind the installation is limited. Follow the steps described on slide 14 for a quick and safe module removal.

Cabinet lock

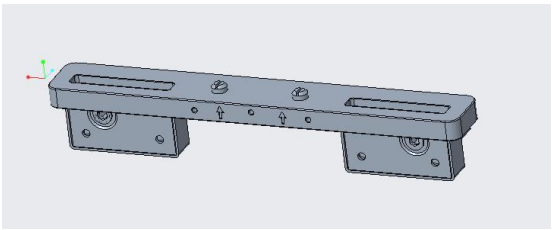
1. The lock is in open position when the hock is recessed in the frame, ensure that this position is applied.
2. Align the panels carefully.
3. Insert the supplied Allen key or use another suitable one.
4. Turn the key counter-clockwise to secure the lock. The lock must be rotated till the stopping point is reached.



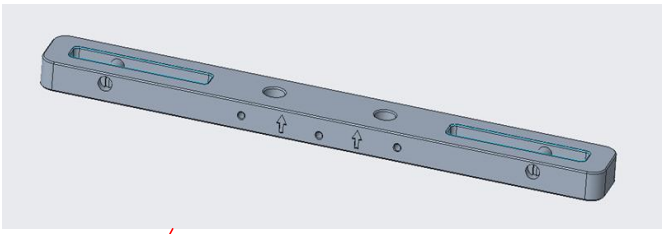
2. Mechanical Installation

2.2 Horizontal Connection

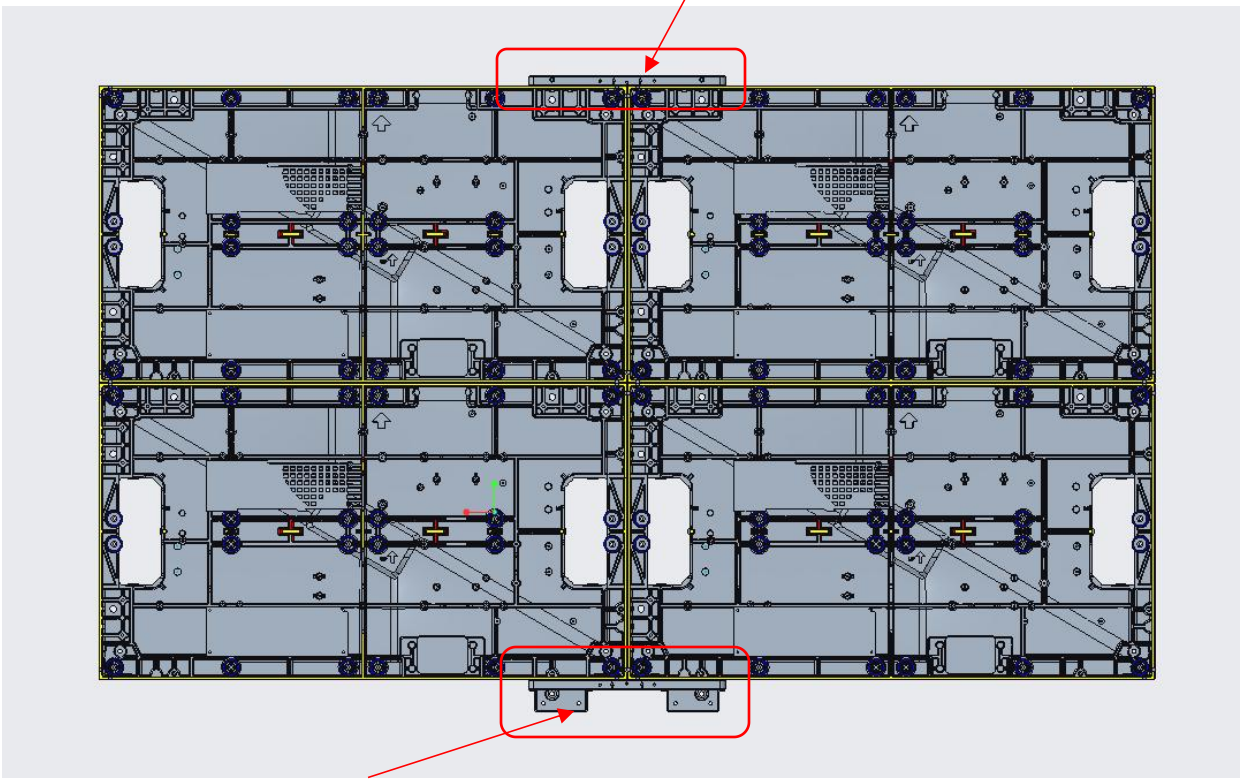
There have two tools to help installation to make sure all the cabinets at the same level, just shown as follow.



Bottom tool



Top tool



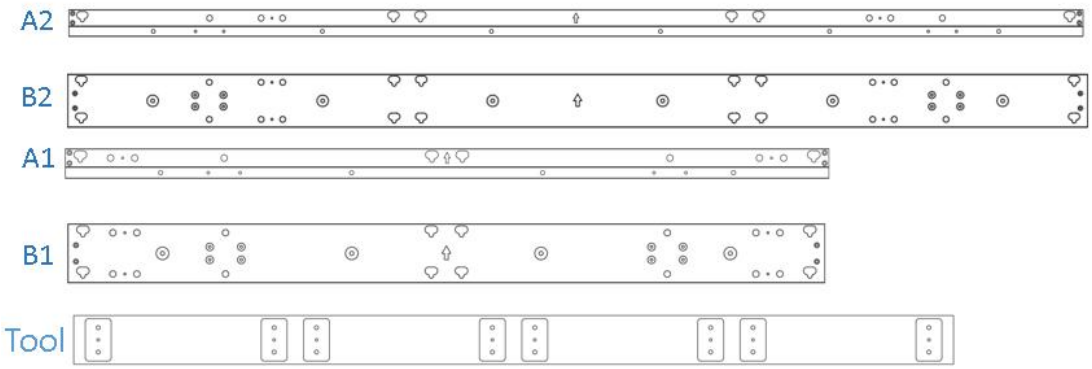
Put the tools on the cabinets, then use the Allen key lock them, let them combined together. It is suitable every two cabinets when installation. Remove the tools after finish adjustment.

2. Mechanical Installation

2.3 Installation Components

INFiLED designed special wall mounting bass, tools and components for a precise and accurate fixed installation.
It depends on the desired screen size, which additional parts are supplied. Contact your INFiLED supplier in order to get the best consultation and solution for your project.

Small screen components



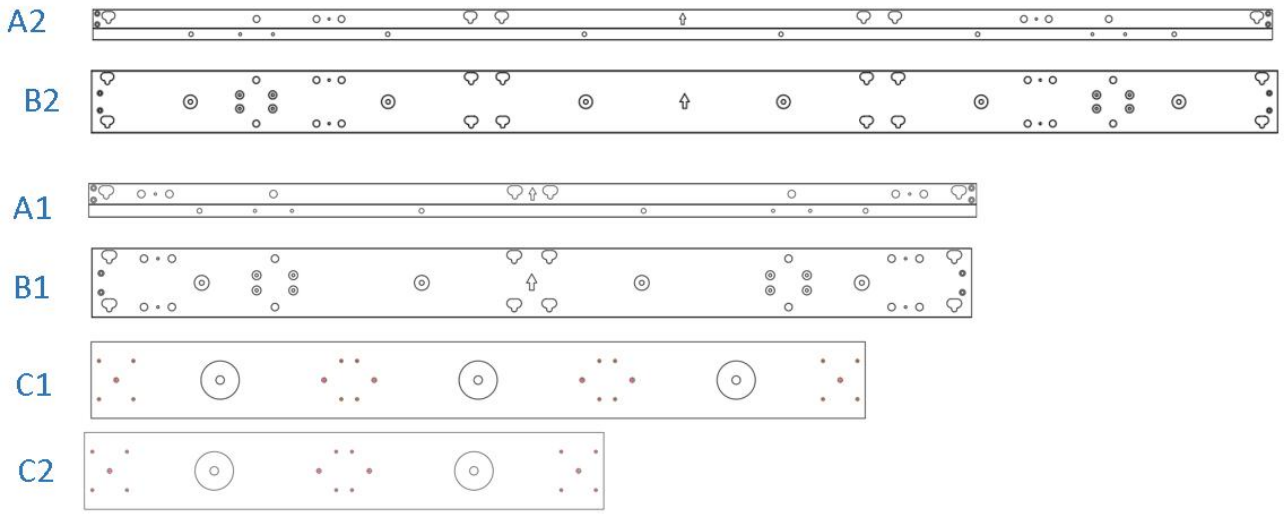
Tools		Accessories			
	Mark	**Name**	4*4	5*5	6*6
Electric hand drill /M5 wrench/Cross screw driver	A2	WP-Mounting bracket-1800mm top/bottom bar-C	0	2	4
	B2	WP-Mounting brakect-1800mm middle bar-C	0	4	10
	A1	WP-Mounting bracket-1200mm top/bottom bar-C	4	2	0
	B1	WP-Mounting bracket-1200mm middle bar-C	6	4	0
Cross screw driver	TOOL	WP-Mounting bracket- Location beam for vertical -B	2	2	2
6mm drills		M6X40 Hexagon countersunk head built-in expansion bolt	40	60	84
5mm drills		PA6X40Round head tapping screw (Black stainless steel)	40	60	84

2. Mechanical Installation

2.3 Installation Components

INFiLED designed special wall mounting bass, tools and components for a precise and accurate fixed installation.
It depends on the desired screen size, which additional parts are supplied. Contact your INFiLED supplier in order to get the best consultation and solution for your project.

Big screen components



Tools	Mark	Name	QTY
Electric hand drill /M5 wrench/Cross screw driver/ 8mm drills	A2	WP- Mounting bracket-1800mm top/bottom bar -C	Determined by the order.
	B2	WP-Mounting bracket-1800mm middle bar-C	
	A1	WP-Mounting bracket-1200 top/bottom bar-C	
	B1	WP-Mounting bracket-1200 middle bar-C	
	C1	WP-Mounting bracket-1012.5X100mm-vertical beam -B	
	C2	WP-Mounting bracket -675X100mm-vertical beam-B	

Supplemental “mounting” bars are provided for the correct assembling of the wall mounting bars. The additional bars validate, that the wall mounting bass are installed with a defined distance and in accurate position.

2. Mechanical Installation

2.4 Small Screen Assembly

Small screen components

Ten wall mounting bars are provided for a 4x4 screen installation on the wall. The top and bottom boundary bars are identical, so are the six wall mounting bass in the middle.

Prior to the wall mounting bas installation on the wall, we need to connect the wall mounting bars with the supplementary mounting bars. For an installation with 2x4 screens, two mounting bars and five wall mounting bass are necessary. A 4x4 screen installation is mounted with twice as much bars. Each wall mounting bas is attached to the mounting bar by four screws. The total installation depth of the screen will not exceed 37mm.

2. Mechanical Installation

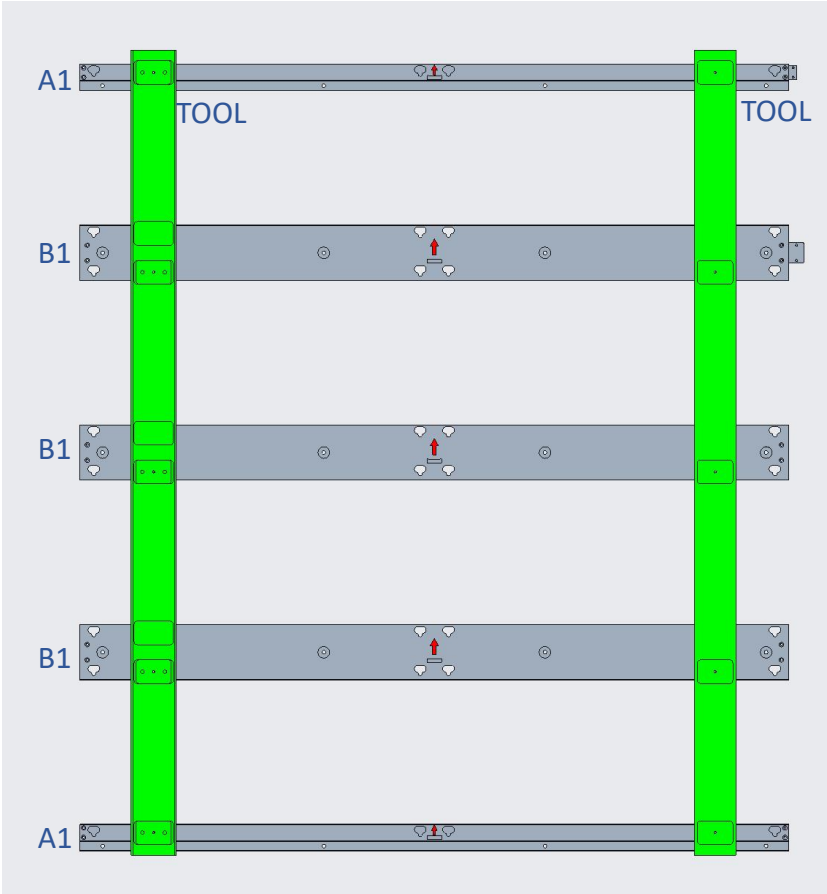
2.4 Small Screen Assembly

Assembly Steps

1. Use the mounting bracket beam 1200x45mm(A1) and 1200x93.5mm(B1) beam splice them into the shape like Fig.1, use the two locations vertical beam to fixed them, please let the arrow up on the beam up.

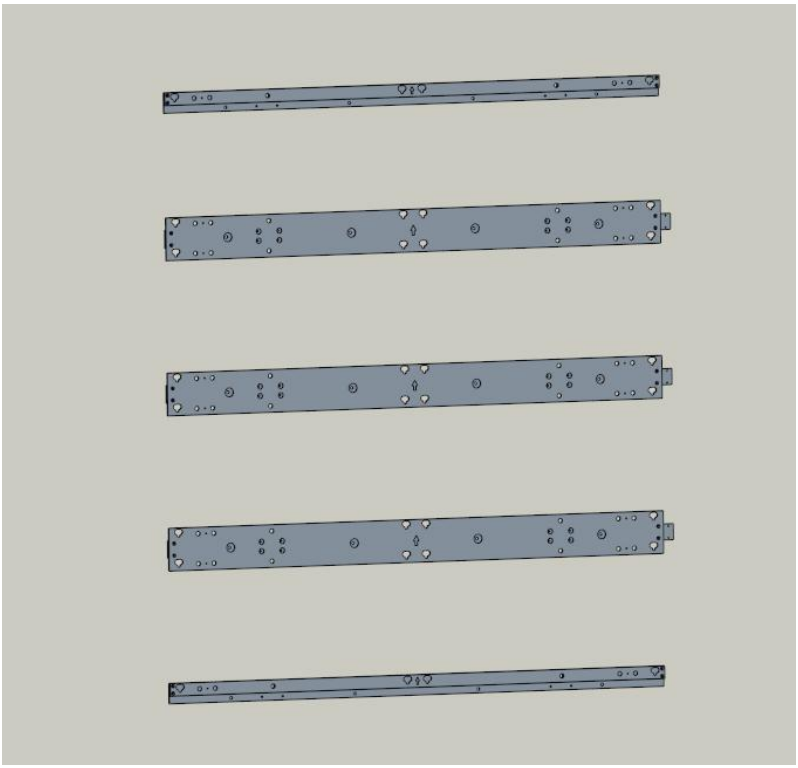
2. Make holes on the wall according to the size marked in the installation drawing, can use the frame that spliced at the step 1 to auxiliary, the holes size is Φ6mm, embedded expansion screw base in the holes. (Please skip if use tapping screws)

3. Align the frame that spliced at step 1 with the holes, use the spirit level to make sure the frame level, fixed them with screws, then remove the vertical beam.

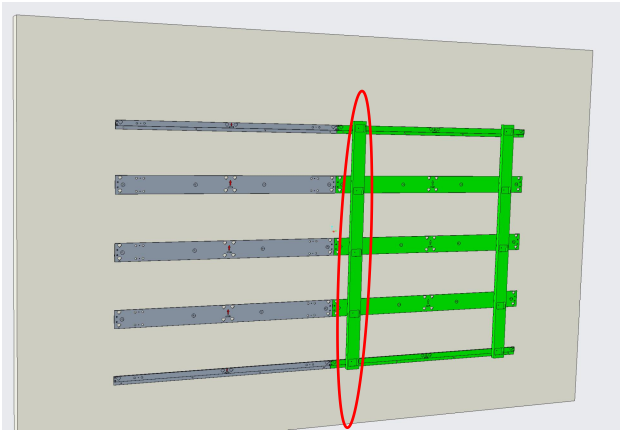


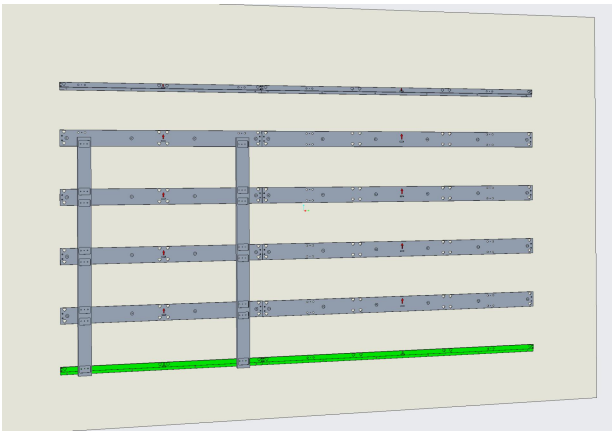
2. Mechanical Installation

2.4 Small Screen Assembly



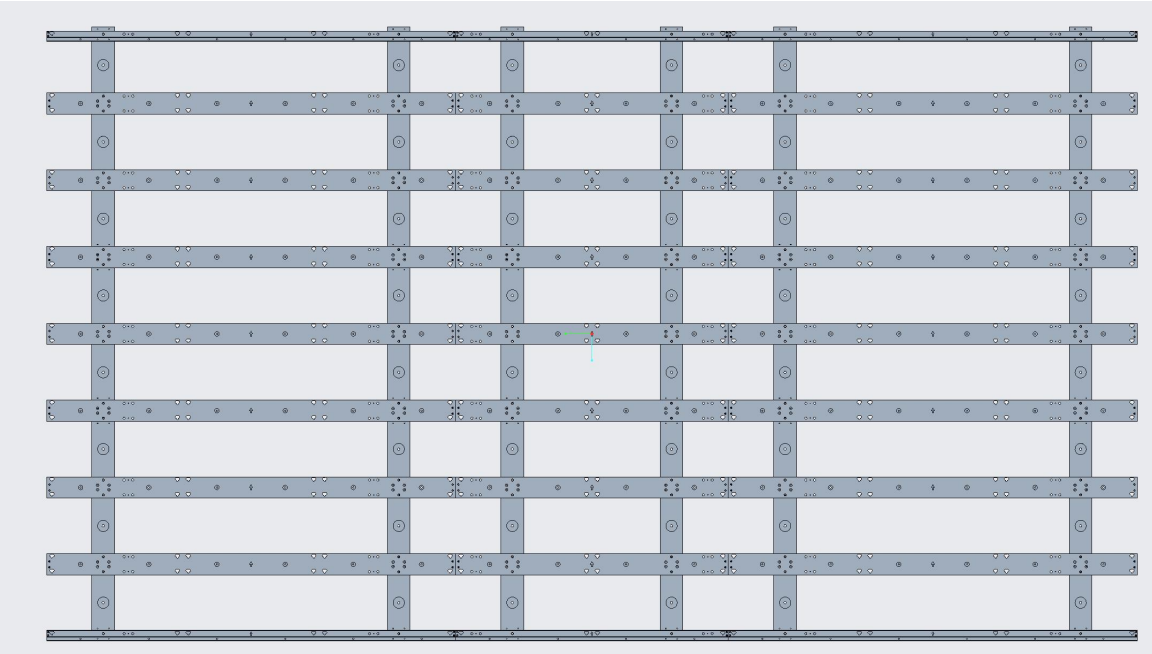
4. Repeat step 1 & 2, splice another half of frame and mounted on the wall, just like Fig.3, tighten the screw at the red circle position, which combine the two parts of the mounting frame, so far, the 4x4 mounting bracket complete assembly.
5. If this is a 5x5 screen, just add one more beam at the bottom, just like Fig.4





2. Mechanical Installation

2.5 Big Screen Assembly

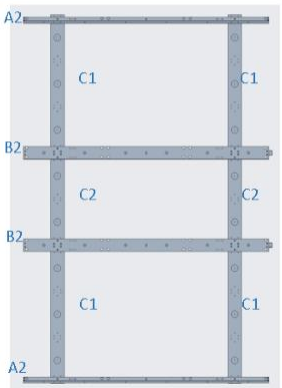


8x8 Structure

If a screen size larger than 6x6, must need a vertical beam to auxiliary installation. For example 8x8, this structure is a little bit big for installation, according to the materials provided, the whole structure can be divided into three parts to complete, just like below shown. After finish, the total installation depth of the screen will not exceed 67.5mm.

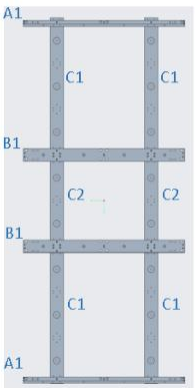
Materials

A2 2 pcs
B2 2 pcs
C1 4 pcs
C2 2 pcs



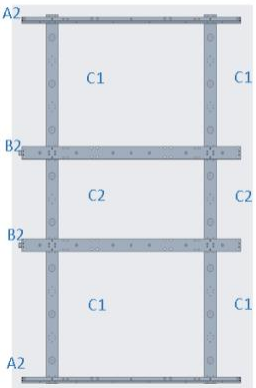
Materials

A1 2 pcs
B1 2 pcs
C1 4 pcs
C2 2 pcs



Materials

A2 2 pcs
B2 2 pcs
C1 4 pcs
C2 2 pcs

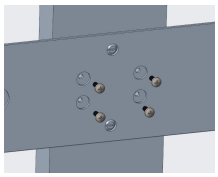


2. Mechanical Installation

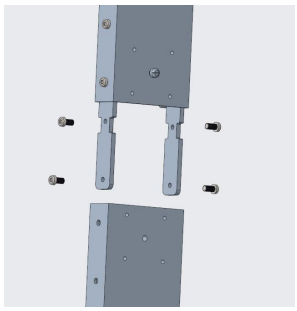
2.5 Big Screen Assembly

The required parts of assembly

According to the quantity of the materials shown in the figure, they were spliced into three brackets as shown in the figure, please notice the direction of the bracket marked in the red circle.



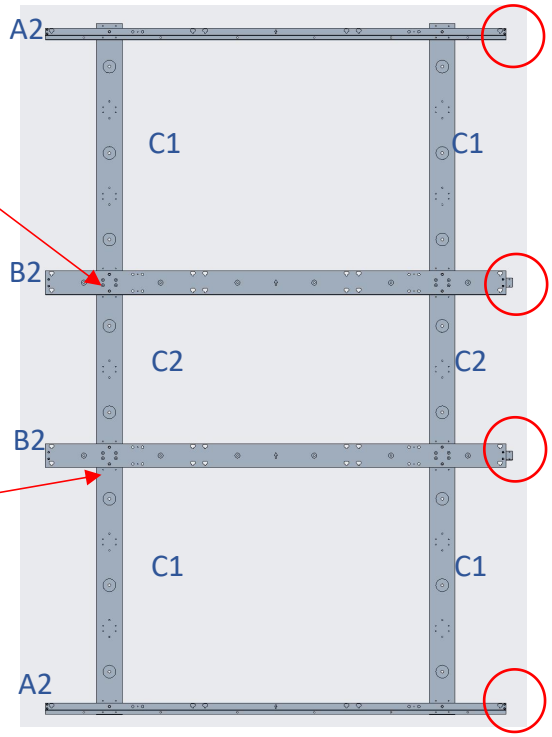
Joint: fixed by M4x10 inner hexagon screws



Vertical beam joint： fixed by M6x12 inner hexagon screws

Materials

A2	2 pcs
B2	2 pcs
C1	4 pcs
C2	2 pcs



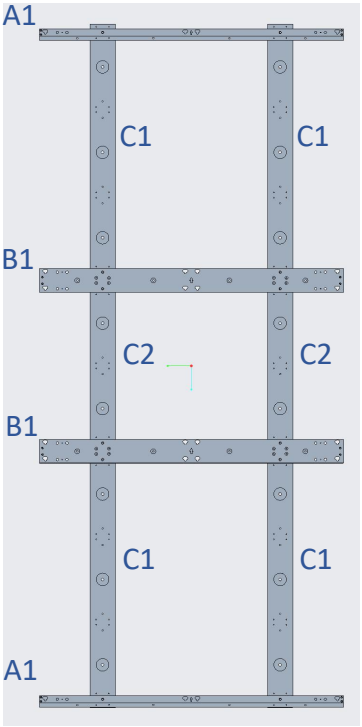
2. Mechanical Installation

2.5 Big Screen Assembly

The required parts of assembly

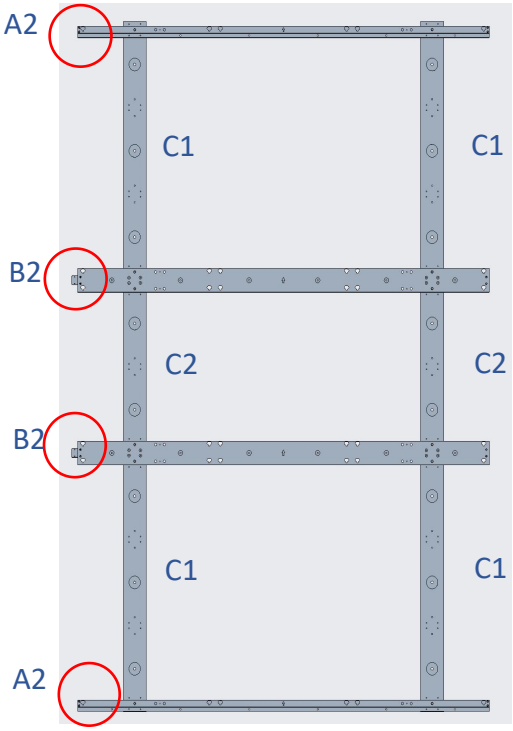
Materials

A1 2 pcs
B1 2 pcs
C1 4 pcs
C2 2 pcs



Materials

A2 2 pcs
B2 2 pcs
C1 4 pcs
C2 2 pcs

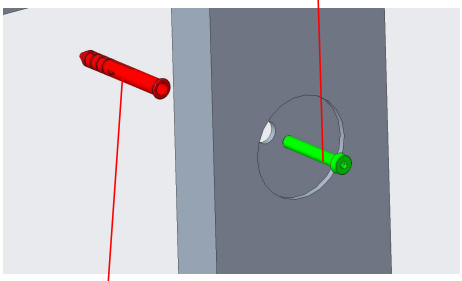


2. Mechanical Installation

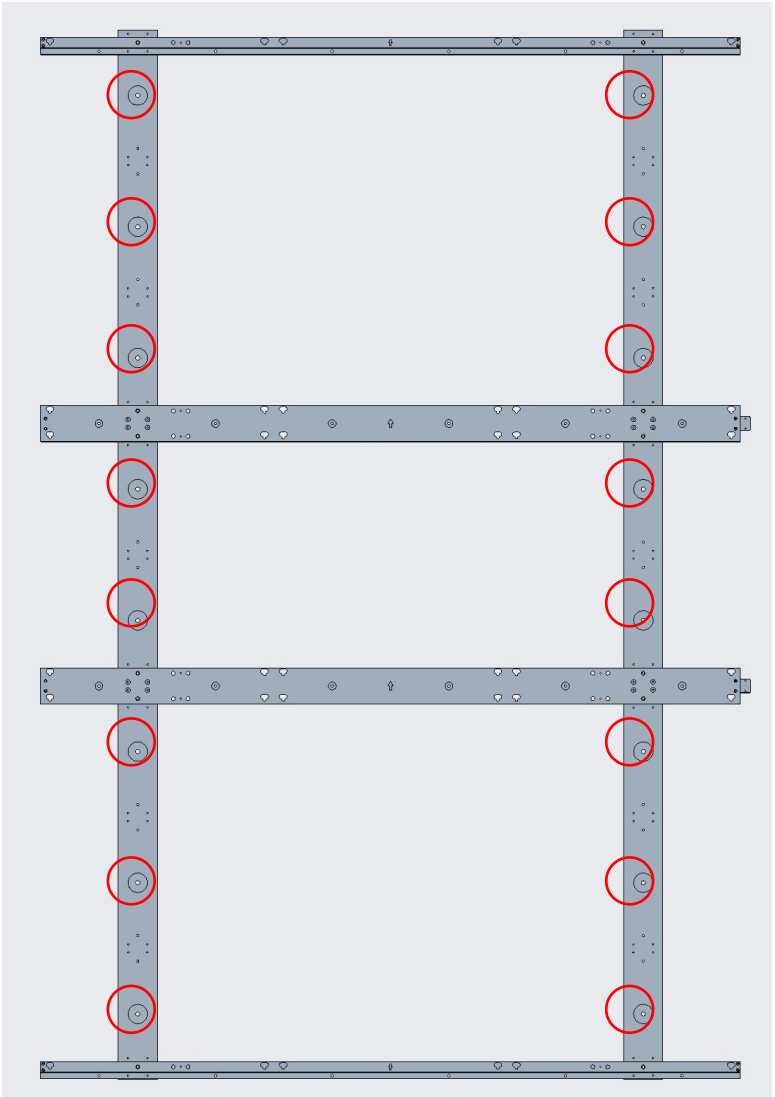
2.5 Big Screen Assembly

1. Use the ϕ9mm drill make a hole on the wall, can use the bracket to help make the holes.
2. Insert the expansion pipe into the wall.
3. Fix the bracket on the wall, please notice the level of the bracket.

M6*60mm expansion bolt



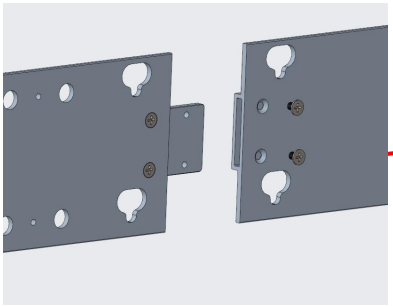
8x60 expansion pipe



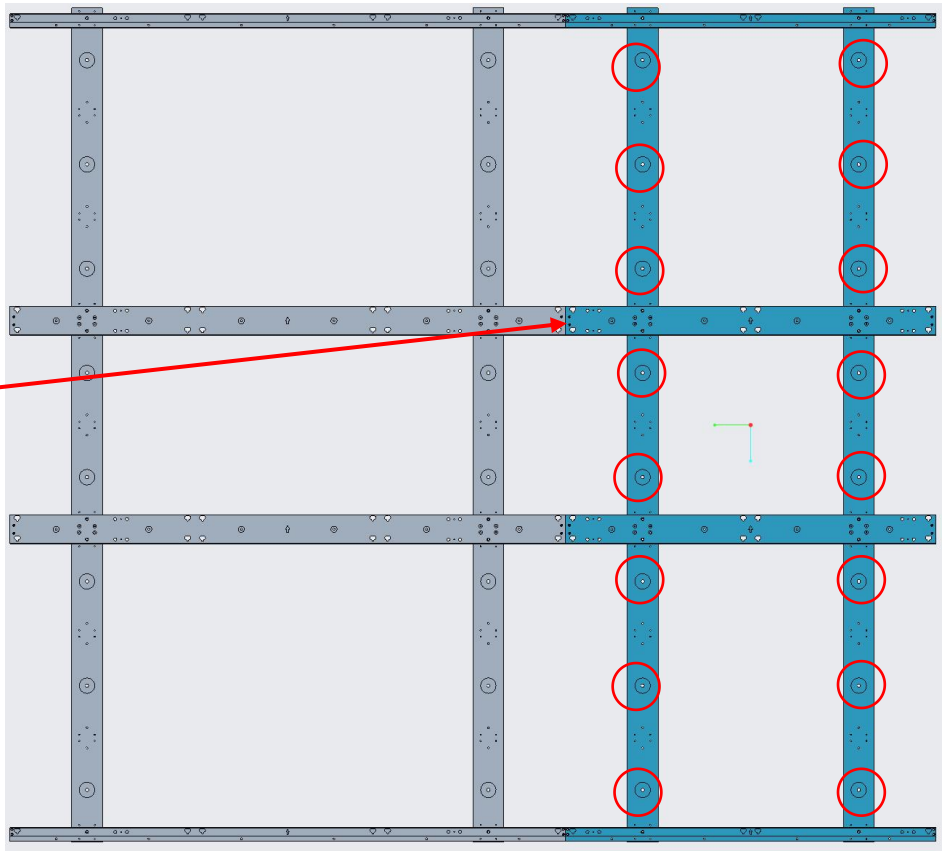
2. Mechanical Installation

2.5 Big Screen Assembly

4. Place another assembled mounting bracket on the side of the fixed mounting bracket.
5. Fix the junction plate just like below picture to make sure the two mounting bracket at a same level.
6. Use the expansion bolt to fix the mounting bracket, just like below figure.



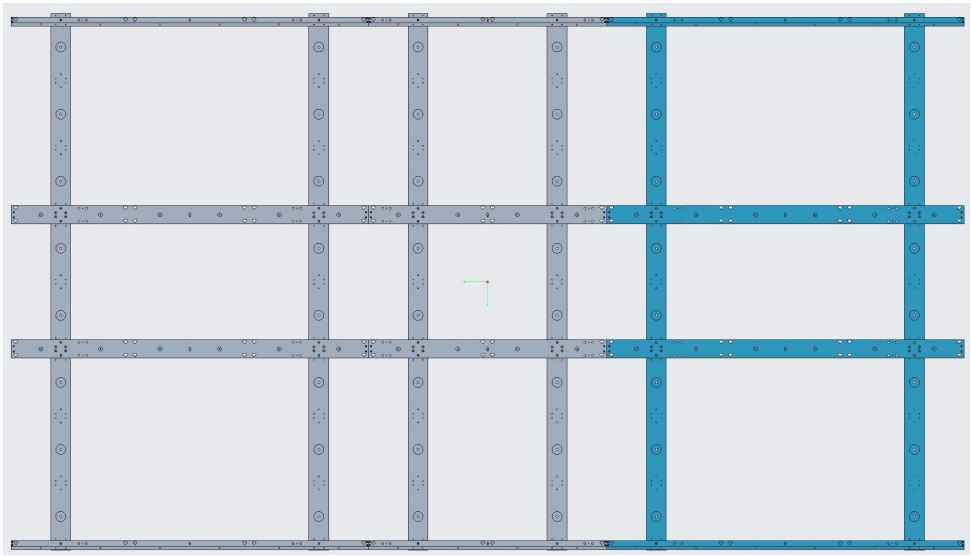
KM4*6mm screw



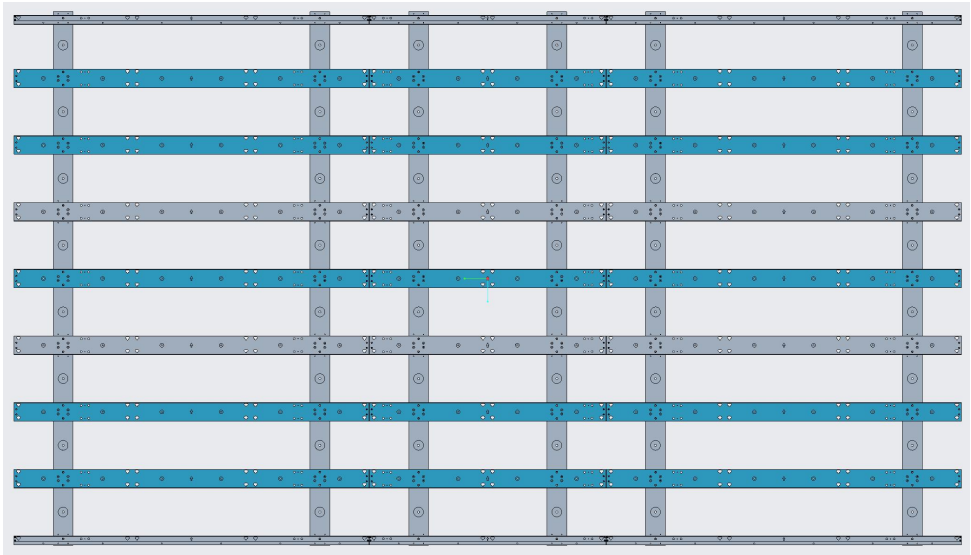
2. Mechanical Installation

2.5 Big Screen Assembly

7. Use the same methods finished the next one, when finished, as shown as below figure.



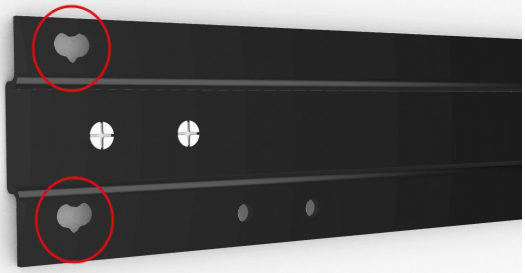
8. Fix the remaining beam to the mounting bracket to complete the installation.



2. Mechanical Installation

2.6 LED-Panel Suspension

Each cabinet features four hanging pins on the back. The hanging pins must be inserted into the suitable heart-shaped holes of the wall mounting bar.



The special shape of the fixing point allows you to insert the cabinets pin from the right and left side. Align the panel carefully and ensure, that all four pins are placed into the holes before releasing the panel. The panel will slightly move downwards as it gets into the final position.

2. Mechanical Installation

2.6 LED-Panel Suspension

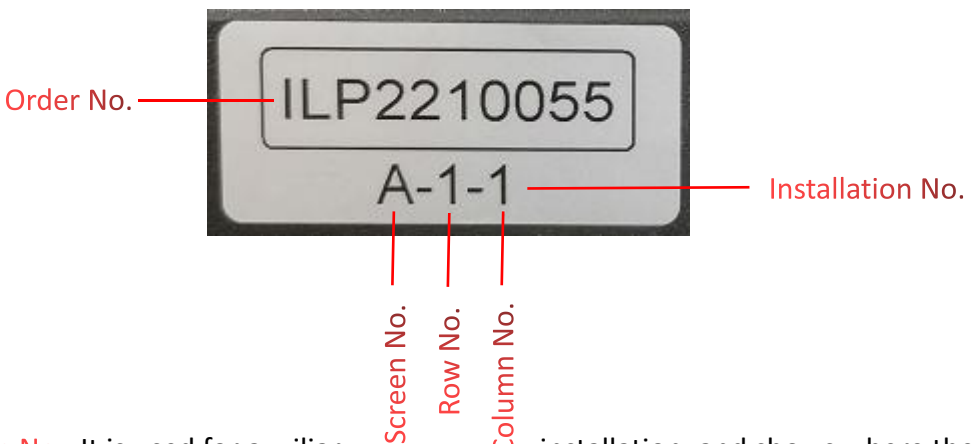
When installing WP panel, INFiLED generally recommend that the installation be carried out according to the order of delivery or the drawings provided. Therefore, all panels will be numbered before leaving factory, and the installation can be performed according to the serial number of the panel.

Installation No.

A-4-1 01703	**A-4-2 01706**	**A-4-3 01716**	**A-4-4 01718**
A-3-1 01711	**A-3-2 01712**	**A-3-3 01704**	**A-3-4 01714**
A-2-1 01710	**A-2-2 01709**	**A-2-3 01708**	**A-2-4 01707**
A-1-1 01705	**A-1-2 01704**	**A-1-3 01713**	**A-1-4 01715**

Panel Serial No.

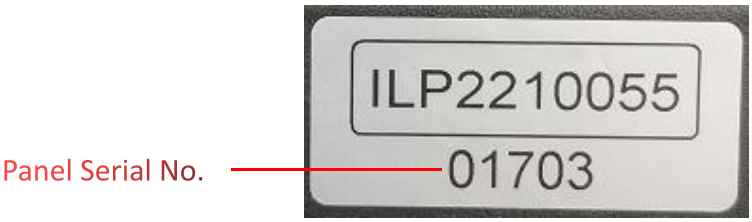
Screen Installation Diagram -- Front View



Installation No.: It is used for auxiliary installation, and shows where the screen is and where row and column is.
Order No.: It is the number from LGE, in principle, only the same order number can be installed together.
Screen No.: It is the number of screen, it depends on how many screen do you have, just like have 5 screen in this order, so the screen number would be A/B/C/D/E.
Row No.: It shows which row the panel located.
Column No.: It shows which column the panel located.

2. Mechanical Installation

2.6 LED-Panel Suspension



Panel Serial No.: It is the number of the panel. This number can be used for auxiliary installation, also the number used for the calibration, it is the unique code of the panel.

The drawing shows how to installation can be provided by INFiLED. It includes the installation number and panel serial number, just as shown in the Screen installation diagram on the previous page. So it is important to check the back of the panel to known the installation number.

Overview of Panel

2. Mechanical Installation

2.7 Module Installation

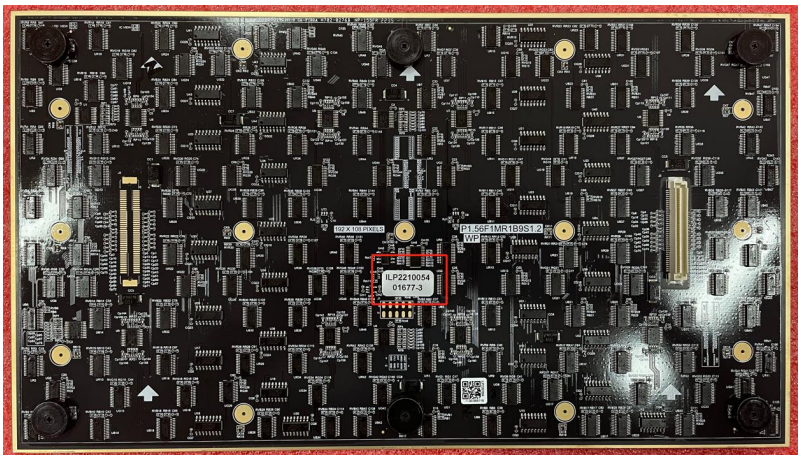
In order to make the color consistency of the screen better, WP series will do the panel calibration before shipment. The calibration data is saved which named as same as the panel serial number, that means, if anyone want to find the calibration data of the panel, only need to find the number of the corresponding panel (can be found at the back of the panel). The module on the calibrated panel can not be replaced at will, otherwise the module display will have the problem of poor consistency, so, do not put the module at will, be sure to place the module as provided in the figure below.
The following is diagram of the panel where the modules palced and a real sticker sample of module number.

Order No.	**ILP2210055 01703-1**	**ILP2210055 01703-3**
Module No.	**ILP2210055 01703-2**	**ILP2210055 01703-4**

Module placed diagram
-From Front View-

Real sticker on the module

Interpretation of sticker information: The above real sticker sample shows the order number is ILP2210055, and the panel serial number is 01703, and the module number is 1, so this module must be placed at the top-left of the panel (from front view).



Overview of Module

3. Power and Data Connection

3.1 Electrical Components

Power cables

WAGO Connector

Data cables

Neutrik/ EtherCON
LAN cable

A various number of power cables can be used on the AC cabinets depending on the model:

Power	**Data**
AC power starter cables	Cat5e/ Cat6e data starter cables
AC power inter-connector cables	Cat5e/ Cat6e data interlink cables

The operating power source must be 100- 240V, 50/ 60 Hz. One main power cable (3 x 2,5 mm²) can support a **maximum of 20 panels at 220V** and 12 panels at 110V. Ensure that no more cabinets are supported by one power source.

Data should be routed to ensure connection between all panels in a single chain up to the maximum output of the processor connection port. It is recommended that the data interlink begins in one corner of the display. These are usually 10m Cat5e cables with Neutrik PowerCON connectors and can be up to a maximum of 100m. For connections beyond 100m distance a fibre connection is required.

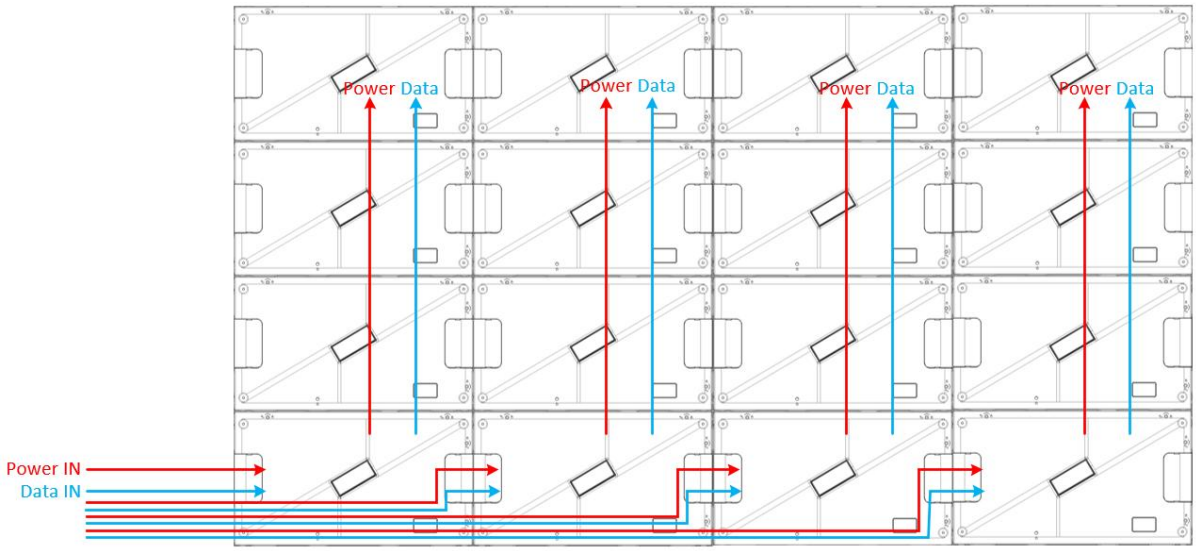
The maximum supported cabinets from one main data output depends on the selected resolution and frequency. **One main data output can load 650 Thousand pixels**, and one standard 4 port controller can support 2.3 Million pixels. (Example Nova MCTRL660 Controller)

3. Power and Data Connection

3.2 Power and Data Link

Small screen installation

All the cabinets can connector each others by cable connector and data cable in vertical or horizontal direction, but one cabinet can not connect two cabinets same time.
The lateral interlink of data and power between two panels must be arranged with suitable ethernet or power cables.



Single line power supply

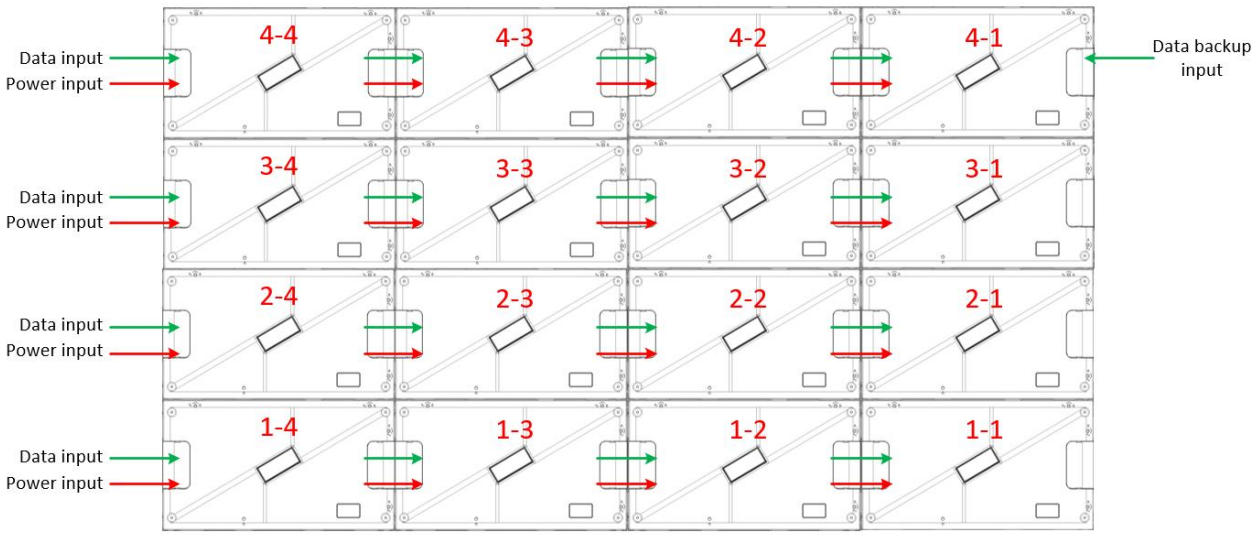
The power and data input sockets are on the left side of each PDU, the outputs are on the right side. Use the long power and data cables for the main connection. The interlink is provided by the recessed power/data plug. For data backup, the data output socket on the last LED- panel can be used. In this scenario, each column has its on power and data supply. Ensure, that no more panels are connected through one main power or data cable than the capacity requirement allows.

3. Power and Data Connection

3.2 Power and Data Link

Small screen installation

The lateral interlink of data and power between two panels must be arranged with suitable ethernet or power cables.



From Rear View

Looped power supply

The power cable can be looped through the columns as well, as shown in this example. Ensure, that no more cabinets are connected through one main power cable than the power capacity requirement allows.

In this scenario, the first power supply is linked from the left bottom cabinet to the top left cabinet with the integrated connector. The power interlink to the cabinet on the next column is completed by an external power cable. One power supply distributes eight cabinets. Each column has its own data supply.

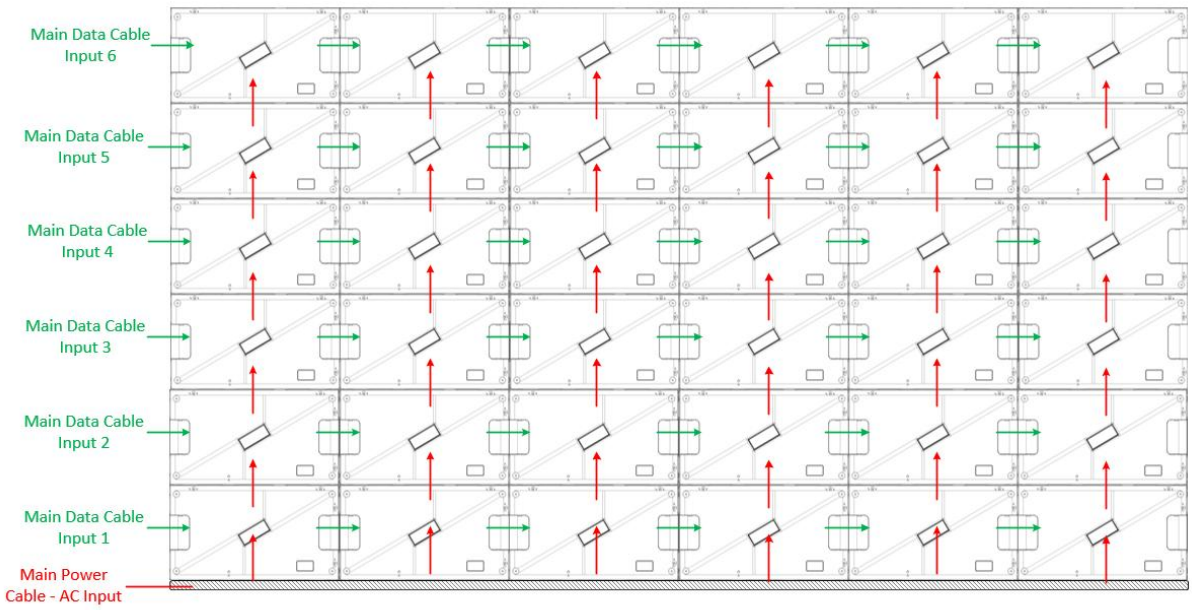
Pay attention, that no more panels are connected through one main power or data cable than the capacity requirement allows.

3. Power and Data Connection

3.2 Power and Data Link

Big screen installation

The interlink bottom bar of the big screen installation has the same power connectors integrated as the cabinets. The power supply can be implemented through the bar and looped vertical through the interlink cables.



Implement the power supply trough the bottom bar and connect the pales by engaging the integrated connectors. The data supply needs to be linked by external cables as shown in the picture.
For data backup, the data output socket on the last LED- panel can be used. In this scenario, each column has its on power and data supply. Ensure, that no more panels are connected through one main power or data cable than the capacity requirement allows.

4. Software

4.1 Senderboard

The senderboard connects the Computer/ Software with the LED- panel. A high-performance senderboard from Nova is recommended for the best picture quality.

It’s important, that the senderboard is suitable for the LED- application. Ensure, that the controller can cover the quantity of pixels needed.

As an example, the Nova MCTRL 660 controller is described in more detail in the following section.

The front interface can be used to setup simple main configurations of the LED- wall and modify the colour settings.
More detailed configurations and setups can be performed with the “Novastar” software.

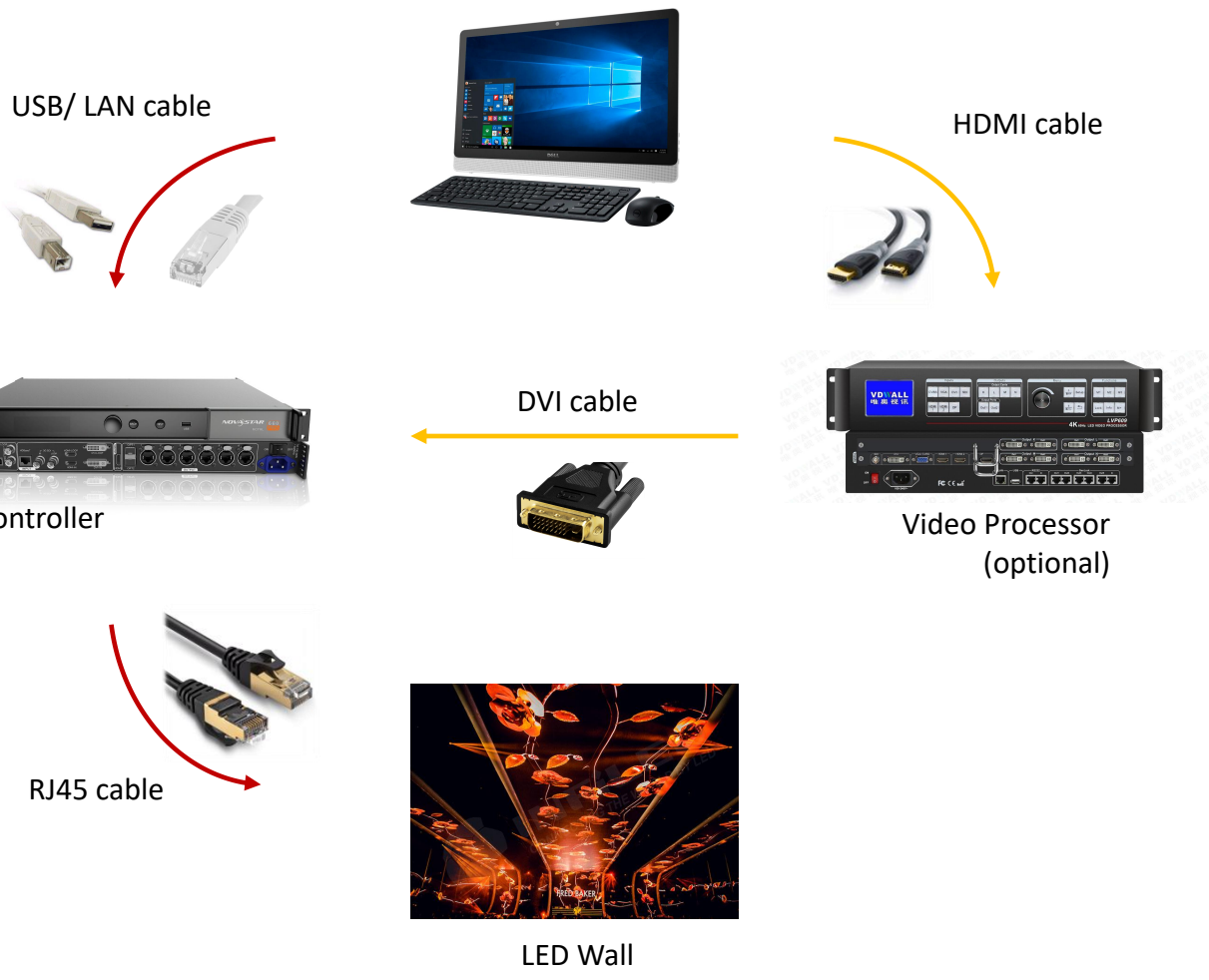
Connections:

Output:	4 x RJ45 HDMI- Loop DVI- Loop	Control:	RJ45 USB IN/OUT
Input:	single- link DVI/ HDMI Audio 3,5 Klinke HDMI	Power supply:	AC 100- 240 V 50 – 60 Hz

4. Software

4.2 Hardware Connection

The data communication between the computer and sender board is enabled with USB or LAN connection. The sender board is connected via RJ45 cables to the LED- panel.
Ensure, that the plugs are connected correctly.



A USB- driver is needed for the data communication, which is already installed on the computer system or is included in the Nova software. Install the driver if necessary.
The communication between the controller and LED- panel begins immediately after the Nova software starts running.

A video processor (yellow line) can be used optional. The red line shows the basic but necessary connection between the software and LED- panel.

4. Software

4.3 Software Introduction

This chapter informs shortly about the Nova software, its setup and operation.
For more detailed information about using the software and run the desired content, please refer to the NovaStar user manual.

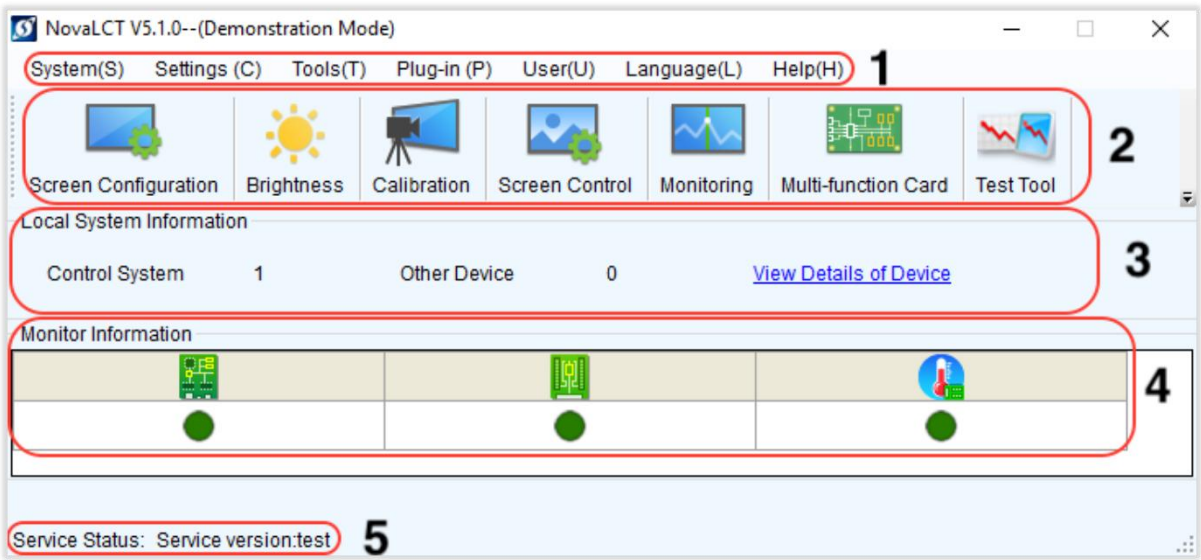
Software installation

Open the NovaStar website (www.novastar.tech), access the downloadable software section (www.novastar.tech/download) and install the latest version of NovaLCT (Mars) on your computer.

Alternatively, insert the NovaStar disk received with the processor into the PC, click setup file to install the NovaLCT (Mars) software.

NovaCLT (Mars) Software Interface

After the software is installed and enabled, the main interface home screen will be displayed as below.



The main interface is composed of five areas:

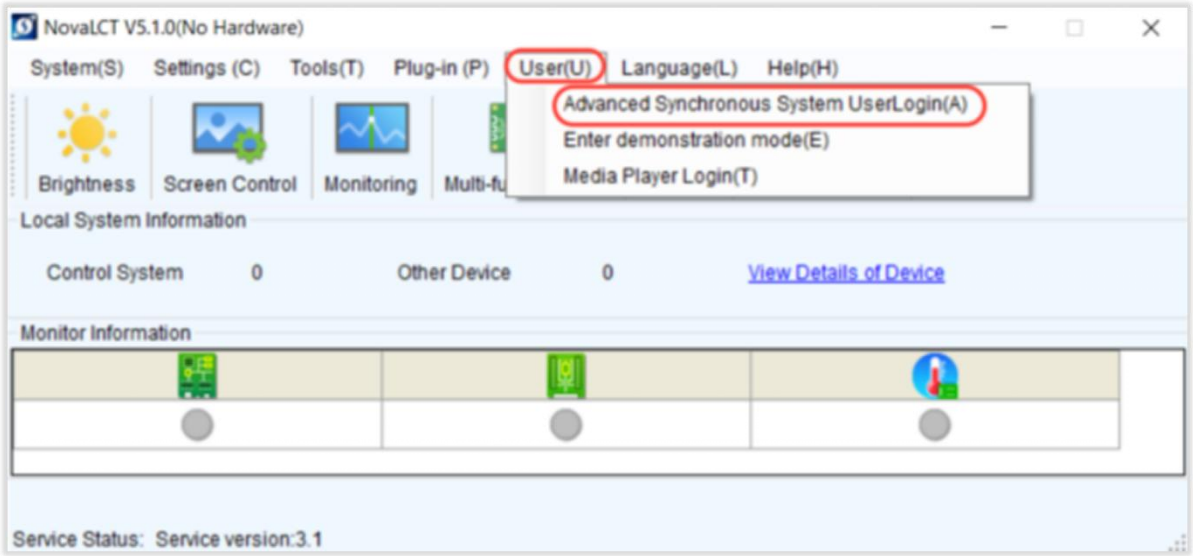
1 › Menu
2 › Main tool bar
3 › Local system information
4 › Monitor information
5 › Version

4. Software

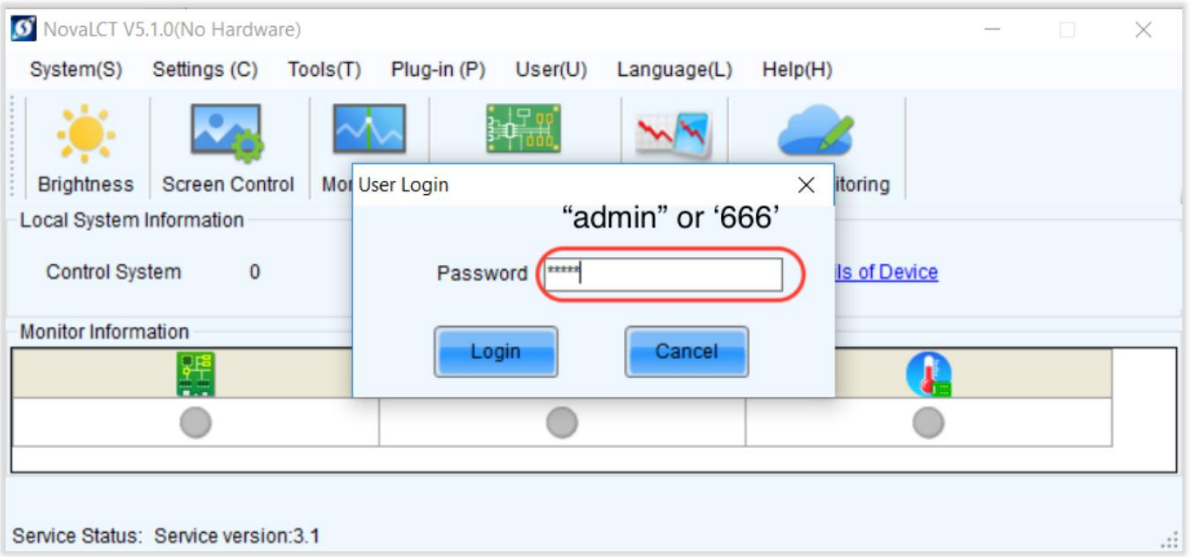
4.3 Software Introduction

User Login

Click on the “User(U)” tab in the menu of the home screen and then select “Advanced Synchronous System User Login(A)”.



The Advanced User Login requires a password. Enter the password ‘admin’ or ‘666’ into the popup and continue the login.

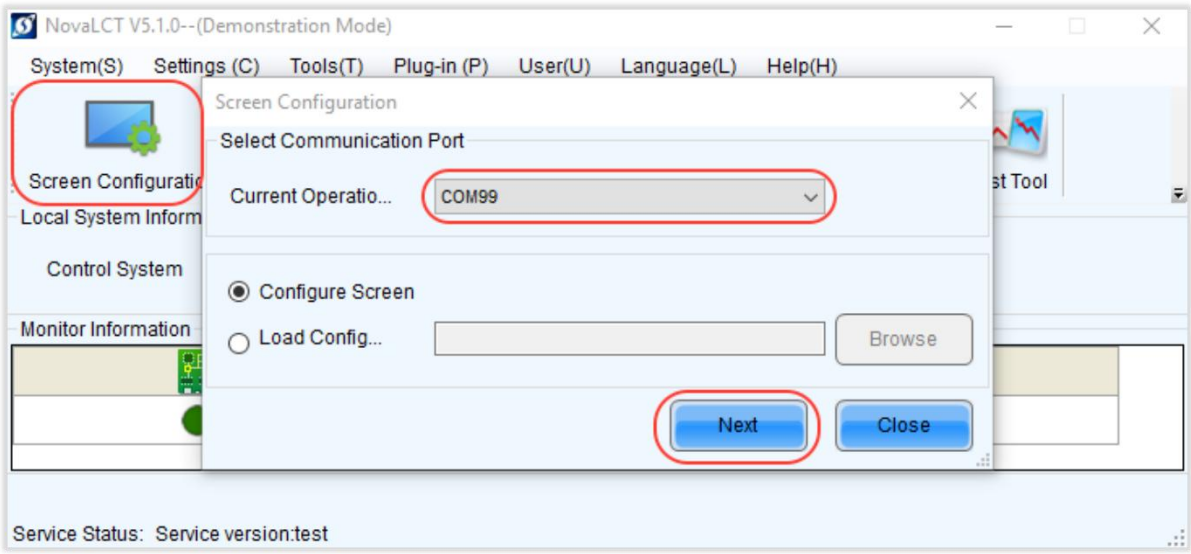


4. Software

4.3 Software Introduction

Display Connection Setup

Press the “Screen Configuration” icon on the home screen. A popup will appear that allows you to select the COM Port (USB Port) number that the sending card is plugged into. After picking the correct port, select “Configure Screen” and press “Next”.



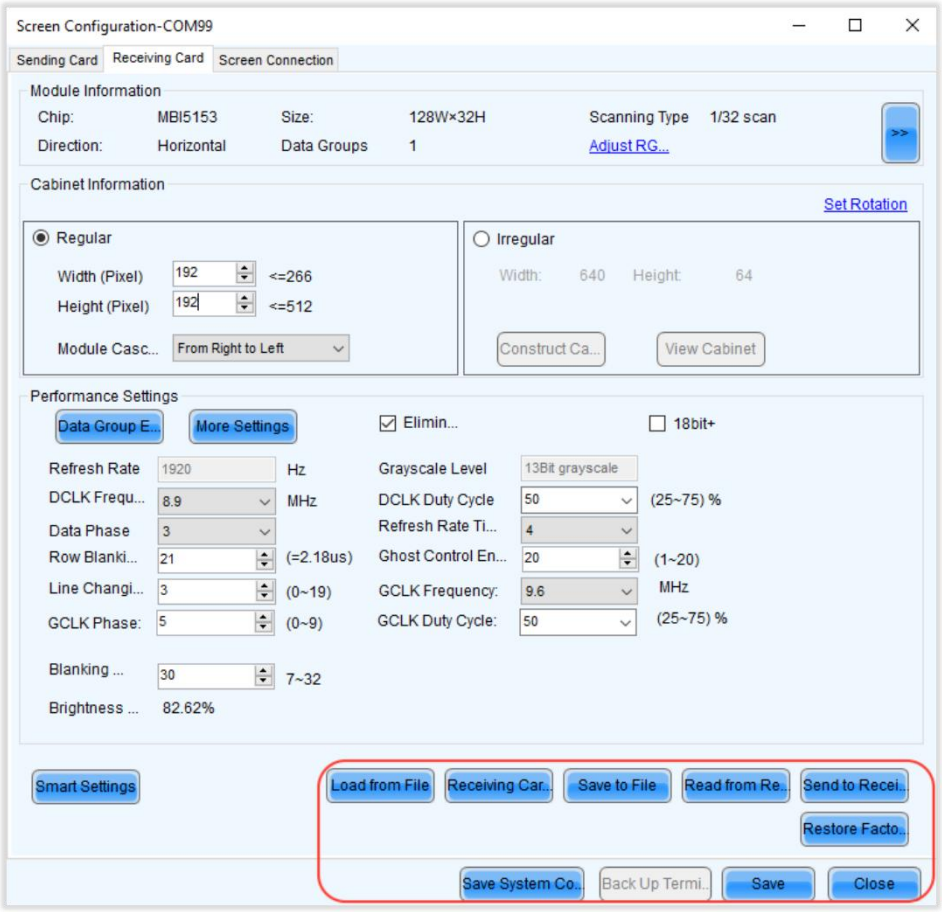
On the next window, the Screen Configuration for the selected COM Port appears. There are three different tabs where you can modify the Sending Card, Receiving Card and Screen Connection separately. There is no need to change anything on the Sending Card tab, the information is infilled automatically.

4. Software

4.3 Software Introduction

Load Configuration File

Select the “Receiving Card” window at the Screen Configuration settings.
On the top main information about the Module and Cabinet. First, we need to upload the correct receiving card file to the software. Ensure, that the file (“***.rcfgx”) belongs to the specific cabinet. After the file upload is completed, send the information to the receiving card.



Load from File:	Load a receiving card file to software
Save to File:	Save a receiving card configuration as a file
Read from Receiving Card (HW):	Read configuration from receiving card
Send to Receiving Card (HW):	Send configuration to receiving card
Save Configure File:	Save complete configuration as a file
Save:	Save configuration information to the hardware.

4. Software

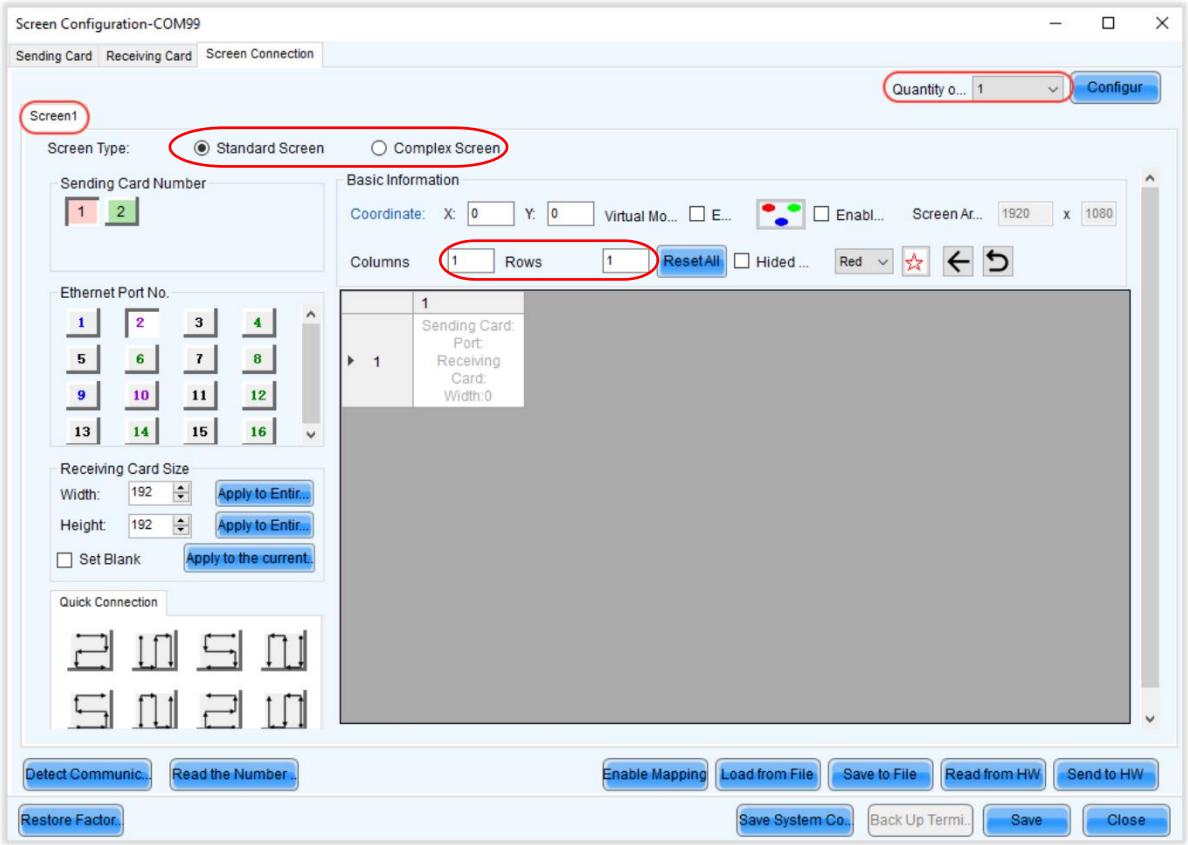
4.3 Software Introduction

Screen Configuration

Enter the “Screen Configuration” tab. Determine the quantity of displays using the drop down list in the top right hand corner of the window. Select the correct number and press “Configure”. Then select the screen tab.

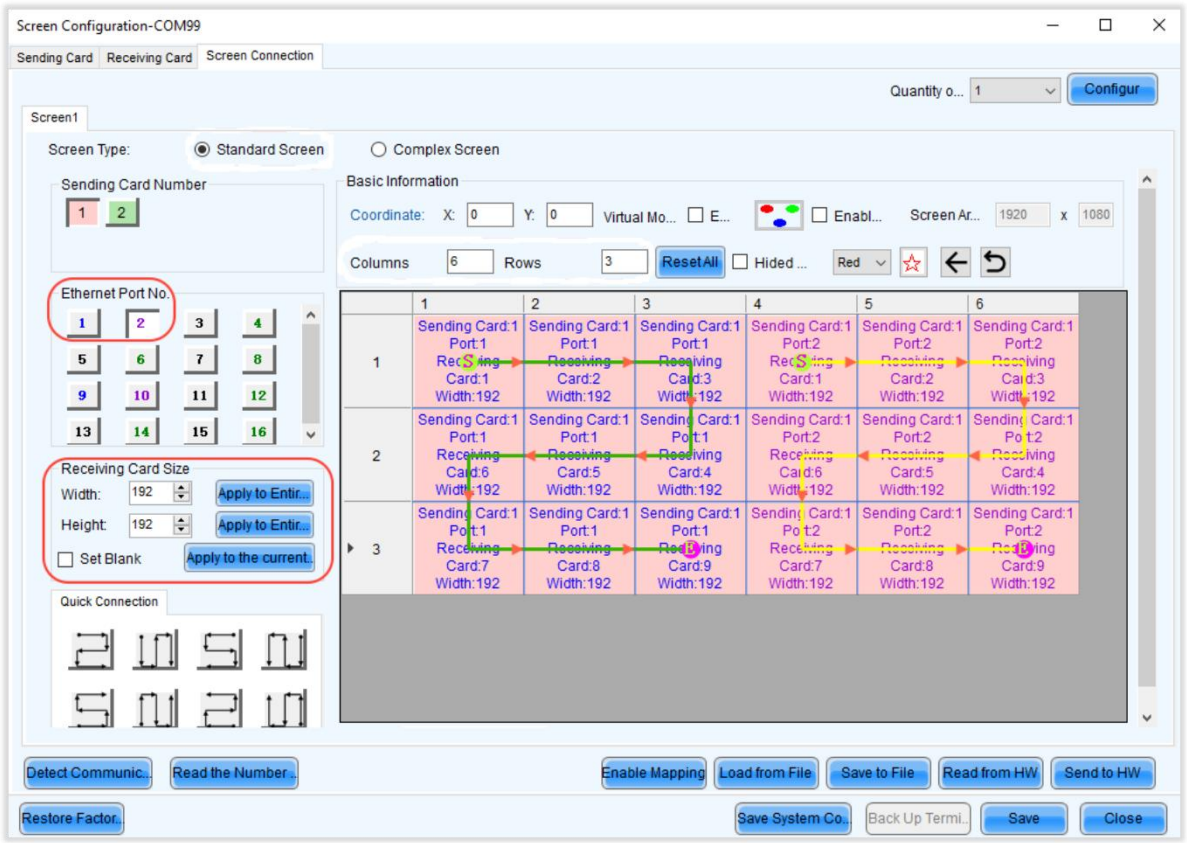
Select the correct Screen Type, “Standard Screen” or “Complex Screen”.

The dimensions of the LED- display need to be selected by entering the number of cabinets used in columns and rows.



4. Software

4.3 Software Introduction



Be mindful of the maximum pixel loading of each port on the controller in use. Use more output ports if necessary. In this example, two ports have been used.

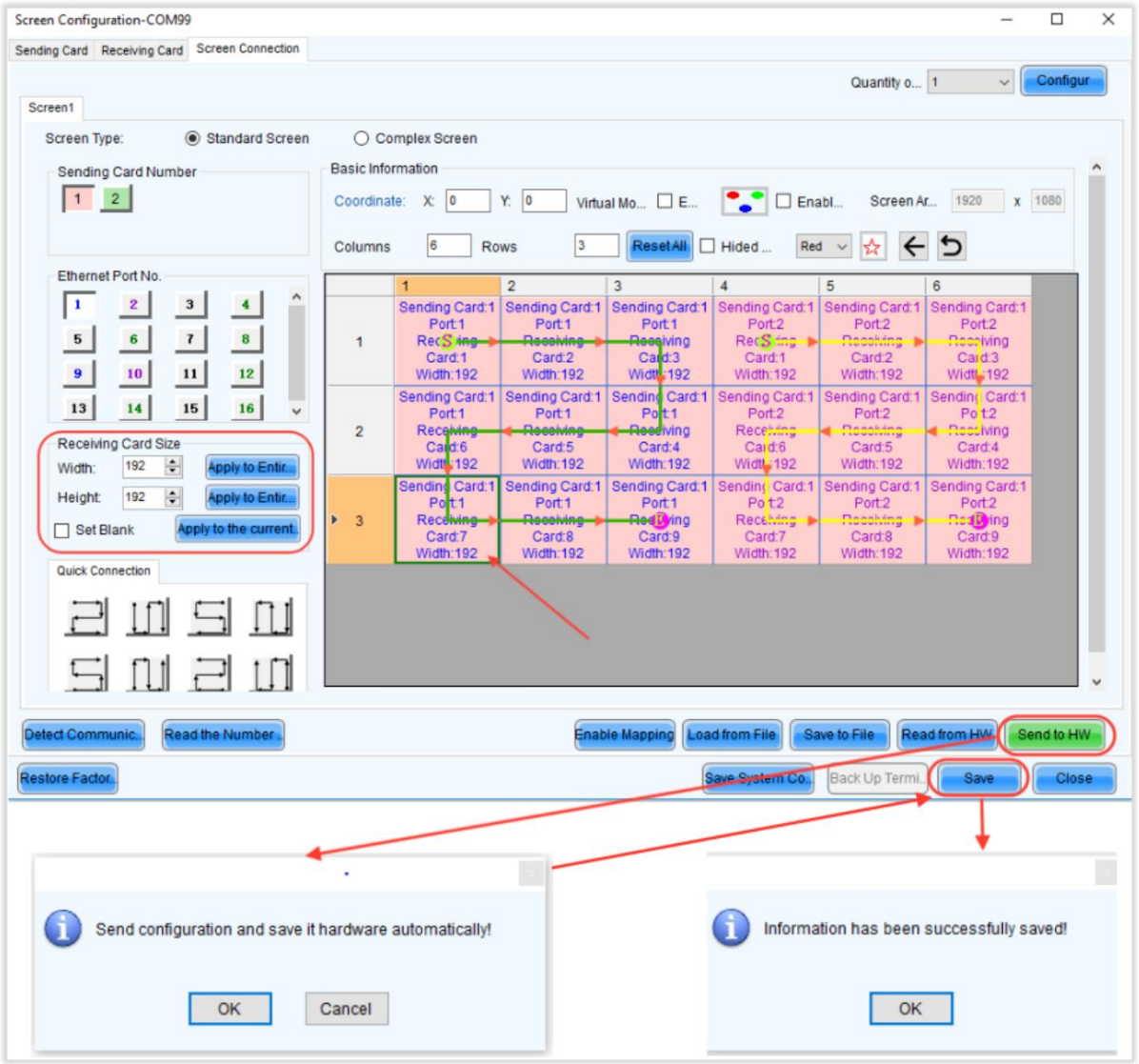
Identify how many pixels one receiving card is controlling by reading the information from the receiving card (see page 28) or referring to the specification sheet of the cabinet model. Enter the width and height in the “receiving card size” section and confirm by clicking the “Apply to the current” icon.

Select one “Ethernet Port Number” and apply the connection between ports and cabinets to the current installation. Draw the wiring diagram to connect the cabinets/ receiving cards based on the physical data connections made at the LED- display as if you’re viewing the display from the front.

4. Software

4.3 Software Introduction

Check if the receiving card size is correct and that the wiring diagram matches the physical installation. Click “Send to Receiving Cards (HV)”, a window will appear a few seconds later. Click “Ok” to continue. Check if the display is still accurate and click the “Save” icon to store the settings. Another window pops up, by clicking “Ok” the setup is finished.



5. Service and Maintenance

5.1 Maintenance Announcement

In order to expand the working lifespan of our INFiLED LED Display products, INFiLED formally announce the maintenance guidance.

This announcement applies to all the INFiLED products with SMD LEDs.

1. LED Display should be in use for at least eight hours per week. (Five hours warming with 50% brightness, and three hours of running video content.)
2. For rental displays that have been in long–term storage. To energized display in turn-off status for 0-2 hours; lighting up display with 10 grey scale for 2-4 hours; lighting up display with 20 grey scale for 4-6 hours; lighting up display with 30 grey scale for 6-8 hours; lighting up display with 40 grey scale for 8-10 hours; lighting up display with 50 grey scale for 10-12 hours; lighting up display with 70 grey scale for 12-14 hours; lighting up display with 90 grey scale for 14-16 hours; lighting up display with 120 grey scale for 16-18 hours; lighting up display with 150 grey scale for 18-20 hours; lighting up display with 200 grey scale for 20-22 hours. (**Note**: The operation time can be properly extended or shorten based on the actual application environment, weather and display turnoff time.)
3. Ensuring that LED- panels are completely dry prior to packing into packing cases is extremely important. Wet storage can destroy SMD LEDs, this applies even for outdoor products.
4. The environmental temperature for LED Display storage should be under 30℃ at a humidity under 60%RH.
5. The surface of LEDs is fragile, any physical force will cause significant damage and may destroy the LEDs.
6. Inspect the display on a regular basis, to ensure that it is in good working order and perform any corrective maintenance as soon as possible.
7. Any upgrades must be pre-approved by INFiLED technicians.

5. Service and Maintenance

5.1 Maintenance Announcement

Cleaning

The LEDs will not be affected by weather conditions as they are sealed inside modules. However, the outer surfaces of LED modules will be exposed to the elements, dirt, dust, etc. The user will need to carryout periodic cleaning. Do not use abrasive, caustic or solvent-based products for cleaning, as they can cause surface damage.

How to clean a Wallpaper series panel:

1. Vacuum or gently blow away dust and loose particles from the panel with low-pressure compressed air.
2. Wipe the outside of the LED modules with a soft, lint-free cloth dampened with a solution of water and detergent or auto shampoo. Apply gentle pressure only.

Read the Maintenance Manual for detailed instructions, before performing any kind of maintenance or repair work on the LED-panel.

5. Service and Maintenance

5.2 Test Button and Indicator LEDs

INFiLED's Wallpaper series uses indicator LEDs on the panels back. These are one of the most important fault-finding tools.

The test button and indicator LEDs are located on the right side of the panel. The test button is the small black knob besides the two LEDs. **The red LED indicates the power supply status, the green LED indicates the data connection.**

Notes about the indicator LED

Solid RED	=	Receiving Power
Flashing GREEN (4 flashes per sec.)	=	Data connection ok, no Signal
Flashing GREEN (2 flashes per sec.)	=	Receiving Signal
Flickering GREEN (3 times per sec.)	=	Transmitting calibration data

Test button functions

Briefly pressing	=	Start and stop of the testbattern
Repeatedly pressing	=	Switching between test images
Long pressing (10 sec.)	=	Transmitting calibration data

5. Service and Maintenance

5.3 Troubleshooting

Problem	Probable cause(s)	Remedy
Panel is complete dead	No power to panel	Check power and connections
	Fuse blown	Disconnect panel from power. Contact INFiLED professional for service.
	Defective PSU	Disconnect panel from power. Contact INFiLED professional for service.
One or more panels displays video incorrectly or does not display video at all	Incorrect panel settings on control system	Check settings (display configuration, panel device, properties, etc.)
	Panel defective	Have faulty panel service by INFiLED service technician
	Other device on Control system defective	Replace with a device known to be operating correctly. Have fault device tested and serviced
All panels and/or monitor screen display video incorrectly or do not display video at all	Incorrect video input or panel settings on Control System	Check settings (PAL/SECAM/NTSC selection, overall panel intensity setting, etc.)
	Unusable video signal or defective video source	Check video source
	Fault on Control System	Inspect connections and cables. Correct poor connections. Repair or replace damaged cables
	Device on Control System defective	Have faulty device tested and serviced by INFiLED service technician or supplier.
Display cuts out intermittently	Panel is too hot	Ensure free air flow around spine. Clean spine. Check that ambient temperature does not exceed max. permitted level. Contact INFiLED for service
	Fault on the control systems	Inspect connections and cables. Correct poor connections. Repair or replace damaged cables
One LED module cuts out	LED module incorrectly installed and connected. LED module faulty	Check module. Replace LED module.

5. Service and Maintenance

5.4 Service Desk

Installation, on-site service and maintenance can be provided worldwide by the INFiLED Professional Global Service organization by providing agents, giving owners access to INFiLED's expertise and product knowledge.

This type of partnership will ensure the highest level of performance throughout the product's lifetime.

It is INFiLED policy to apply the strictest possible calibration procedures and use the best quality materials available to ensure optimum performance and the longest possible component life times.

However, LEDs are subject to wear and tear over the time in use, resulting in gradual changes in colour and over all brightness over many thousands of hours of use. The extent of wear and tear depends heavily on operating conditions and environment, so it is impossible to specify precisely whether and to what extent LED performance will be affected.

Please contact your INFiLED supplier for details and support.

INFiLED Present Excellence

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