ROE
CREATIVE DISPLAY

Jade Series

User Manual

Version: 2.4
Updated: 2025-09-09

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Warranty Policy

The standard warranty period for the Products is 2 years after shipment from ROE Visual for rental applications and 3 years for fixed install applications. The contract will specify the application. This warranty includes all accessories, spare parts, and components shipped at the time of the original purchase.

Any spare parts sent later are only warranted for 90 days and will in no means extend the original warranty period of the Products.

Any replacements or repairs provided by ROE Visual will not extend the original warranty period of the Products.

If the sales contract provides an extended warranty coverage, the sales contract will supersede the standard period for original purchase. Any other stipulations for the warranty period in this document stay valid.

Extended warranty will be charged at 5% per year, with a maximum total warranty period of 3 years for rental and 5 years for fixed installation applications. If a longer warranty period is required, the details coverage will be agreed on with the Customer and detailed in the sales contract.

The warranty provided by ROE Visual does not include, or is limited by, the following:

1. Products not purchased from ROE Visual.
2. Labor or travel costs for installation, set-up, repair, adjusting, removal, re-installation and other costs incurred by the Customer.
3. Rental cost incurred by the Customer.
4. Any product on which the serial number has been defaced, modified or removed.
5. Product that has been resold, transferred, lost, stolen or discarded.
6. Any software, including but not limited to the operating system.
7. Damage, deterioration or malfunction from:
    a. Accident, abuse, misuse, neglect, improper ventilation and cooling, fire, water, disaster, lightning, or other acts of nature, smoke exposure (cigarette, fireworks, or other), unauthorized modification, or failure to follow instructions supplied with the product.
    b. Repair or attempted repair by anyone other than ROE Visual, a ROE certified repair center, or a ROE certified engineer.

c. Any damage to the product due to shipment.
d. Any damage during the installation, removal, disassembly, or reassembly of the product by Customer or others.
e. Causes external to the product, such as electric power fluctuations or failure, exposure to aggressive environments such as seaside, swimming pool, fireworks, etc.
f. Use of parts not meeting ROE Visual's specifications.
g. Normal wear and tear.
h. Customer caused defects, including but not limited to damaged LED's resulting from physical interaction with the display.
i. Any non-uniformity caused by long-term 24-7 operation of the video wall with heavily contrasting static content.
j. Failure to follow procedures as outlined in the product's User Guide.
k. Operating the display outside the suggested normal usage conditions stated in the User Guide.
l. Software or accessory malfunction.
m. Any other cause not related to a defect in materials or workmanship.

Contact Information

If you have any questions about this document, please feel free to contact with ROE technical service team.

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14. Damage, deterioration or malfunction from:
    n. Accident, abuse, misuse, neglect, improper ventilation and cooling, fire, water, disaster, lightning, or other acts of nature, smoke exposure (cigarette, fireworks, or other), unauthorized modification, or failure to follow instructions supplied with the product.
    o. Repair or attempted repair by anyone other than ROE Visual, a ROE certified repair center, or a ROE certified engineer.
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    r. Causes external to the product, such as electric power fluctuations or failure, exposure to aggressive environments such as seaside, swimming pool, fireworks, etc.
    s. Use of parts not meeting ROE Visual's specifications.
    t. Normal wear and tear.
    u. Customer caused defects, including but not limited to damaged LED's resulting from physical interaction with the display.
    v. Any non-uniformity caused by long-term 24-7 operation of the video wall with heavily contrasting static content.
    w. Failure to follow procedures as outlined in the product's User Guide.
    x. Operating the display outside the suggested normal usage conditions stated in the User Guide.
    y. Software or accessory malfunction.
    z. Any other cause not related to a defect in materials or workmanship.

Contact Information

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1 Safety

1.1 Safety Guidelines

Personal Protection

	CAUTION: Risk of electric shock.
	CAUTION: Be aware of flammable materials.
	WARNING: Ensure you understand and follow all safety guidelines, instructions, warnings, and cautions mentioned in this manual.
	WARNING: Read this manual before the installation and keep this manual.
	WARNING: Be careful of hazardous emission.
	WARNING: Mind your fingers when working with heavy loads.
	WARNING: Pay attention to the hot surface.

Installation Personnel

The installation must be performed by authorized and qualified technical personnel only.

NOTICE

This panel is outdoor rated for water and dust proof(outdoor version), but because of the lightweight structure it is not possible to make a structural report for outdoor use. If the panel is used outdoor, proper precautions must be taken.

Product Care

Do not place LED panels in a dusty environment and clean the surface regularly.

All components should be kept dry, clean, lubricated (only of recommended), coated properly, and otherwise maintained in a manner consistent with the part design. ROE products must be used in a manner consistent with their design and inspected on a routine basis for security, wear, deformation, corrosion and any other circumstances that may affect the loading capacity.

It's recommended that users conduct regular safety and visual inspections on all products, checking whether the cables and LEDs are damaged or not. The damaged parts should be repaired or replaced in time.

Waterproof & Dehumidification

The maximum relative humidity of the work should be less than 90%.

When an LED screen is not in use, the LEDs will start absorbing moisture from the air, no matter if it is an in door or outdoor screen. The longer the time and the higher the humidity of the LED contains moisture, there is a risk to damage the LED when the LED heats up too aggressively.

There fore，ROE recommends that if you have not used a screen for a prolonged time and/or the screen was stored in a very humid environment, you slowly heat up the screen.

we have a 12 steps recommendation for heating up the screen (and thus dying out the LED's):

Step	Gray Scale	Brightness	Power-on hours
1	10	5%	2 hours
2	20	8%	2 hours
3	30	10%	2 hours
4	40	15%	2 hours
5	50	20%	2 hours
6	70	25%	2 hours
7	90	35%	2 hours
8	120	45%	2 hours
9	150	60%	2 hours
10	180	70%	2 hours
11	200	80%	2 hours
12	255	100%	2 hours

1.2 Safety Instructions

(1) The product is only for professional use.

(2) Please read the User Manual carefully and understand all safety information mentioned before installing, powering, operating or servicing the product.

(3) Please follow all instructions of the User Manual during installing, powering, operating or servicing the product.

(4) The installation should be performed after you are thoroughly familiar with all safety guidelines, instructions, warnings and cautions. Otherwise, it may increase risks of hazards and injury to the user.

(5) Please install and / or keep this product away from flammable materials, heat sources, water, high-power electrical devices and dangerous chemicals.

(6) Please use and / or store this product in proper temperature and humidity.

(7) Please earth this product against the risk of electric shock.

(8) Please make sure power and data cables are in a sound condition.

(9) Please do not use the product near the sea and / or other places with corrosive environment.

(10) The installation must be performed by authorized and qualified technical personnel only.

(11) Hot swapping of any part is prohibited.

1.3 Consignes de sécurité

Protection personnelle

	ATTENTION: Risque d'électrocution.
	ATTENTION: Faites attention aux matériaux inflammables.
	AVERTISSEMENT: assurez-vous de comprendre et de respecter toutes les consignes de sécurité, instructions, avertissements et précautions mentionnés dans ce manuel.
	AVERTISSEMENT: Lisez ce manuel avant l'installation et conservez-le.
	AVERTISSEMENT: Faites attention aux émissions dangereuses.
	AVERTISSEMENT: Faites attention à vos doigts lorsque vous travaillez avec de lourdes charges.
	AVERTISSEMENT: Faites attention à la surface chaude.

Personnel d'installation

L'installation doit être effectuée uniquement par un personnel technique autorisé et qualifié.

Produit

Ne placez pas les dalles LED dans un environnement poussiéreux et nettoyez la surface régulièrement.

Tous les composants doivent être maintenus au sec, propres, lubrifiés (uniquement de ceux recommandés), revêtus correctement et entretenus d'une manière compatible avec la conception de la pièce. Les produits ROE doivent être utilisés conformément à leur conception et inspectés régulièrement pour vérifier leur sécurité, leur usure, leur déformation, leur corrosion et toute autre circonstance pouvant affecter leur capacité de chargement.

Il est recommandé aux utilisateurs d'effectuer des inspections visuelles et de sécurité régulières sur tous les produits, en vérifiant si les câbles et les voyants sont endommagés ou non. Les pièces endommagées doivent être réparées ou remplacées à temps.

Étanche et déshumidification

L'humidité relative maximale du travail doit être inférieure à 90%.

Lorsqu'un écran LED n'est pas utilisé, les LED commenceront à absorber l'humidité de l'air, qu'il s'agisse d'une porte intérieure ou d'un écran extérieur. Plus le temps est long et plus l'humidité de la LED contient de l'humidité, il y a un risque d'endommager la LED lorsque la LED chauffe de manière trop agressive.

Par conséquent, ROE recommande que si vous n'avez pas utilisé un écran pendant une période prolongée et / ou que l'écran a été stocké dans un environnement très humide, vous chauffez lentement l'écran.

Nous avons une recommandation en 12 étapes pour chauffer l'écran (et ainsi éteindre les LED):

Marcher	Échelle de gris	Luminosité	Heures de mise sous tension
1	10	5%	2 heures
2	20	8%	2 heures
3	30	10%	2 heures
4	40	15%	2 heures
5	50	20%	2 heures
6	70	25%	2 heures
7	90	35%	2 heures
8	120	45%	2 heures
9	150	60%	2 heures
10	180	70%	2 heures
11	200	80%	2 heures
12	255	100%	2 heures

1.4 Consignes de sécurité

(1) Le produit est uniquement destiné à un usage professionnel.

(2) Veuillez lire attentivement le manuel d'utilisation et comprendre toutes les informations de sécurité mentionnées avant d'installer, de mettre en marche, d'utiliser ou de réparer le produit.

(3) Veuillez suivre toutes les instructions du manuel d'utilisation lors de l'installation, de l'alimentation, de l'utilisation ou de la maintenance du produit.

(4) L'installation doit être effectuée après que vous êtes familiarisé avec toutes les consignes de sécurité, les instructions, les avertissements et les précautions. Sinon, cela pourrait augmenter les risques de dangers et de blessures pour l'utilisateur.

(5) Veuillez installer et / ou garder ce produit à l'écart de matières inflammables, de sources de chaleur, d'eau, d'appareils électriques à haute puissance et de produits chimiques dangereux.

(6) Veuillez utiliser et / ou stocker ce produit à une température et à une humidité appropriées.

(7) Veuillez mettre ce produit à la terre contre le risque de choc électrique.

(8) Assurez-vous que les câbles d'alimentation et de données sont en bon état.

(9) Veuillez ne pas utiliser le produit près de la mer et / ou d'autres lieux exposés à un environnement corrosif.

(10) L'installation doit être effectuée par du personnel technique autorisé et qualifié.

(11) L'échange à chaud de toute pièce est interdit.

2 Installation Requirements

2.1 Mechanical Requirements

2.1.1 Weight

Do not underestimate the weight of panels and frames. Please make sure the floor or truss on which ROE panels and frames will be installed is capable of handling five times the complete weight of panels and frames.

Do not forget to take into consideration the ballast weight required by the stacking system.

2.1.2 Levelling

The surface on which panels and frames will be installed must be levelled. Never install ROE panels and frames on an inclined surface.

2.1.3 Ballast

In consideration of the expected wind load, the height and position of the LED wall upon the stacking system, the additional weight (ballast) should be required. The detailed information how to calculate the ballast weight refers to 5.3 Ballast Calculation.

2.2 Electrical Requirements

2.2.1 Power

ROE panels require 100-240 VAC, 50-60 Hz and should be less than or equal to16A.

This equipment MUST be earthed. To protect against risk of electric shock, the installation should be properly grounded. Defeating the purpose of the grounding type plug will expose you to the risk of electric shock.

3 Product Introduction

3.1 Specifications

	Jade 3.9 Outdoor	
	Full	**Half**
Pixel Pitch	3.9mm	
Max Brightness Calibrated	3500nits	
Panel Dimension	500mm x 1000mm x 90mm 19.69" x 39.37" x 3.54"	500mm x 500mm x 86mm 19.69" x 19.69" x 3.39"
Panel Resolution (H x V)	128 x 256	128 x 128
Panel Weight	6.8kg; 14.99lbs	4.1kg; 9.04lbs
Power Max / Average	300W/150W	160W/80W
BTU Max / Average	1025 / 470	545 / 250
Transparency	Solid	
Serviceability	Rear	
Curving	Concave 10°, 0°, Convex 10°	
Max. Hanging (panels)	15	24
Max. Stacking (panels)	6	12
LED Configuration	SMD 1415 Black	
Viewing Angle Horizontal	160°	
Viewing Angle Vertical	130°	
Scan Ratio	1/8	
Refresh Rate	7680Hz	
Gray Scale	16bit	
Frame Material	Carbon Fiber	
Processing Platform	Brompton / Megapixel / Evision(Half)	
Operational Temp / Humidity	-20°~45°C, 10~90%RH | -4°~113°F, 10~90%RH	
Storage Temp / Humidity	-40°~60°C, 10~90%RH | -40°~140°F, 10~90%RH	
IP Rating	IP65	
Certifications	CE, PSE, ROHS	

Jade 5.9				
	Indoor		**Outdoor**	
	Full	**Half**	**Full**	**Half**
Pixel Pitch	5.95mm			
Max Brightness Calibrated	3500nits		4500nits	
Panel Dimension	500mm x 1000mm x 84mm 19.69″ x 39.37″ x 3.31″	500mm x 1000mm x 84mm 19.69″ x 39.37″ x 3.31″	500mm x 1000mm x 91mm 19.69″ x 39.37″ x 3.58″	500mm x 1000mm x 86mm 19.69″ x 39.37″ x 3.39″
Panel Resolution (H x V)	84 x 168	84 x 84	84 x 168	84 x 84
Panel Weight	5.9kg; 13lbs	3.6kg; 7.94lbs	6.6kg; 14.55lbs	4kg; 8.82lbs
Power Max / Average	300W/150W	160W/80W	300W/150W	160W/80W
BTU Max / Average	1025/430	545/250	1025/430	545/250
Transparency	Solid / 14%			
Serviceability	Rear			
Curving	Concave 10°, 0°, Convex 10°			
Max. Hanging (panels)	15	24	15	24
Max. Stacking (panels)	6	12	6	12
LED Configuration	SMD 1921 Black			
Viewing Angle Horizontal	160°			
Viewing Angle Vertical	160°		140°	
Scan Ratio	1/7			
Refresh Rate	7680Hz			
Gray Scale	16bit			
Frame Material	Carbon Fiber			
Processing Platform	Brompton / Megapixel / Evision			
Operational Temp / Humidity	-20°~45°C, 10~90%RH | -4°~113°F, 10~90%RH			
Storage Temp / Humidity	-40°~60°C, 10~90%RH | -40°~140°F, 10~90%RH			
IP Rating	IP40		IP65	
Certifications	CE, PSE, ROHS			

3.2 Overview

The panel consists of modules, panel frame and power box.

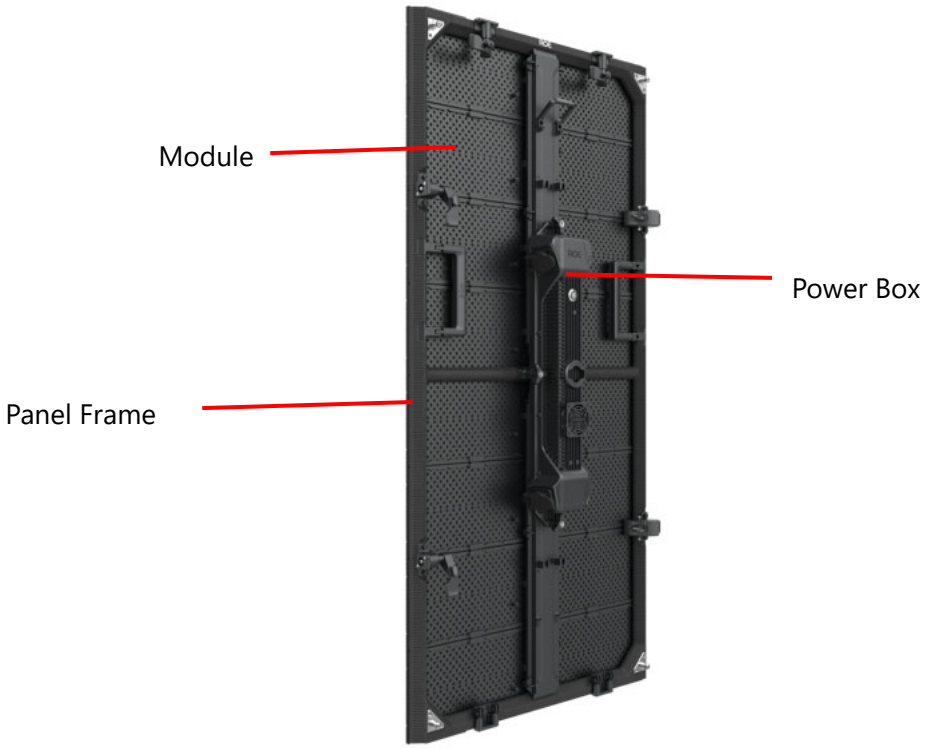


Figure 3-1 Jade Series Components

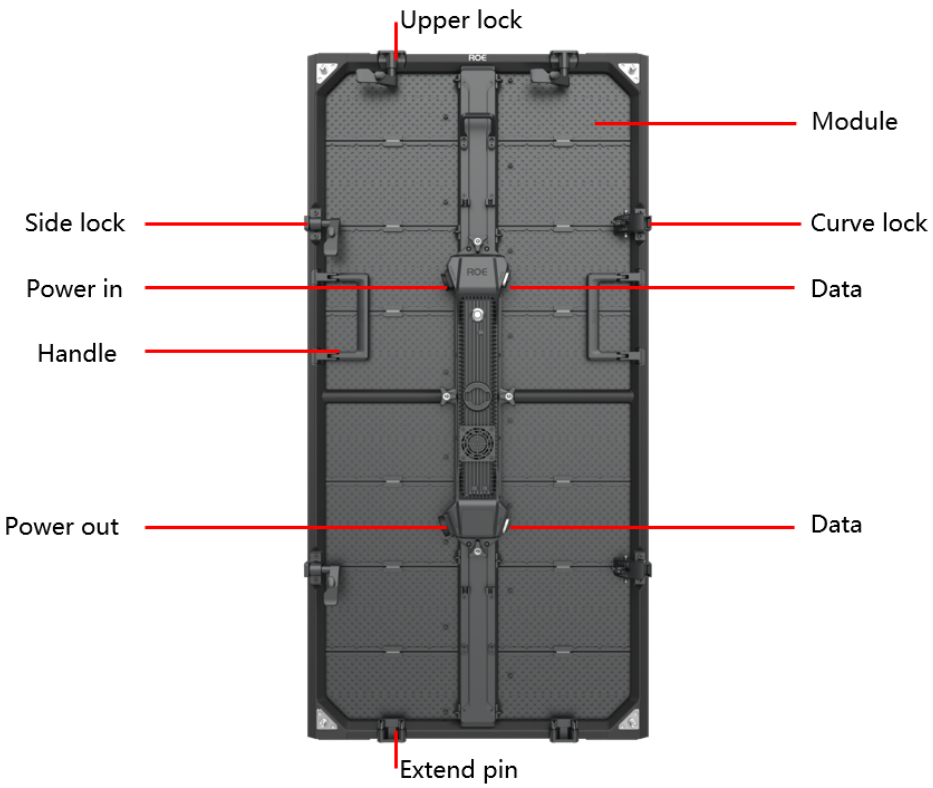


Figure 3-2 Jade Parts Information

Dimensions

One Jade full panel consists of 8 pieces modules.

One Jade half panel consists of 4 pieces modules.

Jade outdoor full panel

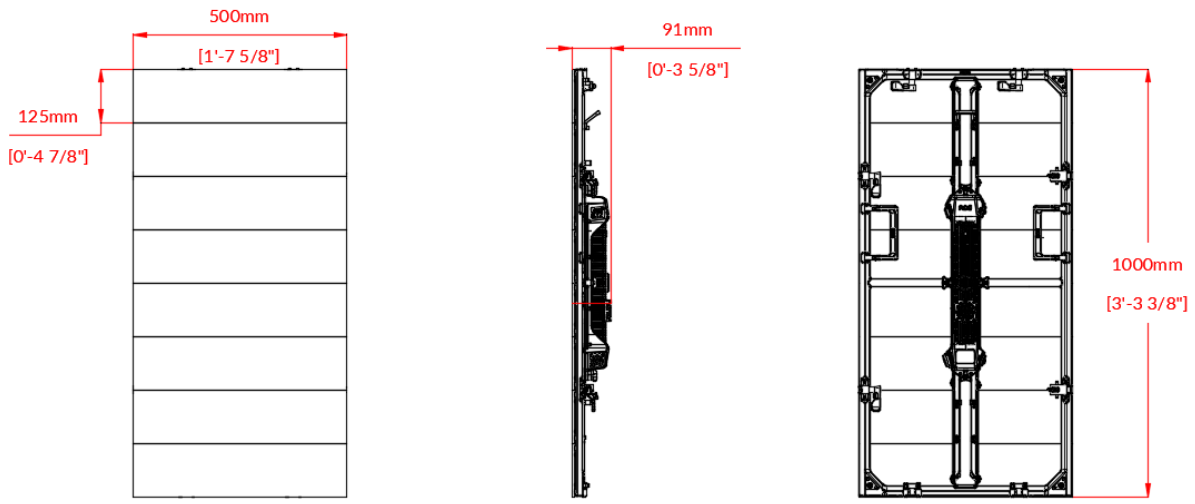


Figure 3-3 Jade Full Panel Dimensions (Unit: mm)

Jade outdoor half panel

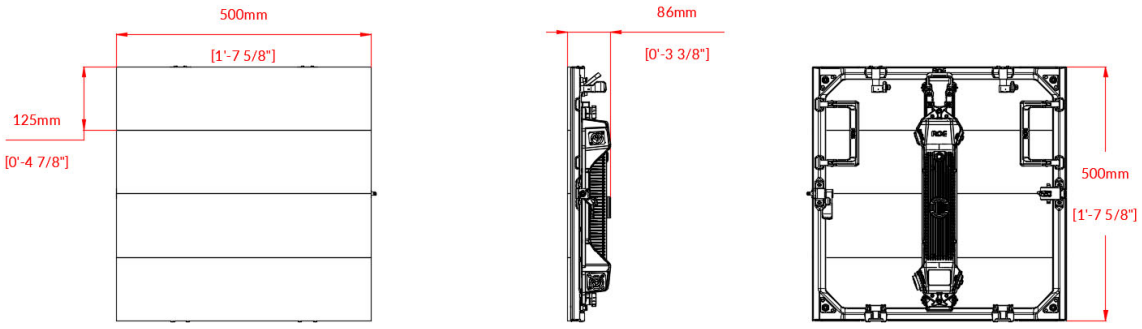


Figure 3-4 Jade Full Panel Dimensions (Unit: mm)

Jade indoor full panel

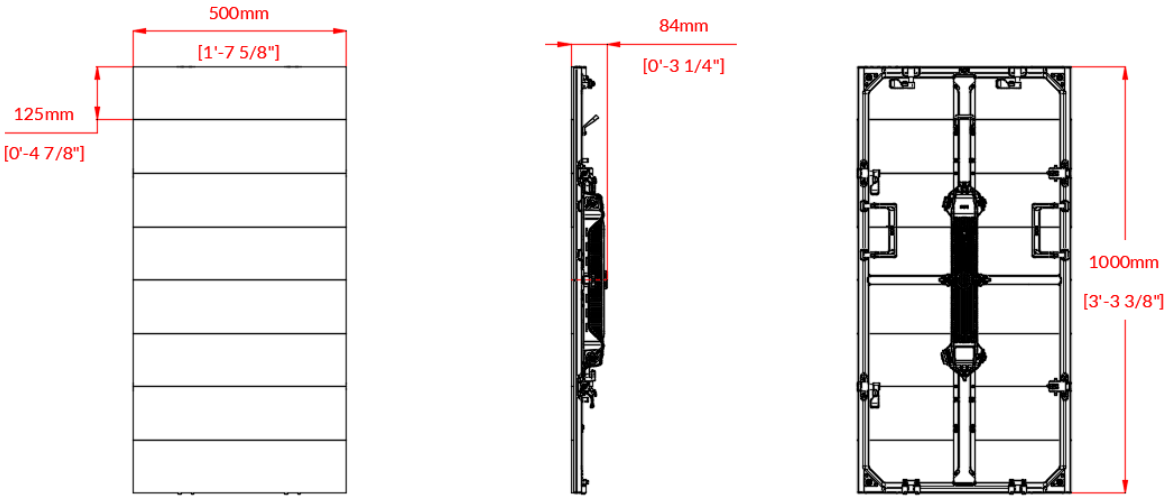


Figure 3-5 Graphite Half Panel Dimensions (Unit: mm)

Jade indoor half panel

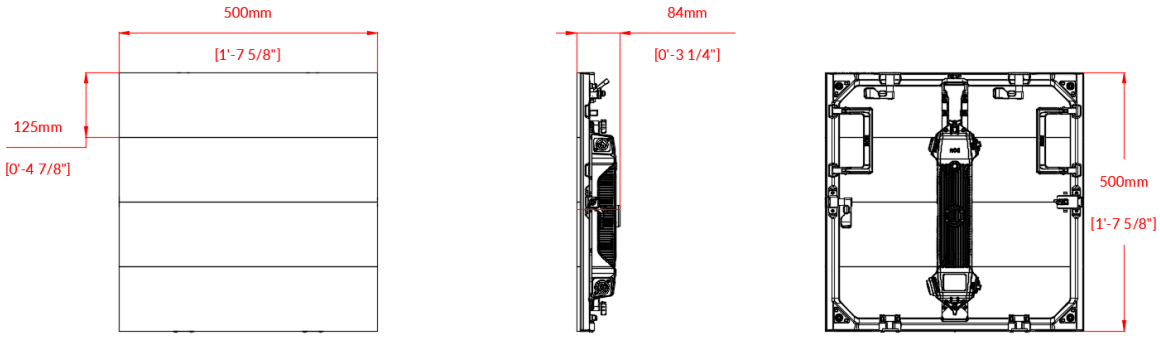


Figure 3-6 Graphite Half Panel Dimensions (Unit: mm)

4 Accessories

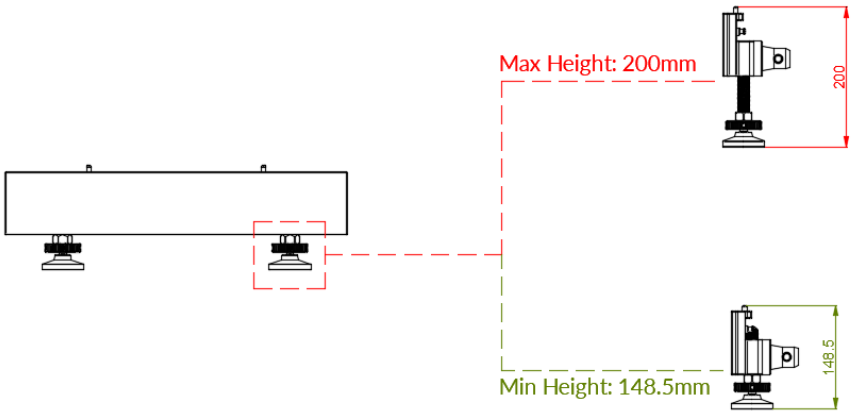
Jade support both hanging and stacking installation.

4.1 Hanging System

	Jade hanging bar, 1W, clamp SAP: Y1000155467 Weight: 2.84±3%kg Dimensions: 490X184X157 mm
	Jade hanging bar, 2W, clamp SAP: Y1000155516 Weight: 5.74±3%kg Dimensions: 990X158.43X196.4 mm
	Jade hanging plate, 2W, clamp,flat SAP: 218011C0014 Weight: 1.509kg Dimensions: 163.9X217.2X156.9 mm
	Jade hanging plate, 1W, clamp SAP: 218011C0013 Weight: 1.279kg Dimensions: 254.17X156.88X51.2 mm
	Jade hanging plate, 2W, clamp,10°~-10° SAP: 218011C0012 Weight: 1.704kg Dimensions: 217.2X163.9X156.88 mm
	2-way locking plate,yellow handle SAP: 36001-00234 Weight: 164.25 g Dimensions: 163.9X45X33 mm

4.2 Stacking System

	Jade base bar, 1W SAP: Y1000145565 Dimensions: 490X 96.5 X 145.5 mm Weight: TBD
	Base truss SAP: 215003S0128 Weight: 7.6±3% kg Dimensions: 1040.5X316X172mm
	Rear truss, 1m SAP: 304012-00504 Weight: 4.45±3% kg Dimensions: 1040.5X300X50 mm
	Base truss adaptor SAP: 304010-00546 Weight: 0.3±3% kg Dimensions: 70 X350 X 92.5 mm
	Rear bridge SAP: 215002S0107 Weight: 1±3% kg Dimensions: 253.97X173.21X51.43 mm



4.3 Cables

	Power cable, 1m, 16A, True 1-True 1 SAP: 208001S2247 Weight: TBD Neutrik _ Neutrik Connectors Connect panels.
	Power cable, 0.86m, 16A, True 1-True 1 Full Panel SAP: 208001S2454 Weight: TBD Neutrik _ Neutrik Connectors Connect panels. Shipped with Panel
	Power cable, 0.68m, 16A, True 1-True 1 Half Panel SAP: 208001S2453 Weight: TBD Neutrik _ Neutrik Connectors Connect panels. Shipped with Panel
	Data cable, 0.93m, etherCON-etherCON SAP: 208004S1477 Weight: TBD Neutrik _ Neutrik Connectors Connect panels.
	Data cable, 0.85m, etherCON-etherCON Full Panel SAP: 208004S1771 Weight: TBD Neutrik _ Neutrik Connectors Shipped with Panel.
	Data cable, 0.66m, etherCON-etherCON Half Panel SAP: 208004S1764 Weight: TBD Neutrik _ Neutrik Connectors Shipped with Panel.

4.4 Package

4.4.1 Flight Case for Graphite Panels

SAP: Y0000147213
Loading capacity: 6 pcs full panels
Dimensions: 1160 X 764 X 795 mm

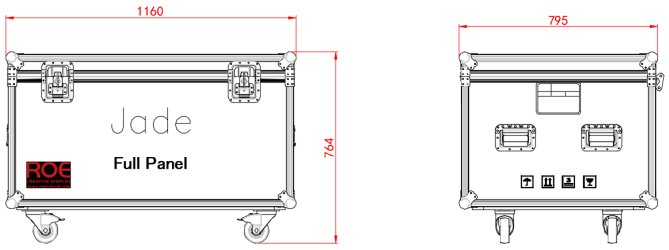


Figure 4-1 Jade Panel Flight Case Dimensions (Unit: mm)

SAP: Y0000147212
Loading capacity: 12 pcs half panels
Dimensions: 1160 X 764 X 795 mm

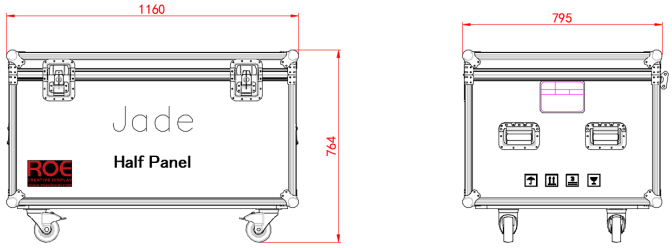


Figure 4-2 Jade Half Panel Flight Case Dimensions (Unit: mm)

4.4.2 Labels on the Flight Case

	Warning: Indoor use.
	Warning: Keep the flight case upwards.
	Warning: Maximum stack 3 flight cases.
	Warning: Fragile

5 Installation

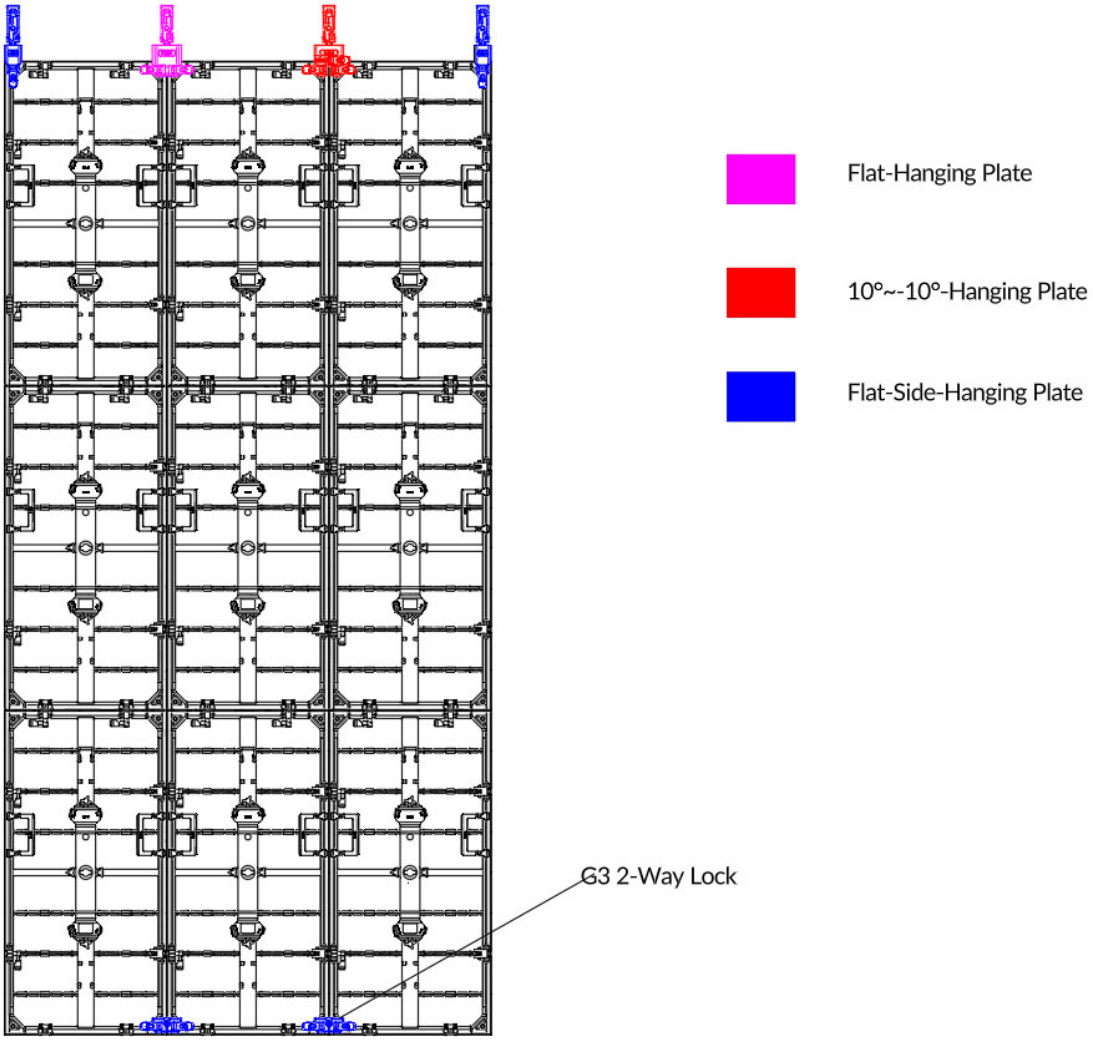
5.1 Hanging System

Clients can choose Hanging bar or Hanging plate to do the hanging.

If you choose hanging plate, please install the corresponding plate according to the following positions

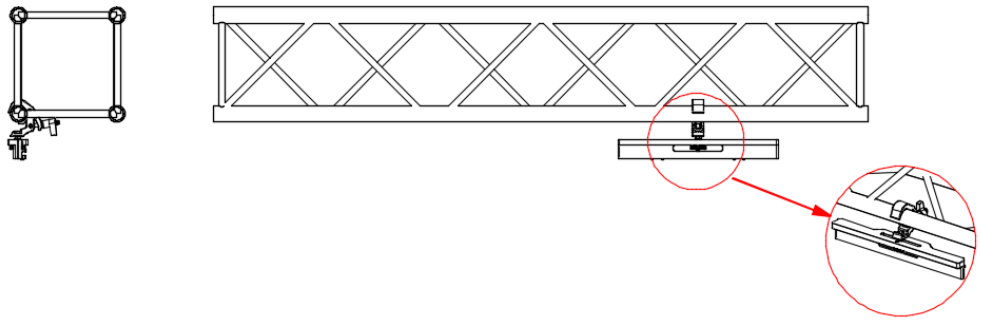
You can choose which hanging plate(flat / 10~-10 Curve) use in the middle part based on your screen shape.

But on the side. Must use side hanging plate.

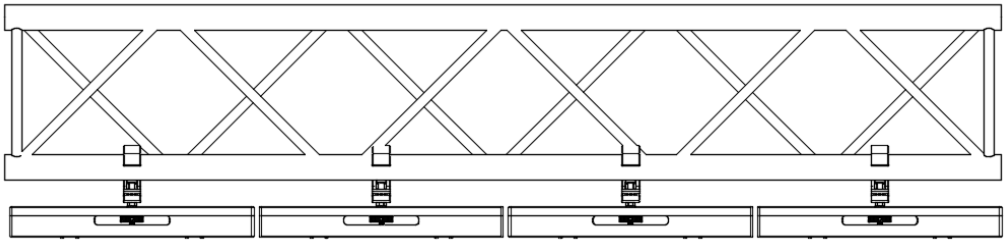


Demonstrate hanging with hanging bar installation steps:

(1) Attach the hanging bar onto the truss, move the clamps horizontally to avoid interference with the truss.



(2) Attach all hanging bars onto the truss. Use the hexagon wrench to adjust the adjustment wheel, making sure hanging bars are horizontal and level.

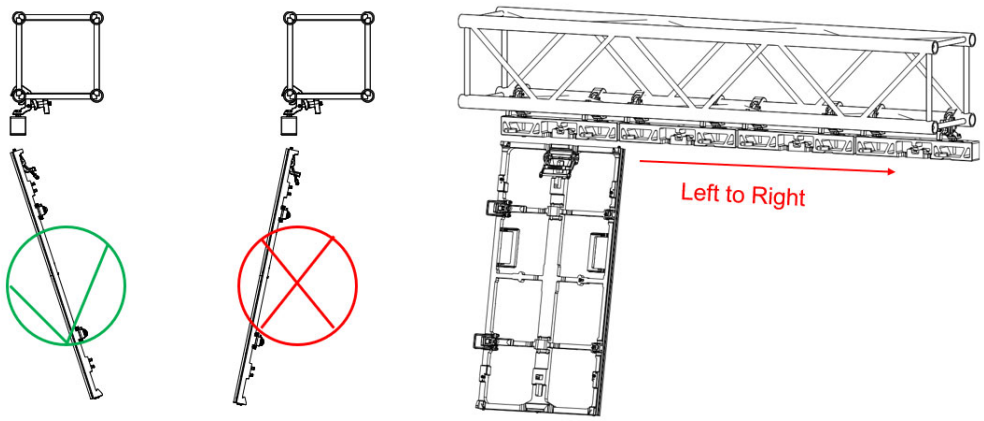


Note: The adjusting range of the adjustment wheel is about 11mm.

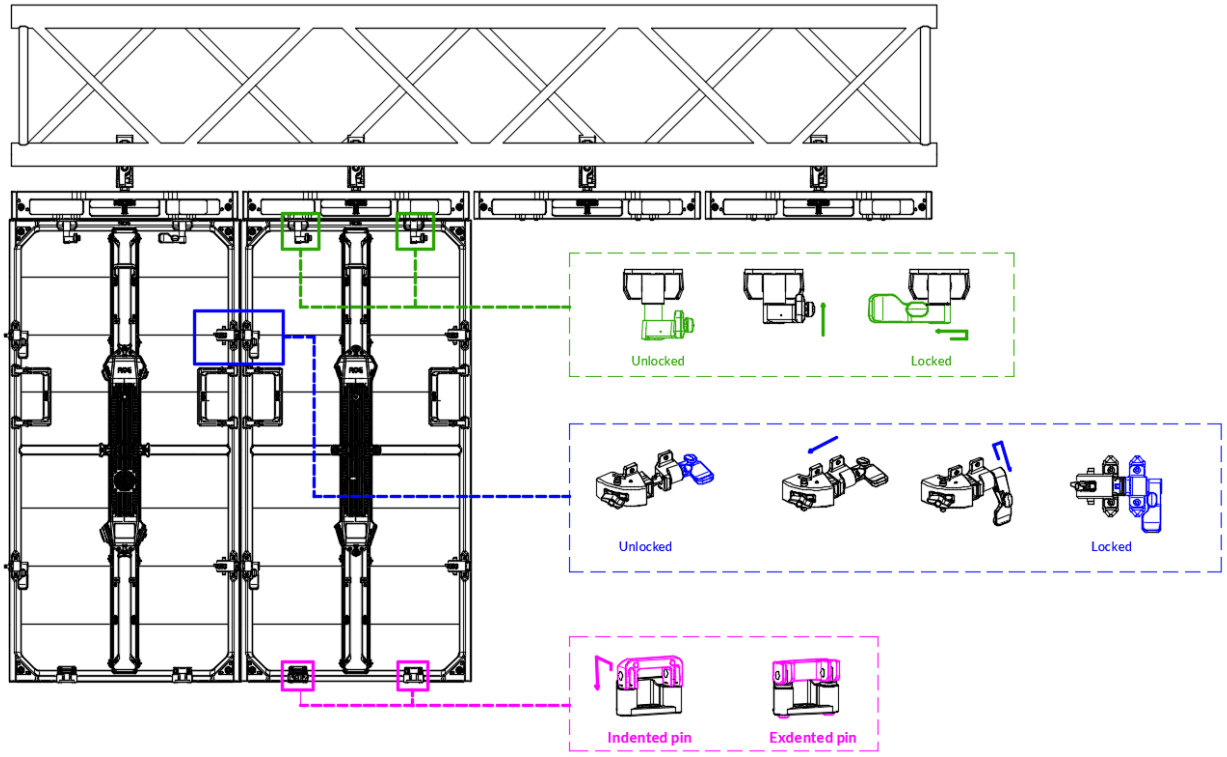
(3) After aligning all hanging bars horizontally, rotate the lever of the clamps to fix the clamps to the truss.

(4) Take out the panel from the flight case.

Keep panels at an angle to avoid damage to LEDs when magnets attract panels.



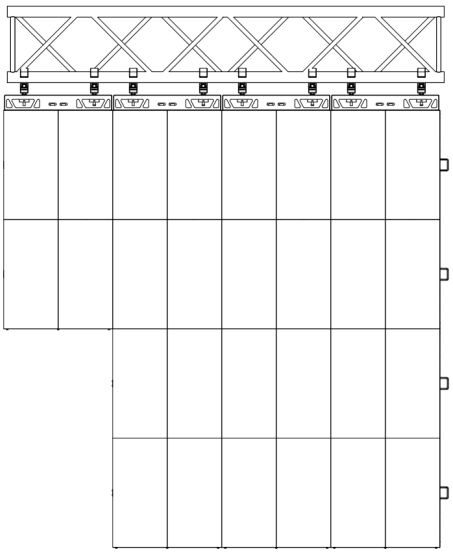
(5) Lock the panel and hanging bar and install the second panel. Lock neighboring panels.



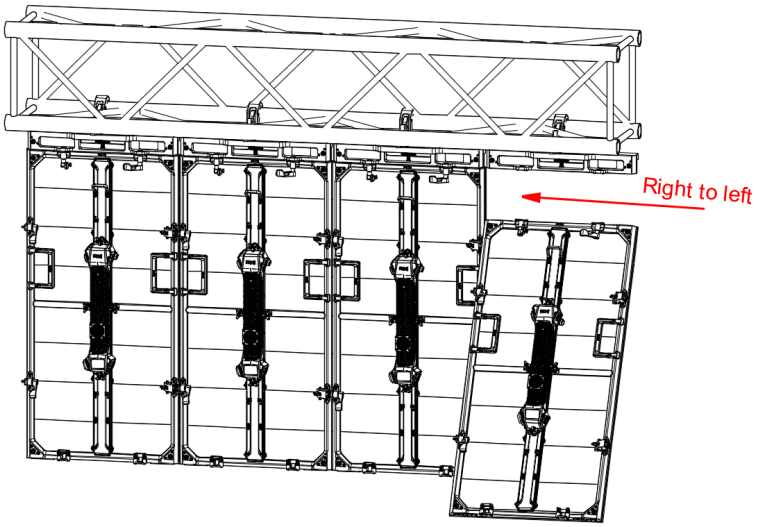
About curve lock:

The desired connection angle can be selected by adjusting the cruve lock, currently we provide concave 10° to canvex 10°.

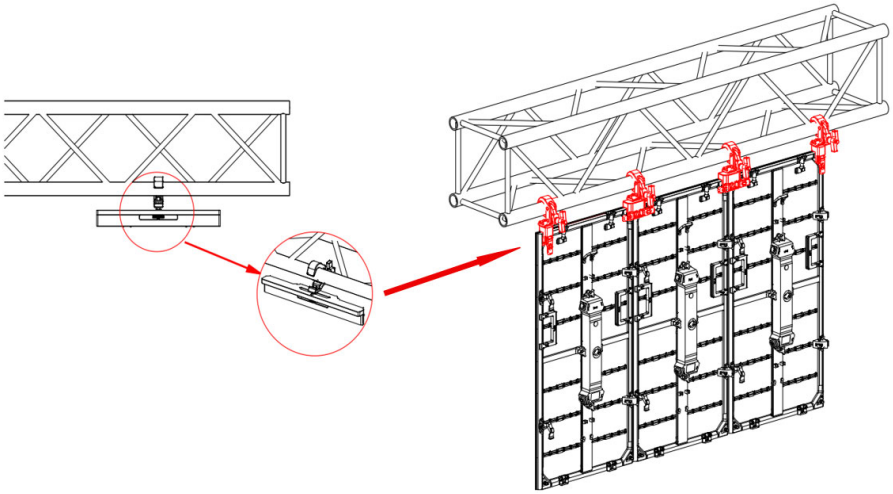
(6) Repeat above steps until all panels are installed.



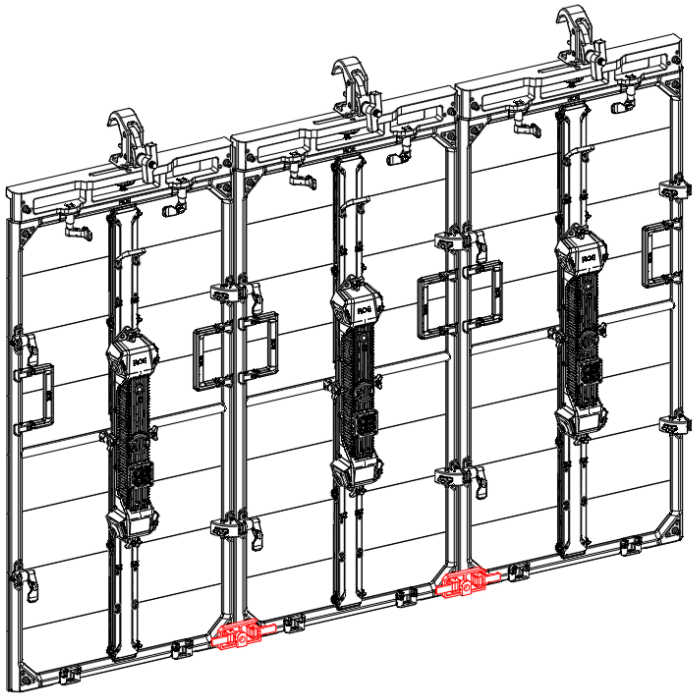
(7) It is recommended to uninstall from right to left when uninstall tiles.



(8) The hanging bars can be replace with the hanging plates.

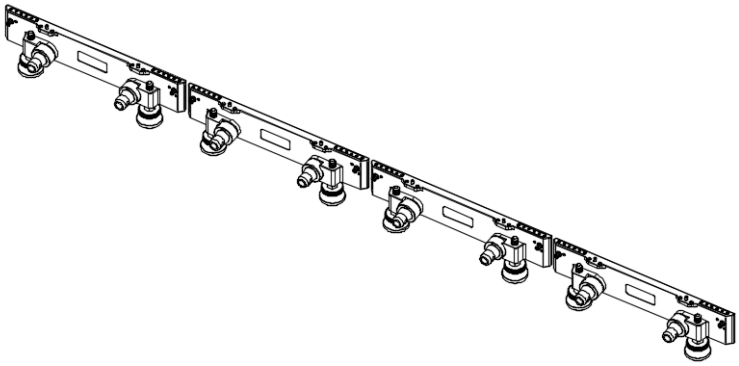


(9) For better flatness, the bottom row needs to be locked with 2-way plates when hanging.

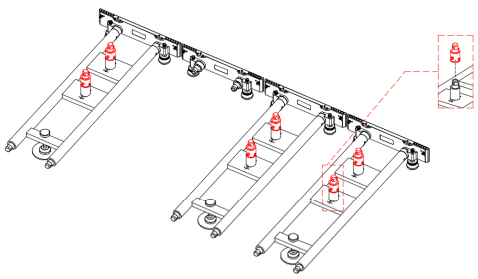


5.2 Stacking System

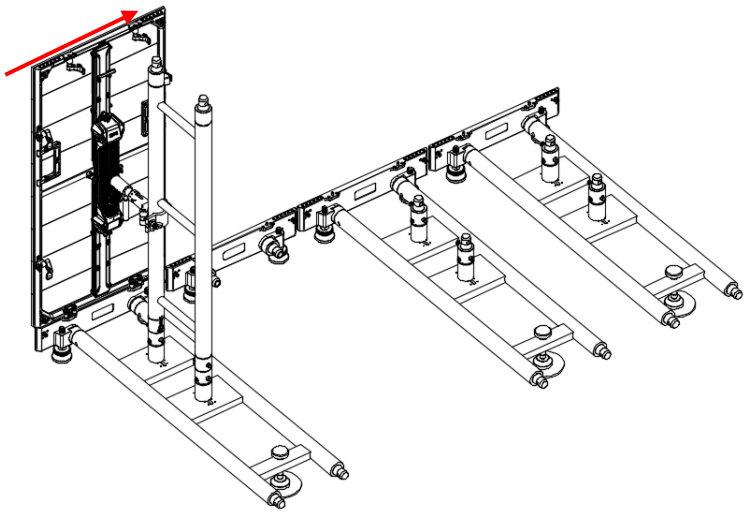
(1) Take stacking accessories from the flight case and put them at the target place.



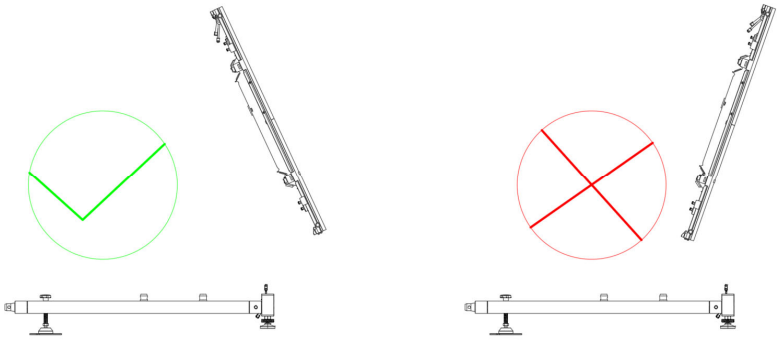
(2) Assemble stacking bars with base trusses, and assemble the adaptor with the base truss(based on the version of base truss!).



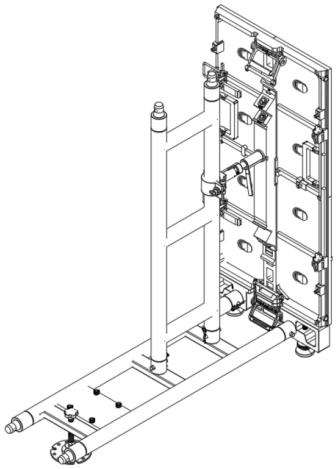
(3) Install the first panel on the stacking bar.



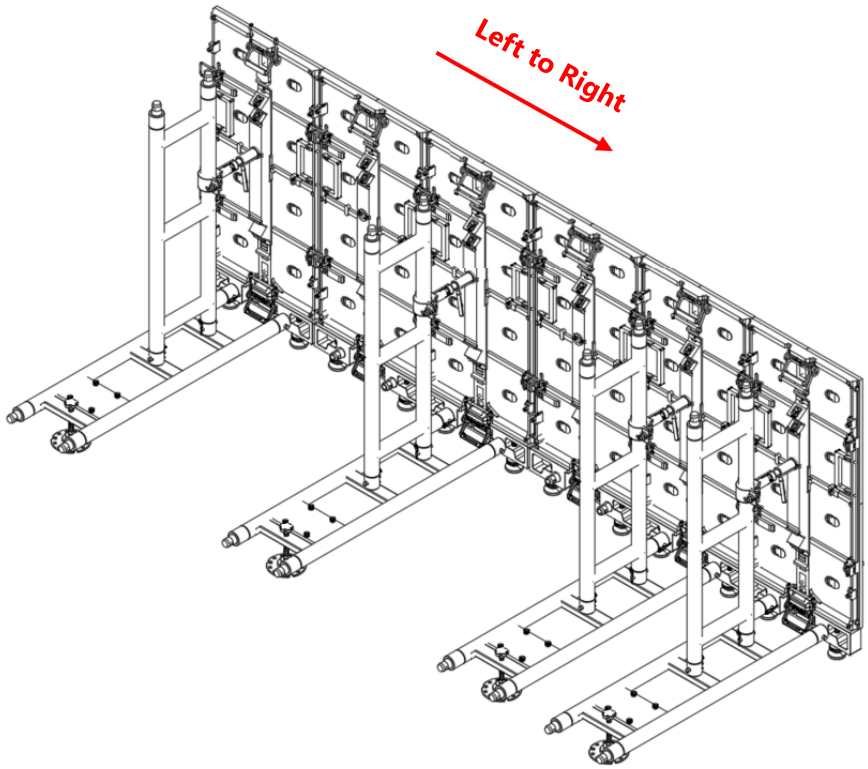
Note: It's recommended to install panel from left to right based on the rear view. Keep panels at an angle to avoid damage to LEDs when magnets attract panels.



(4) Lock the panel with the stacking bar. Connect the panel and rear truss by rear bridge and lock it with the rear truss.

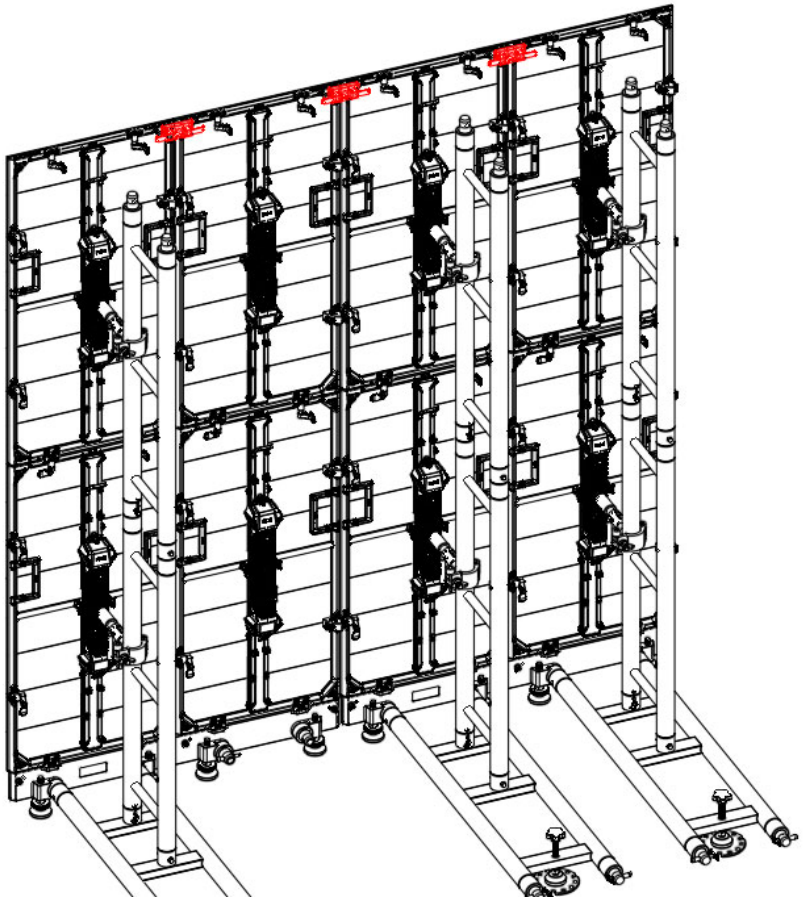


It's recommended to install panel from left to right based on the rear view.

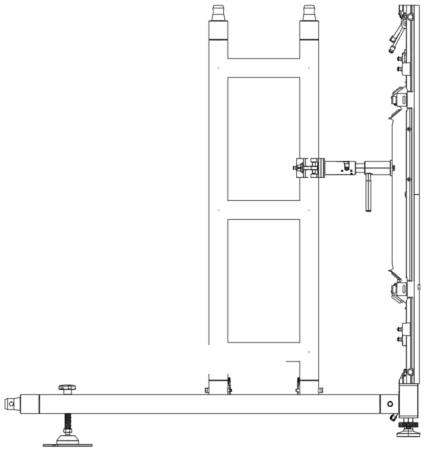


Note: No climbing the rear truss for safety.

(5) For better flatness, the top row needs to be locked with 2-way plates when stacking.

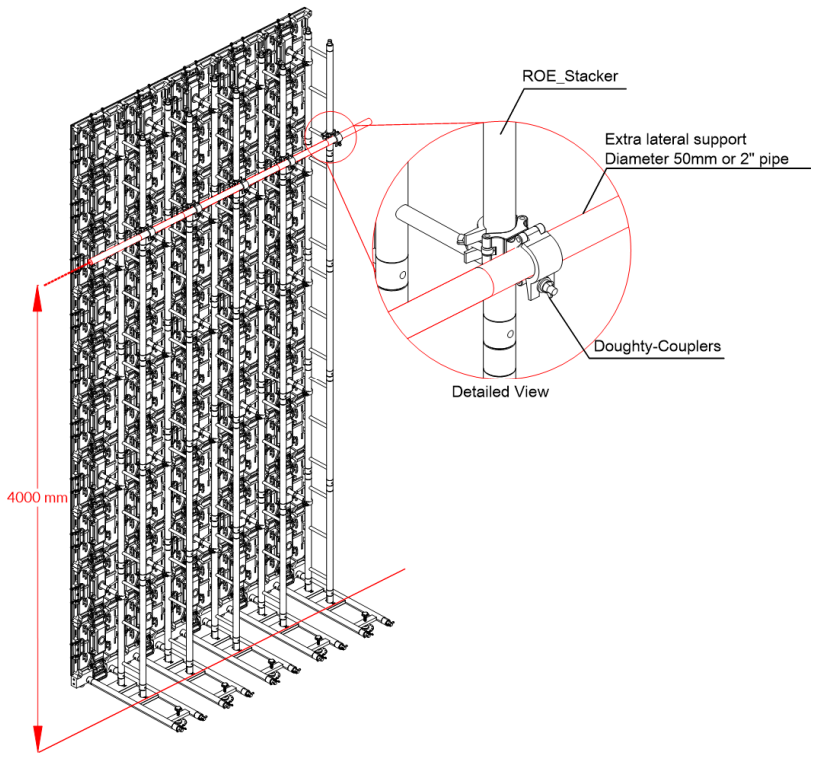


(6) Adjust the feet of stacking bar and the base truss to make the panel stand and upright.



(7) Conditions of use stacking system:

Version	Stacking Limits
Global Truss 1m	Up to 4m height you can use rear trusses on alternating columns. Higher, up to 6m, you need to use rear trusses on every column.
Global Truss Reinforced 1m	Up to 4.5m height you can use rear trusses on alternating columns. Higher, up to 6m, you need to use rear trusses on every column.
Prolyte 0.91m	Up to 6m you can use rear trusses on alternating columns without problem.
Note: -Within a complete screen the LED panels need a rear bridge connector on every 2nd row, including the top row. -LED screens that are only 2 panels wide need 2 rear support trusses and bases. -The first and the last column of the screen always needs to be connected to a stacking system. -Above 4m height the rear truss needs extra lateral support. -For more options, please check the *5.3 Ballast Weight Calculation*	



5.3 Ballast Calculation

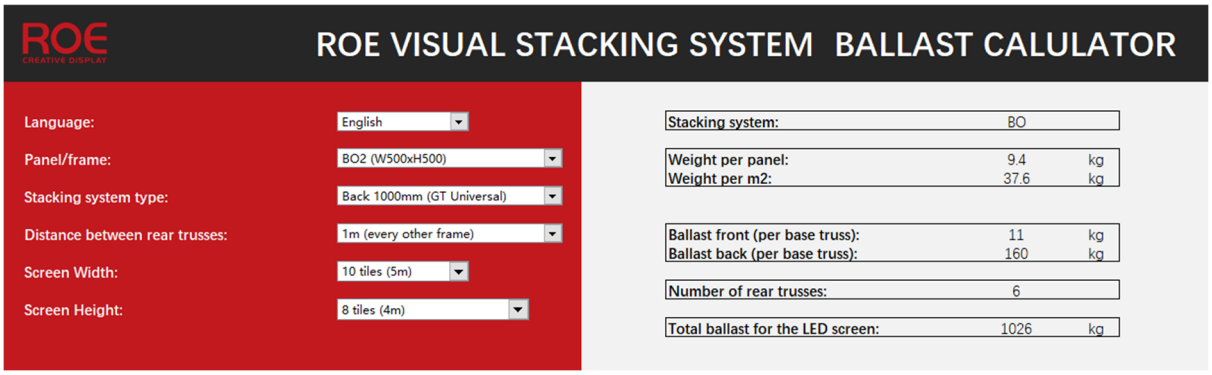
In order to confirm the correct total ballast weight for your LED screen, we created the stacking system ballast calculator based on the ROE stacking system structural analysis reports.

To use, select the corresponding options in the left of the calculator according to the wall build. The results will be shown on the right side of the calculator.

The calculator will not allow you to select a height that is higher than the setup you plan to use. If you cannot reach your height, the first step is to reduce your distance between your vertical trusses by adding additional trusses to the wall.

If you want to go higher you should contact an engineering consulting company. In most cases the height limitation is due to the limitations of the stacking system.

Please download the ballast calculator at https://www.roevisual.com/en/knowledge-and-support/ballast-calculator or contact the customer service.



5.4 Cabling

5.4.1 Overview

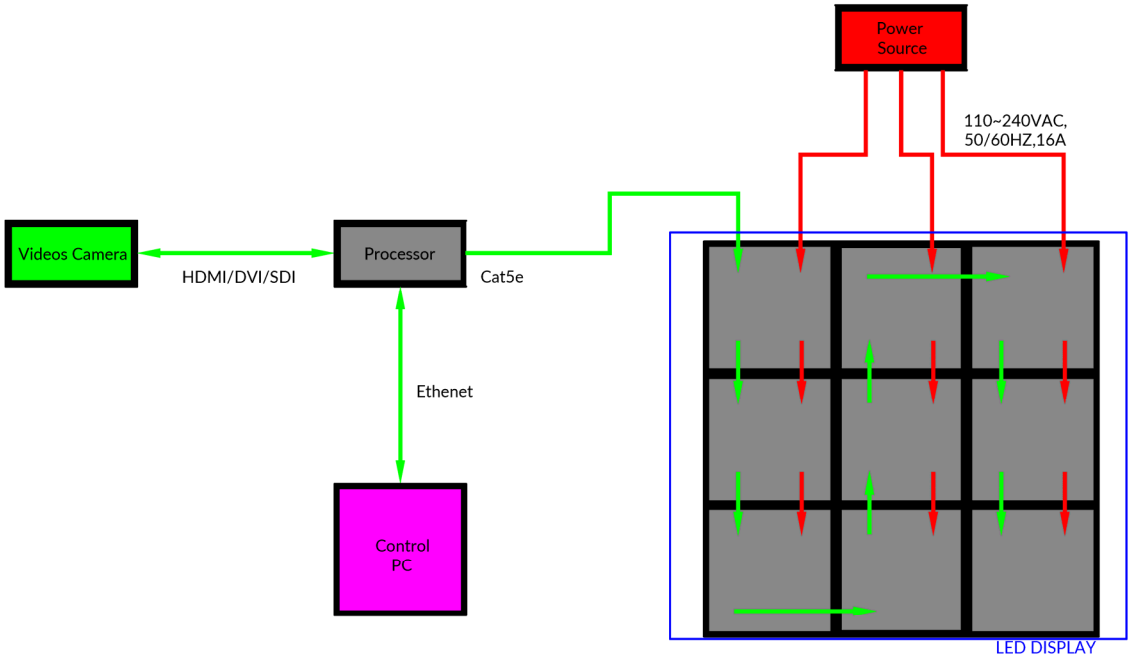


Figure 5-1 System Overview

5.4.2 Power Cabling

Connect neighboring panels (in the vertical direction) with 0.4m power cables from power-out to power-in.

Connect the first power-in port of the panel and power source with the main power cable.

How to calculate the power cable capacity

$$N = \frac{UI}{P}$$

N: One main power cable capacity

U: Voltage of AC input, 100~240V

I: Max current

P: Max panel power consumption

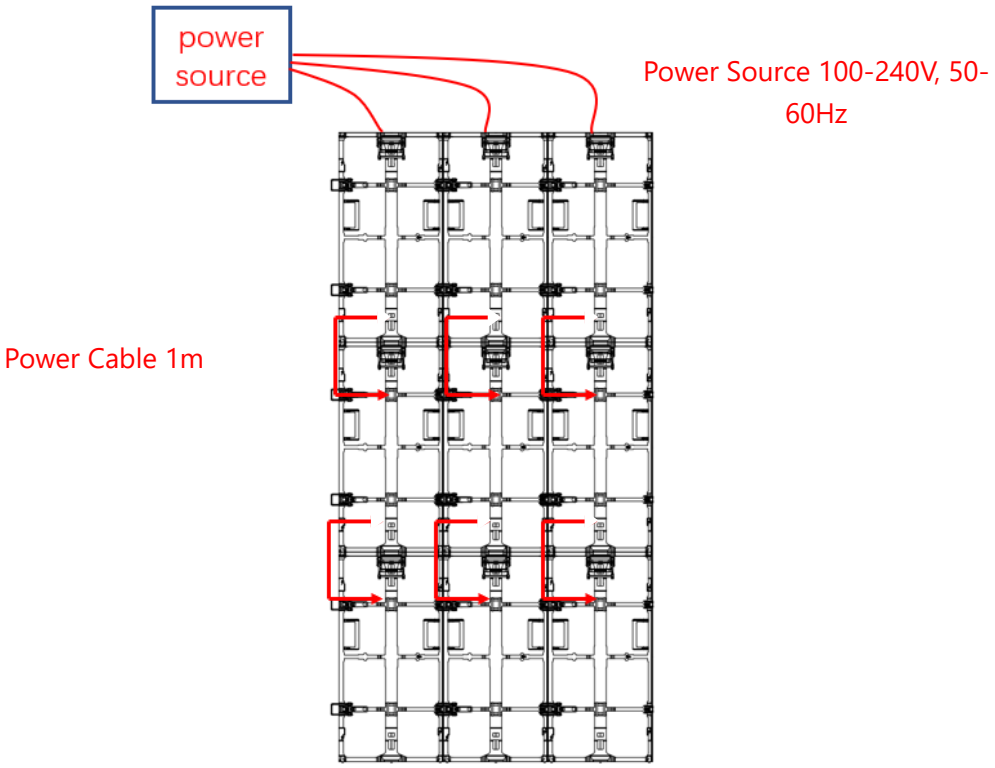


Figure 5-2 Jade Series Power Cabling _ Rear View

5.4.3 Data Cabling

Connect neighboring (vertical) panels with 0.93m data cables.
Connect panels in neighboring columns with 0.93m data cables.
Connect panels with the processor through 30m data cables.
Connect the processor with a PC / laptop via the Ethernet port.
Connect the video source.

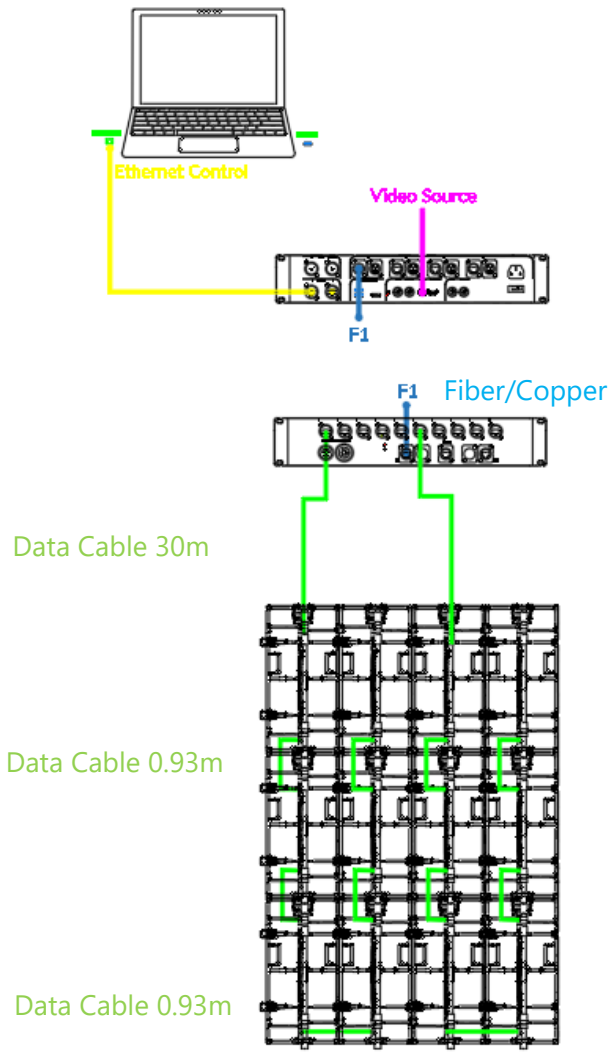


Figure 5-3 Jade Series Data Cabling _ Rear View

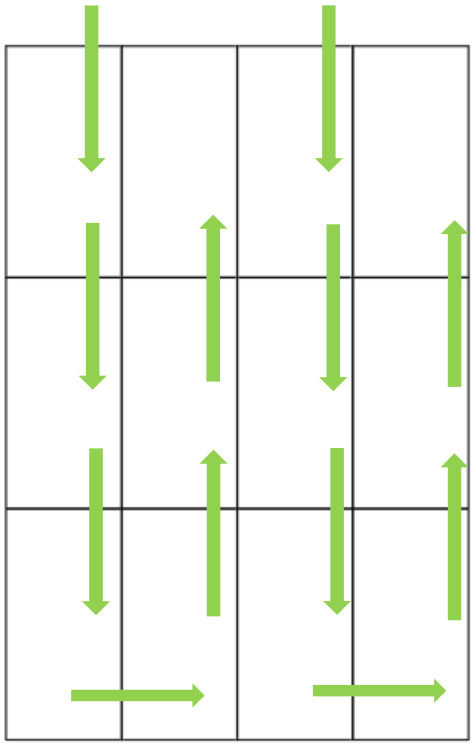


Figure 5-4 Data Mapping _ Front View

Notes：

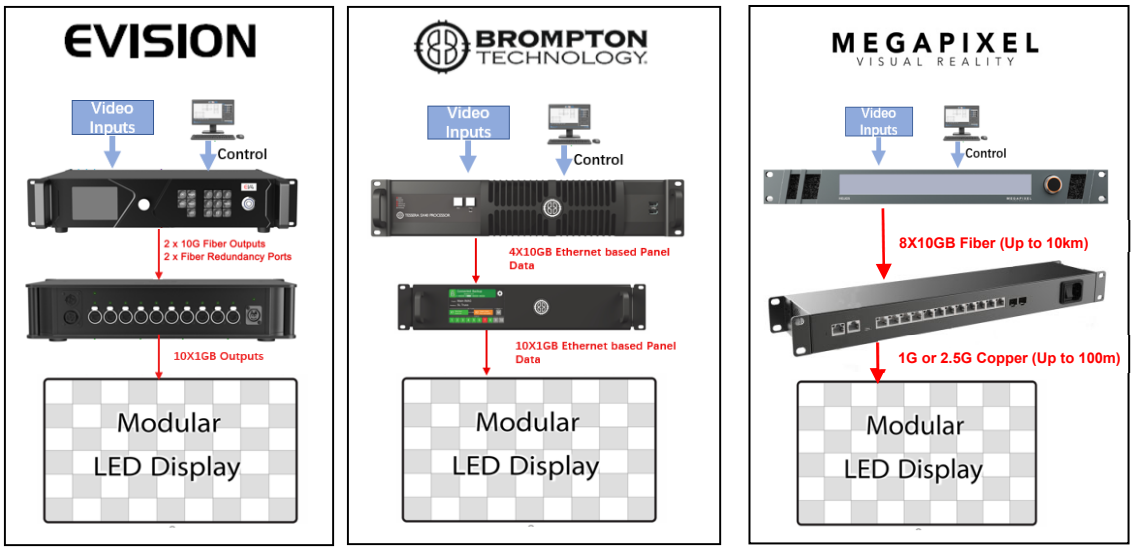
(1) The front view is for the setting in the control system.

(2) The cascade control data cables should not be more than 100 meters. When it's over 100 meters, please switch to fiber cables.

6 Control System

ROE provides three different control systems: Megapixel VR Helios, Brompton Tessera and ROE Evision.
For more information about system operation, please check the corresponding control system user manual.

1. ***ROE Evision Control System User Manual***
2. ***Brompton Tessera Control System User Manual***
3. ***Megapixel VR Helios Control System User Manual***



7 Service Instruction

7.1 Cleaning Panels

1) Needed Tools

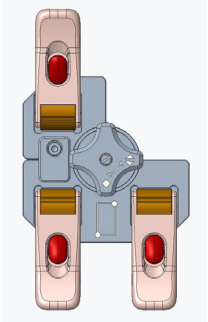
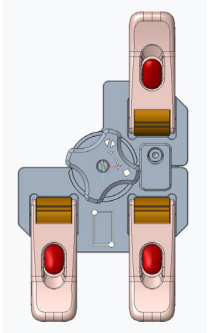
	Clean Microfiber Cloth for LEDs

2) Steps

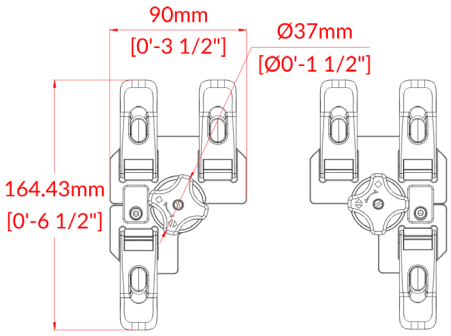
The LED screen requires a light touch.
Please slightly dampen a clean microfiber cloth with WATER ONLY.
It should never be dripping-wet. Use gentle pressure to wipe only the smudged areas.
Immiately use a clean, dry microfiber cloth to dry the screen.

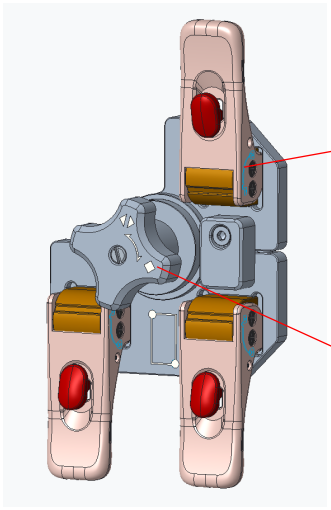
7.2 Remove a single panel from an installed LED wall.

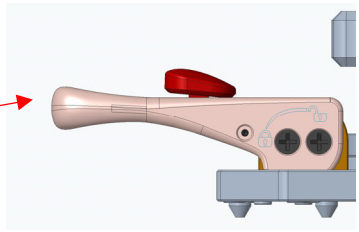
Materials

	L-shaped plate-A SAP: 321004-00204
	L-shaped plate-B SAP: 321004-00203

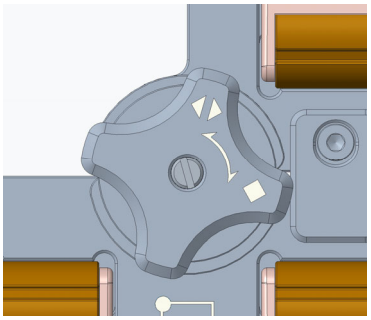
7.2.1 Plate Instruction

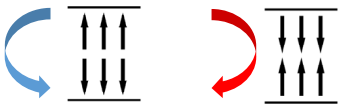






Press the red button and Rotate handle to Lock/Unlock the plate.

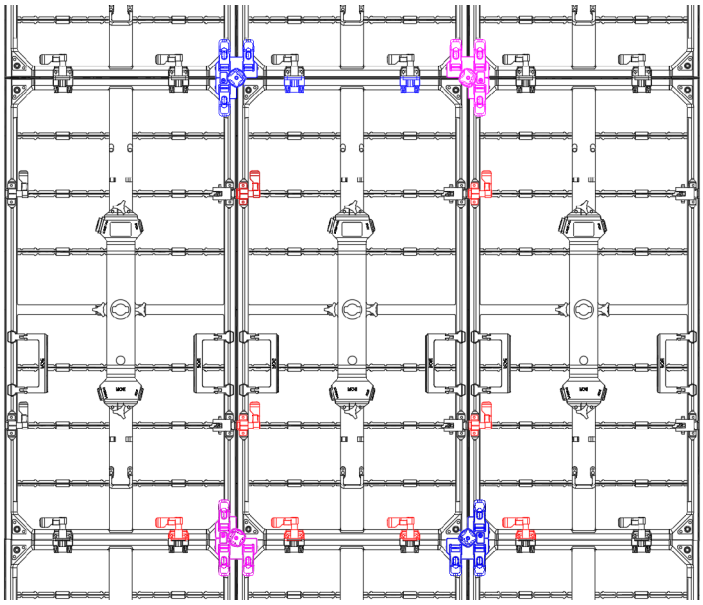




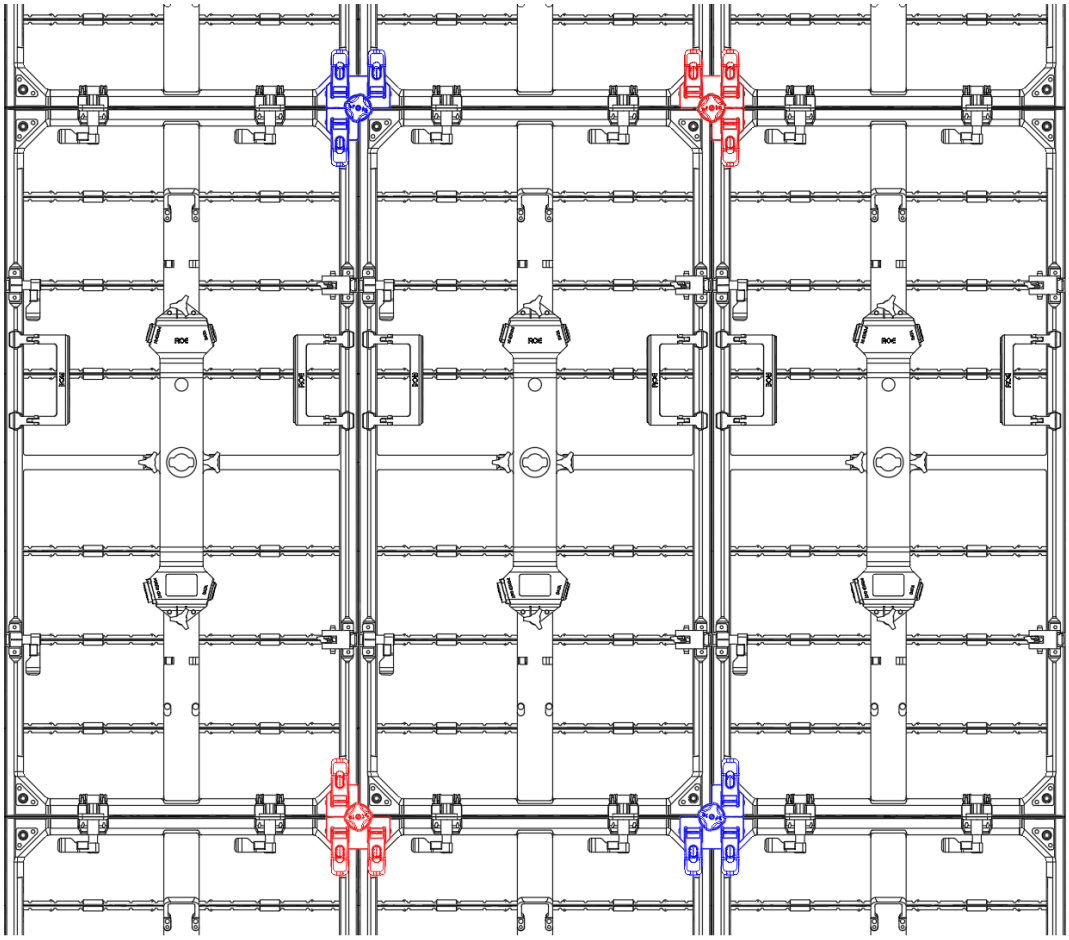
Rotate this button to adjust the gap between the upper and lower panel. To easier get the panel out.
Clockwise: reduce gap
Counterclockwise: increase gap.

7.2.2 Steps：

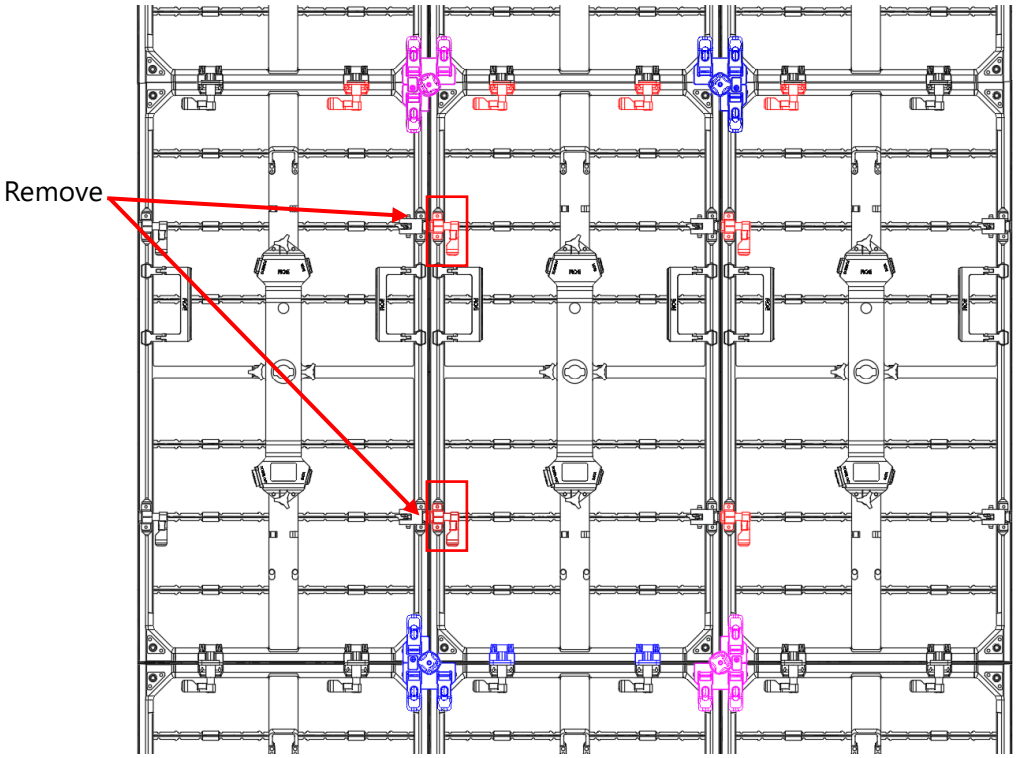
(1) Locate the panel to be removed and have the L-shaped plates ready



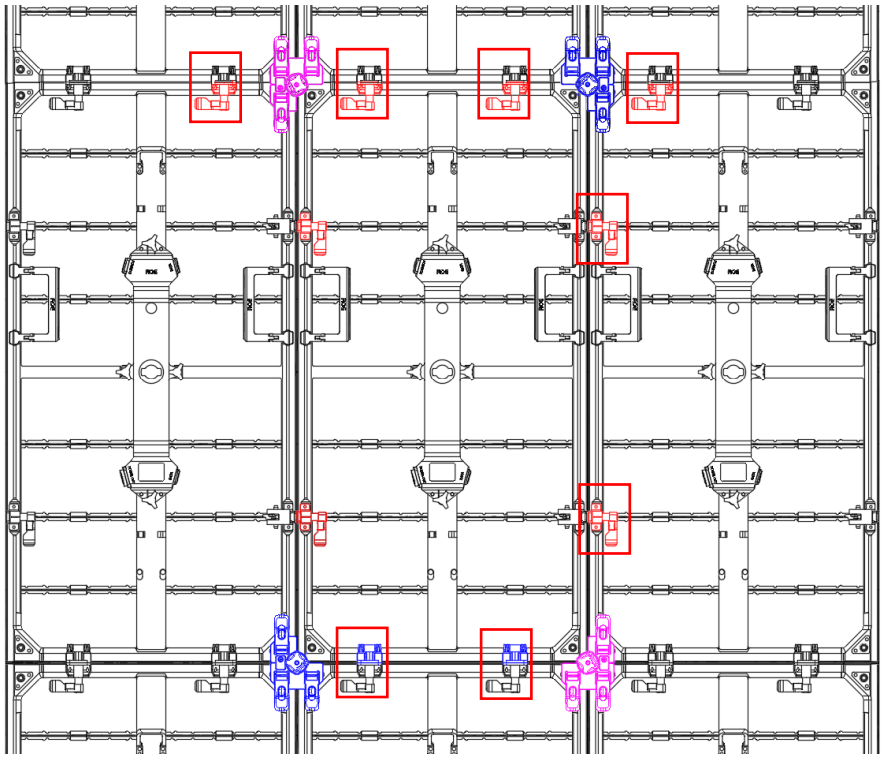
(2) Assembly 4 L-shapd plates



(3) Remove the locks

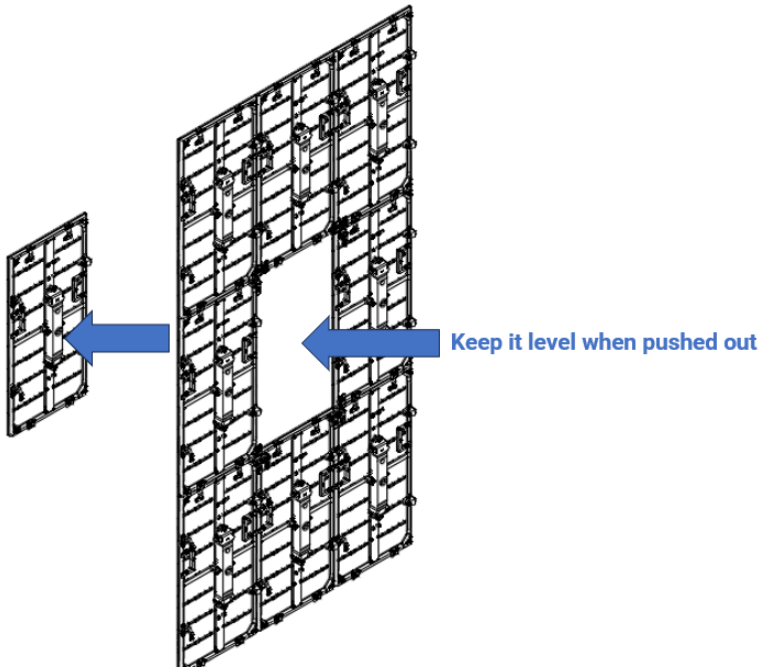


(4) Unlock the locks then use L-Plate to increase the gap between tiles.



(5) Push the panel out from the back.

It must remain level when pushed otherwise the LED may be damaged.



(6) Repeat the above steps in reverse when assembly the panel.

8 Update History

Updated Records	Description	Editor
V1.0	Original release	Chris
V2.0	Add materials and steps for panel remove	Chris
V2.1	Update accessory information	Chris
V2.2	Update spec sheet & L-Lock & update some pictures	Bruce
V2.3	Update spec sheet & L-Lock & update hanging accessories	Bruce
V2.4	Update ROE Europe Office Address and Add waterproof and windproof instructions	Bruce