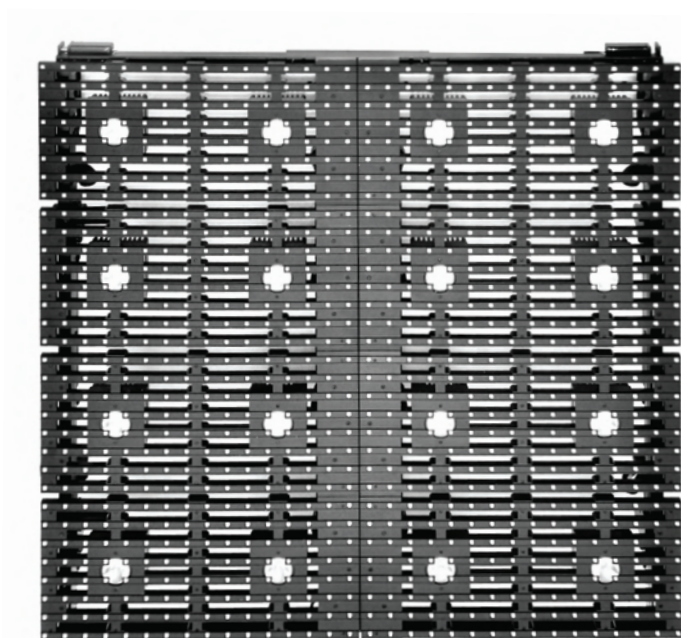


# User Manual

## Hybrid-18



**Contents**

Safety Information 3

Specification 6

Connection 7

Accessories 8

Header Assembly 10

Physical Connection 11

Control System 12

Service and Maintance 14

Package 15

Tour Frame 16



# Safety Information:



## WARNING!

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

The following symbols are used to identify important safety information on the product and in this manual:



**WARNING!**  
Safety hazard.  
Risk of severe injury or death.



**WARNING!**  
Refer to manual before installing, powering or servicing.



**WARNING!**  
Hazardous voltage. Risk of lethal or severe electric shock.



**WARNING!**  
Hot surface. Do not touch.



**WARNING!**  
Fire hazard.



**WARNING!**  
Emission hazardous to eyesight.



This product is for professional use only. It is not for household use.



This product presents risks of severe injury or death due to fire hazards, electric shock and falls.

Read this manual before installing, powering or servicing this product, follow the safety precautions listed below and observe all warnings in this manual and printed on the product.

If you have questions about how to operate the panel safely, please contact your Radiant supplier.



## PROTECTION FROM ELECTRIC SHOCK

- Connect the product to AC mains power within the range 100-240V nominal at 50 or 60 Hz only.
- Disconnect the product from power when not in use.
- Always ground (earth) the product electrically.
- 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, defective 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.



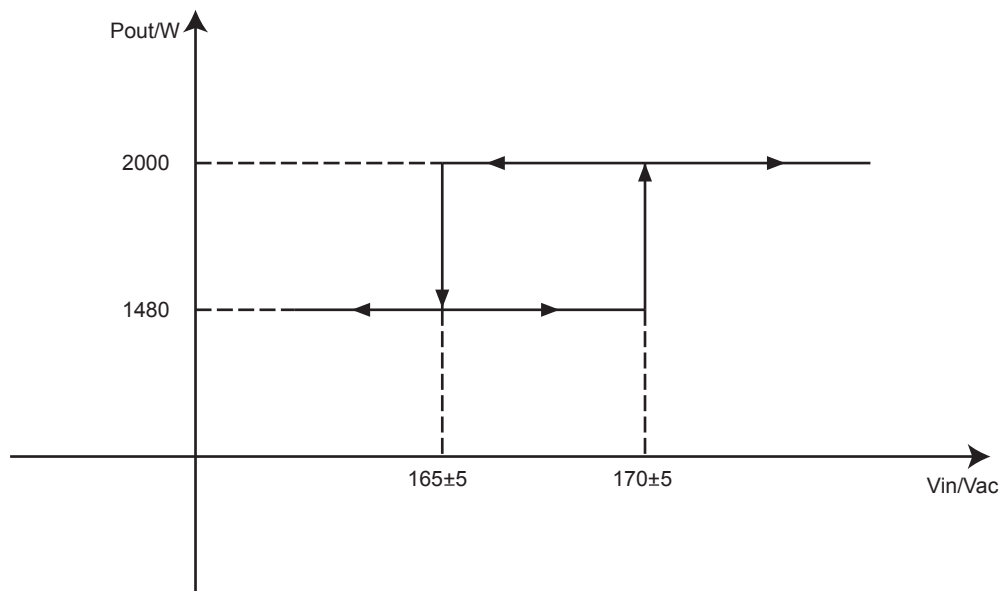
## PROTECTION FROM FIRE

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 Radiant parts in or on the product unless an alternative is described in this manual.

Do not operate the product full load if the ambient temperature of power units ( $T_a$ ) exceeds  $45^{\circ}\text{C}$  ( $113^{\circ}\text{F}$ ) or less than  $-20^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ )



## PROTECTION FROM INJURY

Create an installation by installing panels at 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.

## **Important warnings**

### **Maximum and minimum ambient temperature:**

The maximum ambient temperature for the LED wall is 45°C; the minimum temperature is -20 °C.

### **High leakage current:**

The combination of power boxes in an installation results in increased levels of Leakage current. In order to avoid risk of electric shock due to high leakage current, proper grounding of the installation is required.

### **This equipment MUST be earthed:**

In order 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.

## **Power system**

### **Mains cords:**

The power cords delivered with this system have special properties for safety. They are not user Serviceable. If the power cords are damaged, replace them only with new ones. Never try to repair a power cord.

### **Data cables:**

The data cables provided with this system have special properties for safety. They are not user serviceable. If the data cables are damaged, replace them only with new ones. Never try to repair a data cable. Per requirements of the National Electrical Code® in the USA, the length of a data cable must not exceed 100 m (332 feet). Avoid exposure of data cables to accidental contact with lightning or power conductors.

### **Hybrid LED Panels cannot be hot swapped:**

Always disconnect the power cord from the control box before connecting or disconnecting the cable string or one of Hybrid LED Panels.

# 02 Specification:

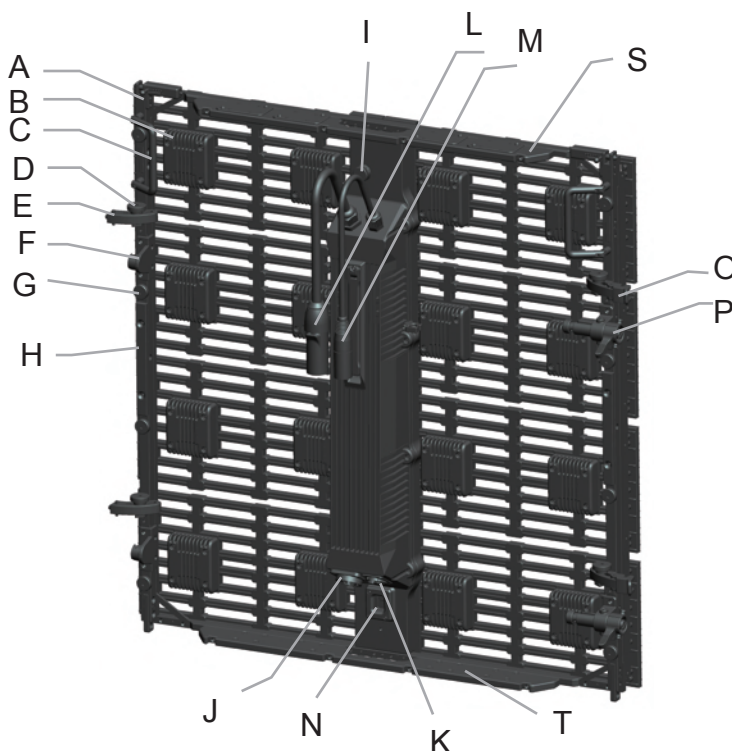
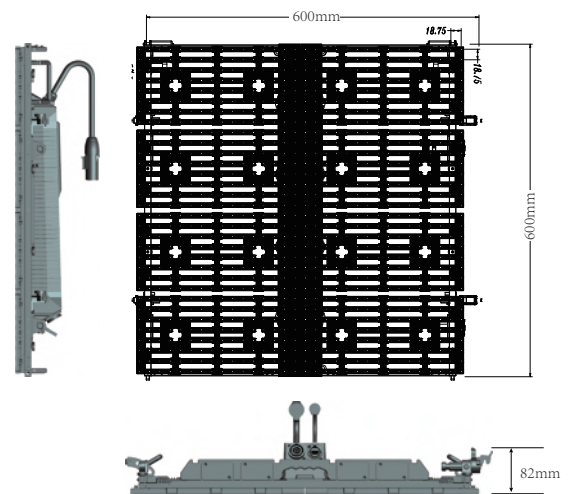
The Hybrid series is the world's first LED video display which integrates the functions of the spotlight. The LED display and spotlight are in independent control which ensures them to be used jointly as well as independently. Depending on the unified structure designing, the Hybrid series can be used jointly with all the MC series.

## Hybrid Specification:

	LED Display	LED Spotlight
Pixel Pitch	18.75mm	150.0mm
LED Type	3in1 SMD	High power LED
Brightness(Nit or CD/m <sup>2</sup> )	Cree 3435 3000 NationStar 3535 3200	77LM
Transparency	30%	N/A
Module Size(mm) W×H×D	600.0×600.0×82.0	N/A
ModuleArea	0.36m <sup>2</sup>	0.36m <sup>2</sup>
Pixels/ Module	32 × 32	4 × 4
Pixels/m <sup>2</sup>	2844	44
Viewing Horizontal/ Vertical	160 °	20 ° or 8 ° optimal
Weight/Module	8.6kg/18.96lbs	N/A
IP ( Front/Reverse )	IP65	IP65
Color Depth	16 bit	14bit
Processing	1280 × 1024/1920 × 640	32640(dot)
Scan	Static	Static
Refresh Rate	4000Hz	2000Hz
Max Power/Module	110W	70W
Certificates	CE/TUV	CE/TUV
Working Temperature	-20 to 45 °C	-20 to 45 °C

## Dimensions:

All dimensions are in millimeters



## Backside diagram

- A. Horizontal spring pin
- B. High Power LED
- C. Holder
- D. Curve regulator
- E. Curve holder
- F. Socket for horizontal fix
- G. Screw for fixing side-beam
- H. Metal plate for frame
- I. Ventilator for air
- J. Neutrik power-con
- K. Neutrik RJ45 Socket
- L. Neutrik power connector
- M. Neutrik RJ45 connector
- N. Indicator
- O. Curve holder
- P. Horizontal connection part
- S.Up Magnet system
- T.Down Magnet system



## 04 Accessories

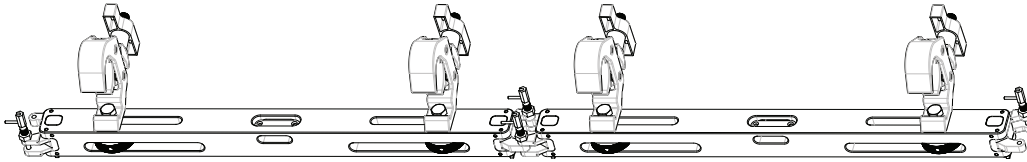
①	②	③
 <p>           Name : Main controller            Part No. : SDR-30001            Dimesion : L460 x W215 X H40mm            Weight : 1.48kg         </p>	 <p>           Name : CAT-5            Part No. : CAT-30003            Dimesion : 30000mm            Weight : 1.4kg            Max Length : 100000mm         </p>	 <p>           Name : Power Cable            Part No. : PWC-30001            Dimesion : 30000mm            Weight : 4.6kg            Max Current : 16A            Max Capacity : 8tiles of MC-H         </p>
④	⑤	⑥
 <p>           Name : CAT-5            Part No. : CAT-00912            Dimesion : 910mm            Weight : 0.1kg         </p>	 <p>           Name : CAT-5            Part No. : CAT-00001         </p>	 <p>           Name : Header            Part No. : RIG-06022            Dimesion : L600xW171xH53mm            Weight : 3.4kg            Material : Cold Rolled Steel            Max Capacity : 30tiles of MC-H         </p>
<div> <div> <p>           Name : Flightcase 12pcs/case            Part No. : FLS-03001            Dimesion : L1300xW720xH860mm            Max Capacity : 12 tiles of MC-H         </p> </div>  </div>		



## 05 Header Assembly:

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Figure 1: Straight installation



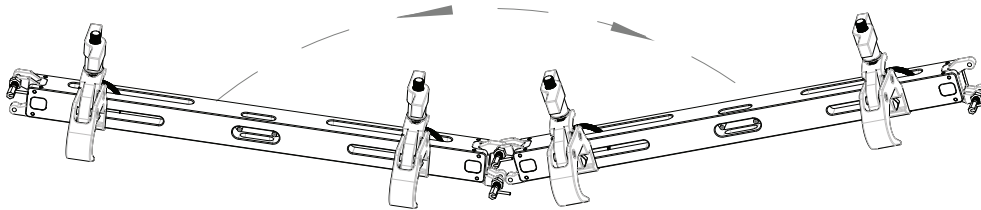
Step 1: Match the holes in straight line.

Step 2: Turn the knob and fit securely.

Step 3: Push the bolt in.

**Note:** Adjust the height of header with the pulley.

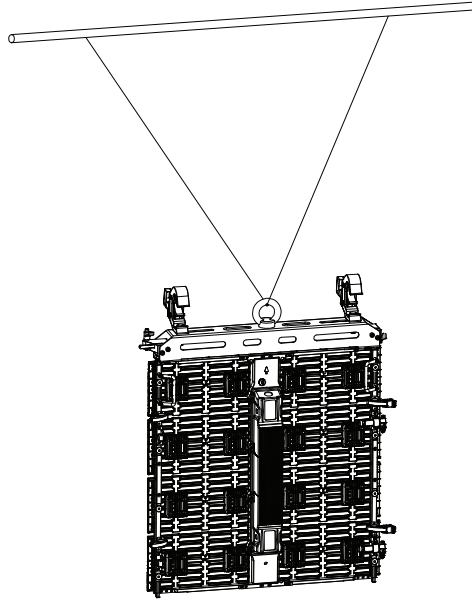
Figure 2: Arc installation



Step 1: Match the holes in the angle.

Step 2: Turn the knob and fit securely.

Figure 3: The function of ring

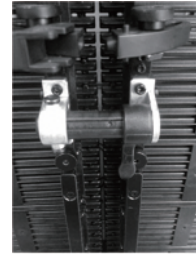
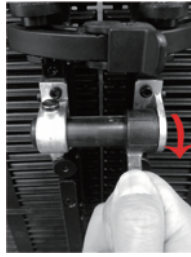
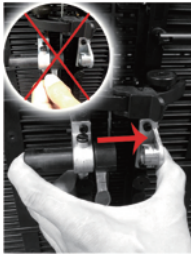


**Note:** The ring suggest to be used in big show, special stage design, high level background display...  
Headers suggest be used in car show, TV show...some close view distance display.  
The ring is not included in standart accessory rist.

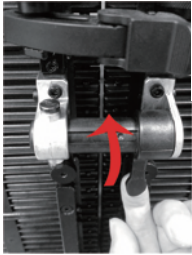
# 06 Physical Connection:

## Straight installation

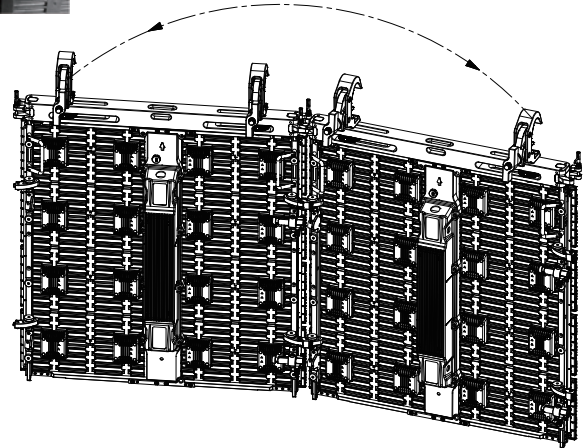
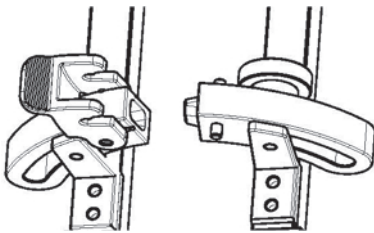
Step1:



Step2:



## Curve Installation



1. Loosen the knob and buttons on the header and panels.
2. Adjust the angle.
3. Tighten the knob and bottom.

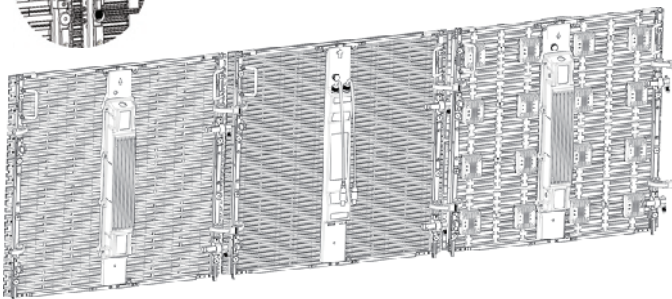
### Note:

Headers can reach the angle of 15° both front and back direction.

Panels can reach the angle of 15°.

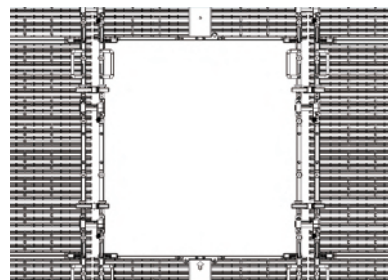
For perfect visual effect, seamless curveable is 15° (Both front/back direction).

## Hybrid&MC-H&MC-F mixing using



**Note:** Depending on unified frame structure, all of hybrid families and MC series can be integrated together.

## Hollow-design



1. Install all the panels securely.
2. Loosen six buttons and take down the panel.
3. Connect the cables above and below nearby.

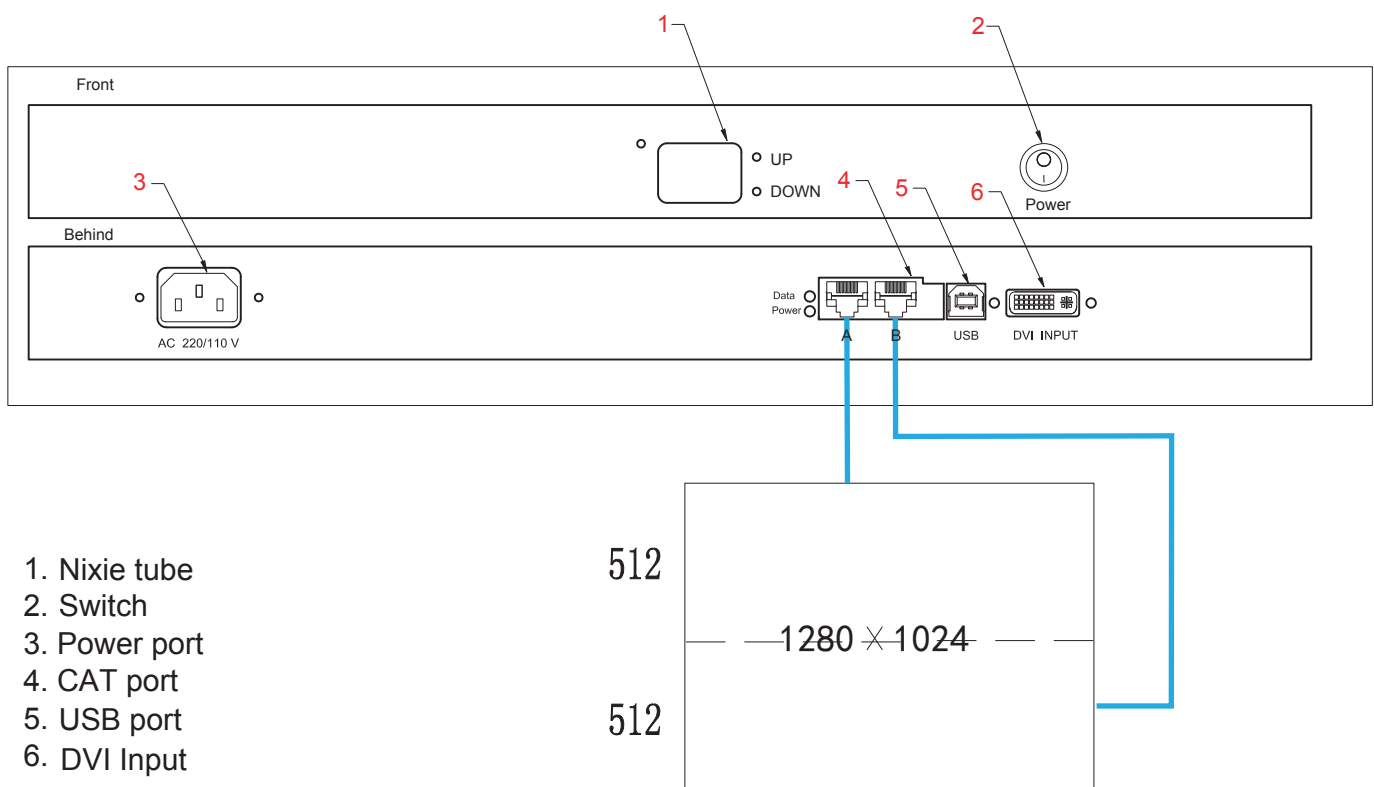
The control system of Hybrid-18 consist of receiving card and sending card.Receiving card is integrated with LED panels.

## Specification

Working voltage	100-240VAC
Power	< 10W
Working temperature	-20℃ ~ 45℃
Input port	DVI
Output ports number	2 ports
Communication port	USB/RJ45
Max resolution	1280x1024
Data transmission port	1000M Ethernet
Material	SPCC
Dimension	L460x W215x H40mm
Weight	1.48kg

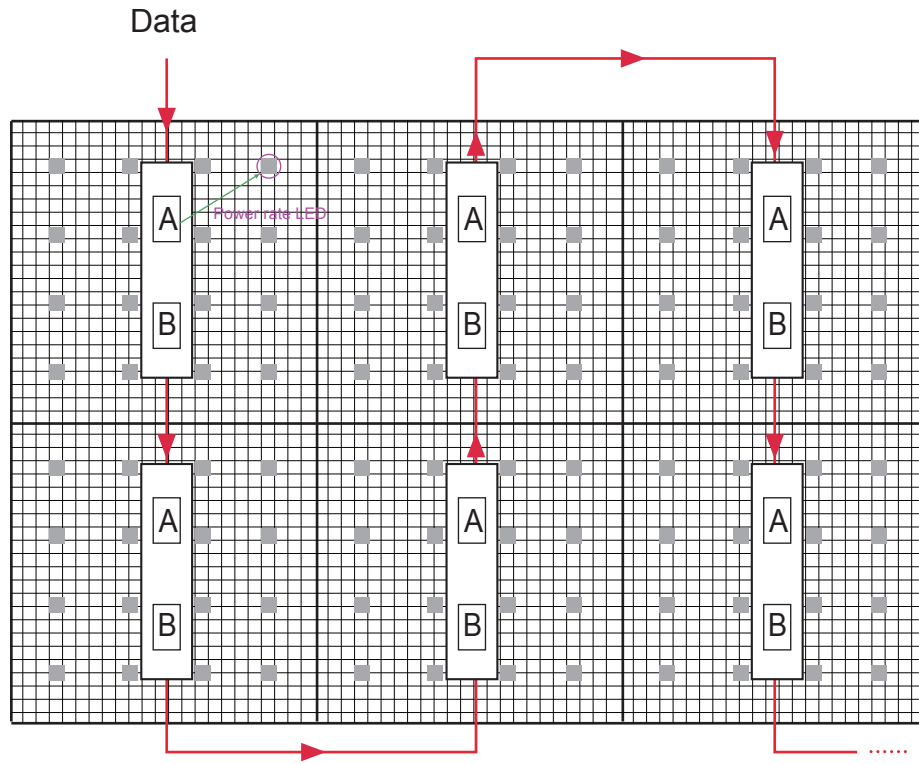


Main controller (SDR-30001)



## Software:

Please read software manual or download from the link as below:



Hybrid-18

Card A control the high power rate LED.  
 Card B control the lights on the screen.  
 The external connection of hybrids is same as the MC series products.

- 1、 Using the ROE unique control card to control the display of hybrid.
- 2、 There are two windows in the software, to separately receive the display from the screen and high power rate LEDs and you can use one unit video processor to control these two display of hybrid.

## 08 Service and Maintenance:

Figure 1: Replacement of LED strips

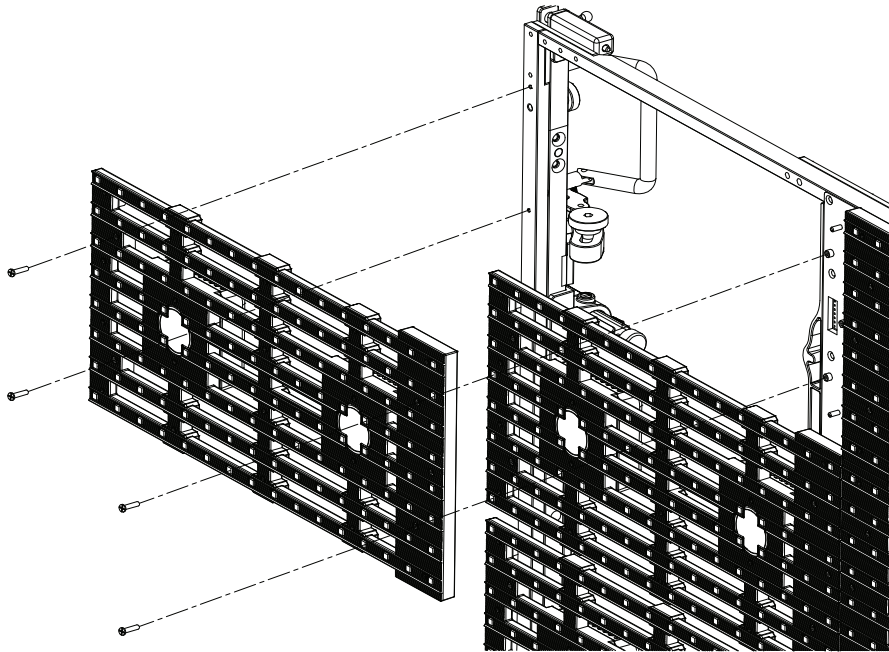
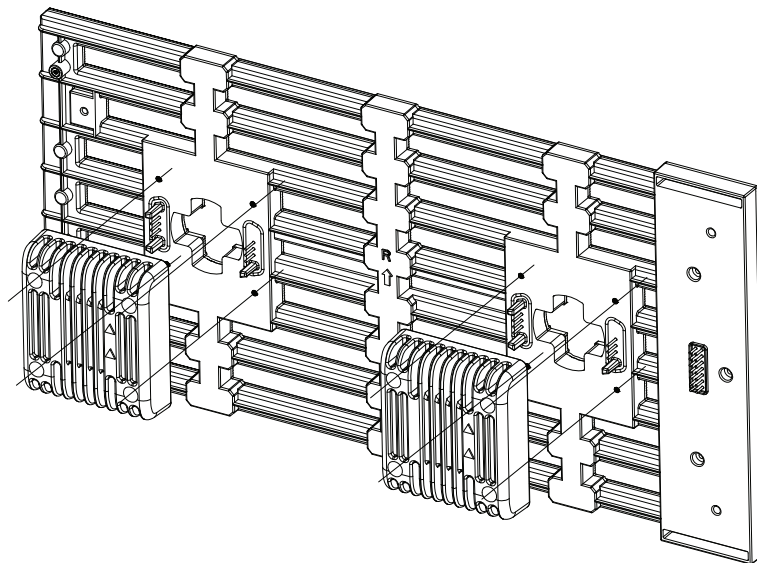


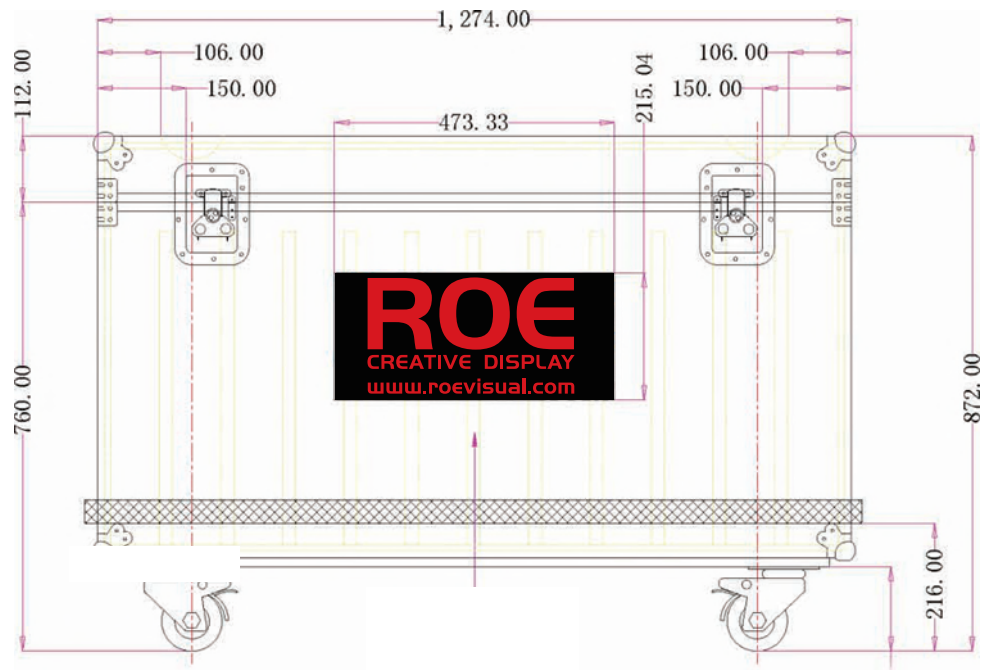
Figure 2: Replacement of LED spotlight.

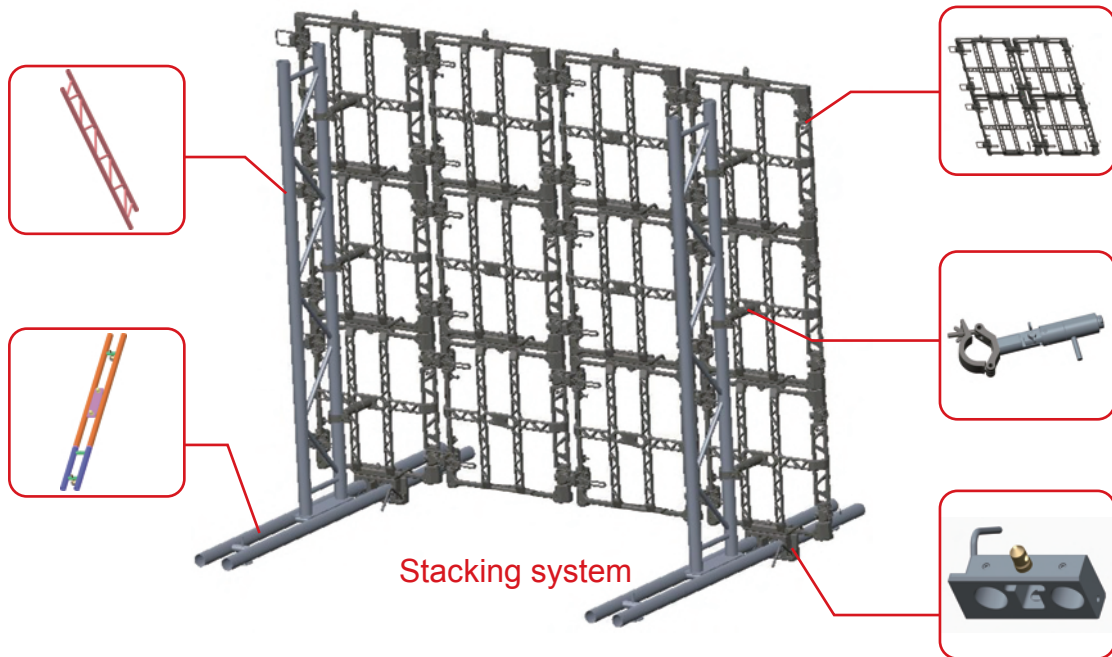
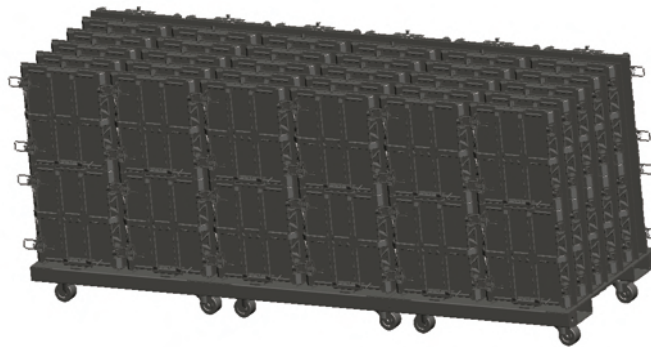
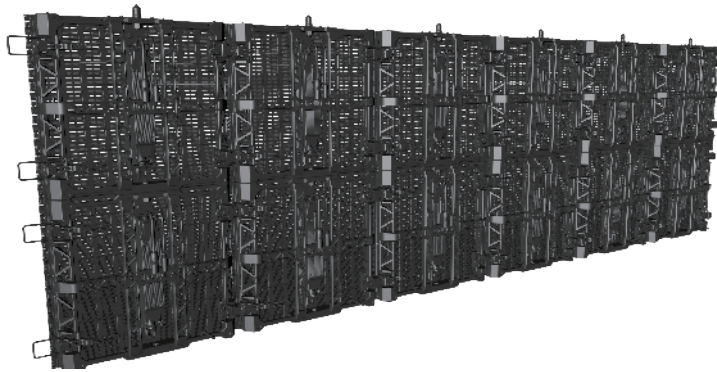




## 09 Package

12 pcs LED panels per flightcase





Touring system is a set of accessories which is especially designed for the touring rental market. It includes robust and strong frames, carts and a stacking system.

The frames made of very lightweight alloys can be climbed on directly. Single panels can be removed for service easily.

Transport carts can load 24 panels combined as 6 frames to save transport space.

The stacking system can be used to build a screen when air suspension is not available. All these accessories greatly improve the installation, transport and use of MC and Hybrid and make it the perfect choice for touring applications.



**The end**

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