User Manual
MC-7H/9H/12H/18H

Index

01 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 90- 264 V 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 (Ta) exceeds 80℃ (176° F).
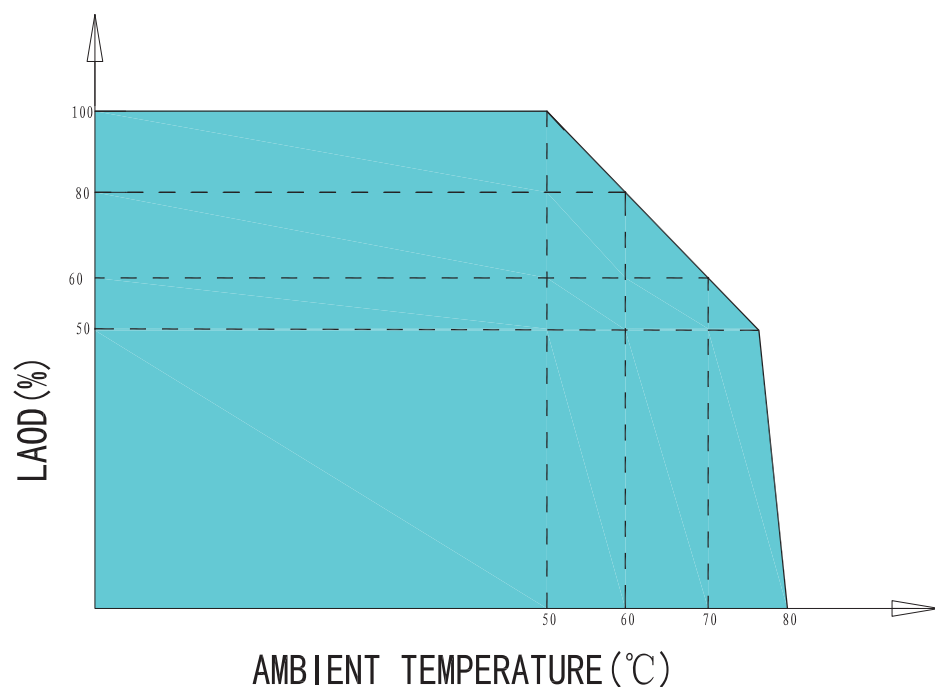
⚠ PROTECTION FROM INJURY

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 60 °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.

MC 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 MC LED Panels.
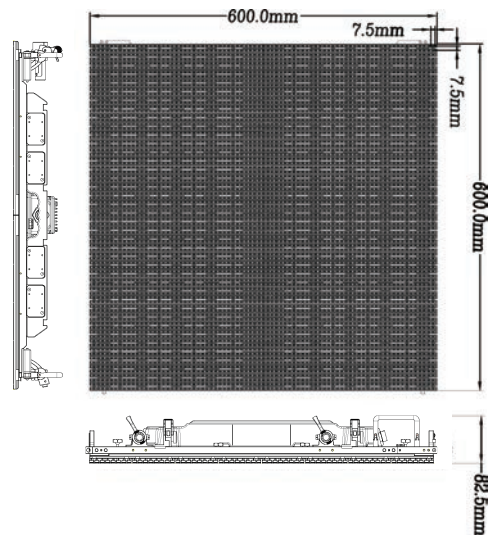
02 Specification:

MC LED Panels is lightweight and virtually transparent LED display.They offer wide viewing angles with excellent image integrity and color uniformity, owning the common characteristics of light - weight and firm structure. With the amazing flexibility and high density, both of them can be able to multi-angle folded, satisfy your solution for applications with long viewing distances.

MC-7H Specification:

Pixel Pitch	7.5mm
LED Type	3in1 SMD
Brightness(Nit or CD/m^2)	Cree 3435,4500/Silan3535,4000
Transparency	7%
Module Size(mm) W×H×D	600.0×600.0×82.5
Module Area	0.36m^2
Pixels/Module	80×80
Pixels/m^2	17778
Viewing Horizontal/Vertical	160 °
Weight/Module	7.95kg/17.530lbs
IP（Front/Reverse）	IP65
Color Depth	16 bit
Scan	1/5
Refresh Rate	2000Hz
Max Power/Module	180W
Working Temperature	-20 to 45℃

MC-7H Dimensions:

MC-9H Specification:

Pixel Pitch	9.375mm
LED Type	3in1 SMD
Brightness(Nit or CD/m^2)	Cree 3435,4500/Silan 3535,4000
Transparency	17%
Module Size(mm) W×H×D	600.0×600.0×82.5
Module Area	0.36m^2
Pixels/Module	64×64
Pixels/m^2	11378
Viewing Horizontal/Vertical	160 °
Weight/Module	6.50kg/14.33lbs
IP（Front/Reverse）	IP65
Color Depth	16 bit
Scan	1/4
Refresh Rate	4000Hz
Max Power/Module	180W
Working Temperature	-20 to 45℃

MC-9H Dimensions:
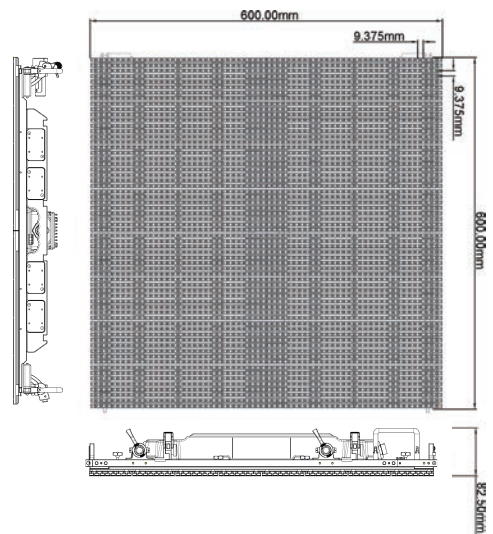
MC-12H Specification:

Pixel Pitch	12.5mm
LED Type	3in1 SMD
Brightness(Nit or CD/m^2)	Cree 3435,4500/Silan 3535,3500
Transparency	21%
Module Size(mm) W×H×D	600.0×600.0×82.5
Module Area	0.36m^2
Pixels/Module	48×48
Pixels/m^2	6400
Viewing Horizontal/Vertical	160 °
Weight/Module	6.00kg/13.23lbs
IP(Front/Reverse)	IP65
Color Depth	16 bit
Scan	Static
Refresh Rate	4000Hz
Max Power/Module	180W
Working Temperature	-20 to 45℃

MC-12H Dimensions:
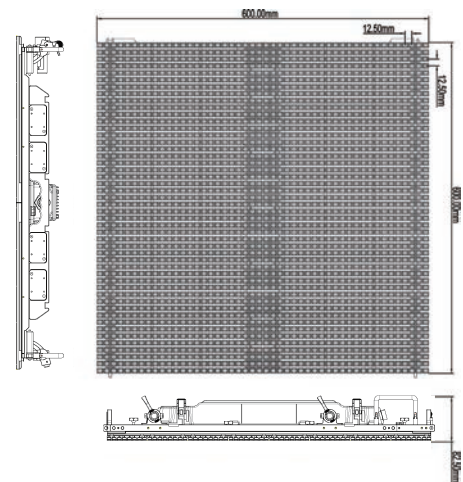
MC-18H Specification:

Pixel Pitch	18.75mm
LED Type	3in1 SMD
Brightness(Nit or CD/m^2)	Cree 3435,4000/Silan 3535,3500
Transparency	37%
Module Size(mm) W×H×D	600.0×600.0×82.5
Module Area	0.36m^2
Pixels/Module	32x32
Pixels/m^2	2844
Viewing Horizontal/Vertical	160 °
Weight/Module	5.60kg/12.34lbs
IP(Front/Reverse)	IP65
Color Depth	16 bit
Scan	Static
Refresh Rate	4000Hz
Max Power/Module	180W
Working Temperature	-20 to 45℃

MC-18H Dimensions:
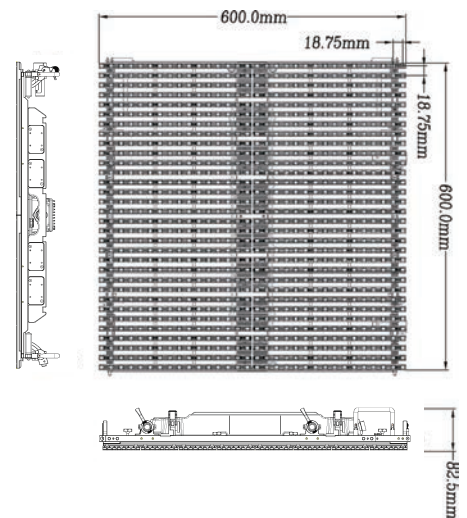
Backside diagram
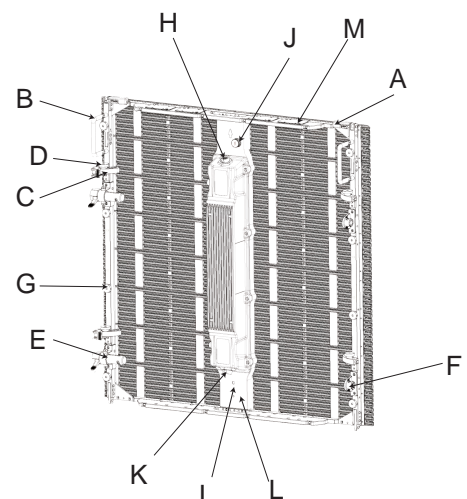
Note:

A. Vertical connector

B. Handle

C. Arc connector-rotation angles

D. Button-Fix the arc

E. Horizontal connector

F. Horizontal lock

G. Disassemble button

H. Breather valve

I. Indicator light

J. Male power socket

k. Female power socket

L. Female data socket

M. Magnet

03 Connection:

Accessories quantity for (4*4) tiles:

. 1× Sending card (SDR-30001)
   1× DVI cable
   1× USB cable
. 1× CAT-5 (CAT-30001)
. 4× Power Cable (PWC-43003)
. 3× CAT-5 (CAT-00811)
. 12×CAT-5 (CAT-40411)
. 12×Power Cable (PWC-40033)
. 4×Hanging Bar(RIG-06022)

04 Header Assembly:

Standard Header:

Figure 1: Clamp

156.88

Figure 2: Headers

600.00

171.10
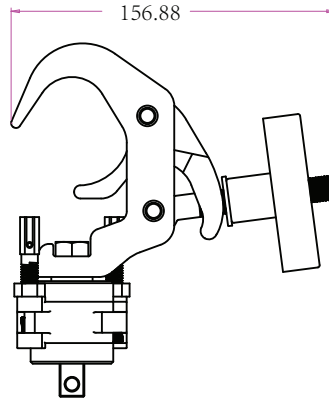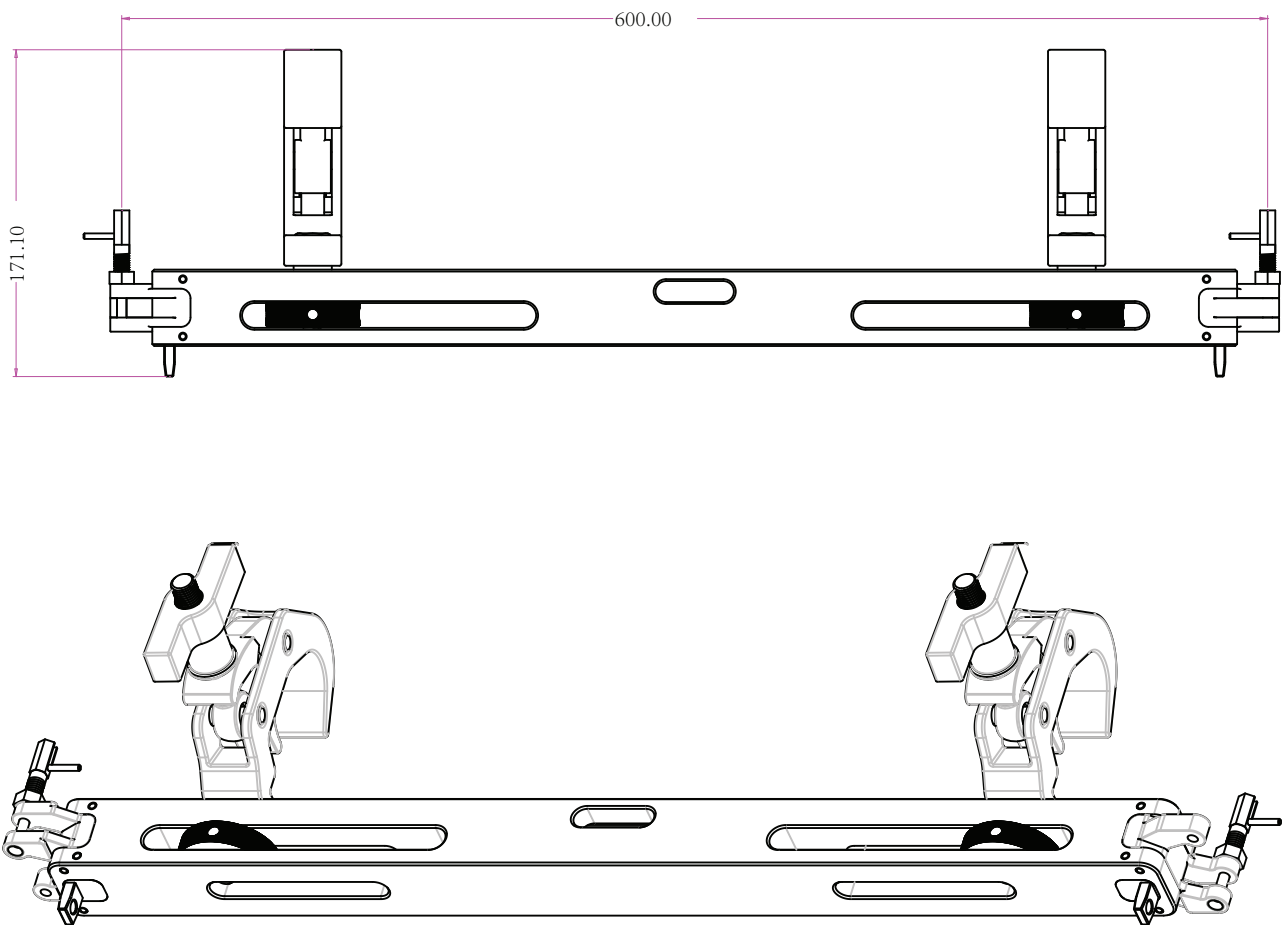
Figure 1: Straight installation
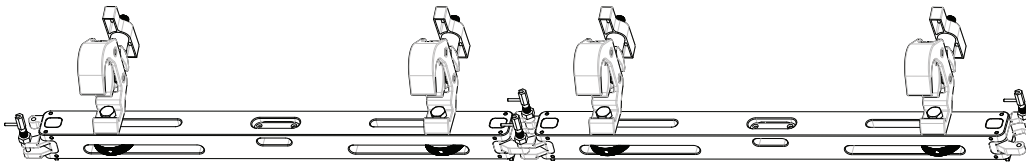
Step 1: Match the holes in straight line.
Step 2   Turn the knob and fit securely.
Step 3   Push the bolt in.

Note: Adjust the height of header with the pulley.

Figure 2: Arc installation
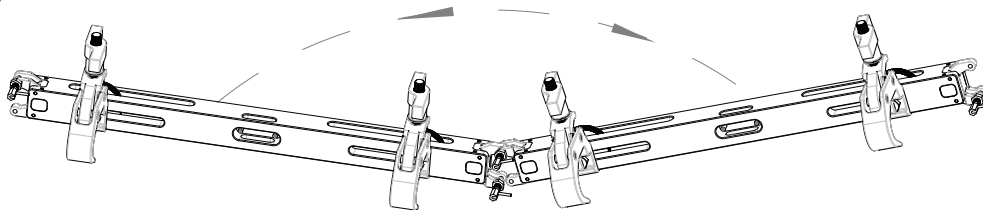
Step 1: Match the holes in the angle.
Step 2: Turn the knob and fit securely.

Figure 3: The function of ring
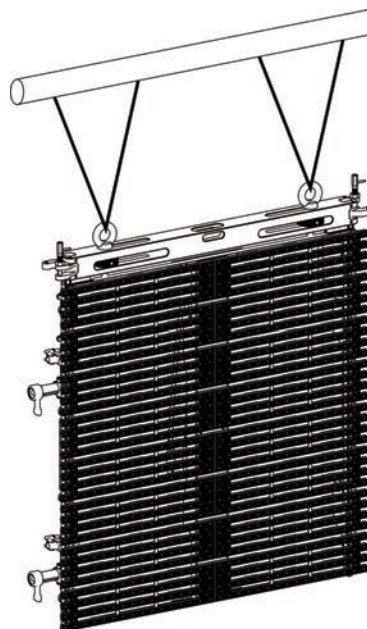
Note: The ring suggest to be used in big show, special stage design, high level background
display…
Headers suggest be used in car show, TV show…some close view distance display.
The ring is not included in standart accessary rist.

05 Physical Connection:

Straight installation

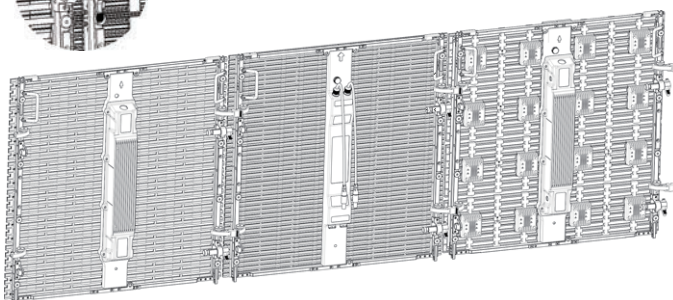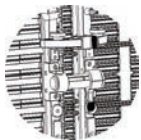Step1:
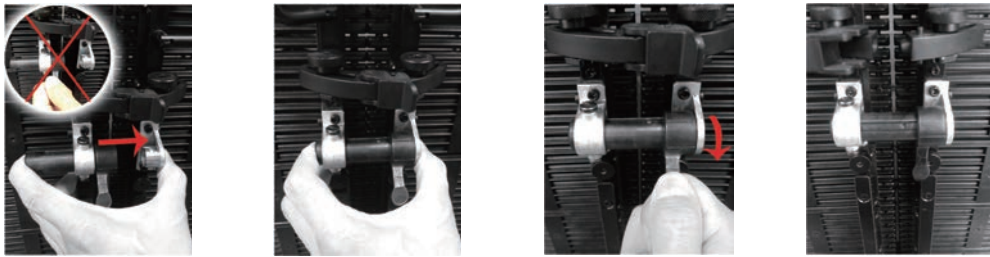
Step2:

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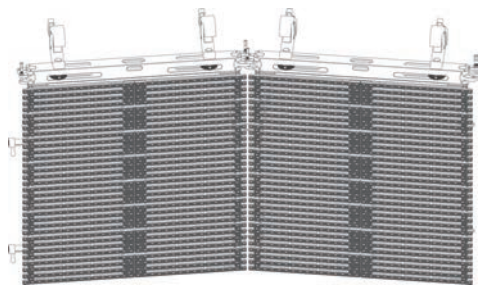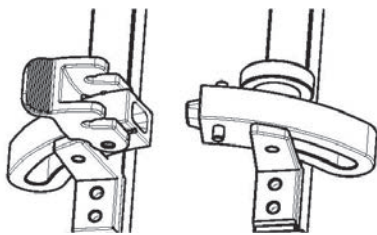
1. Loosen the knob and buttons on the header and panels.
2. Adjust the angle.
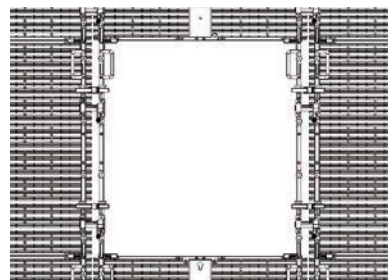3. Tighten the knob and bottom.

Note:
Headers can reach the angle of 50°both front and back direction.
Panels can reach the angle of 40°.
For perfect visual effect,seamless curveable is 15°(Both front/back direction).

MC-H&MC-F&Hybrid mixing using

Note: Depending on unified frame structure,all of MC families and hybrid 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.

Name   : Header
Part No.   : RIG-06022
Dimesion   : L600×W171.1×H53mm
Weight   : 3.40kg
Material   : Cold Rolled Steel
Max Capacity : 30 tiles of MC-H

Name   : Power Cable
Part No.   : PWC-43003
Dimesion   : 30000mm
Weight   : 3.20kg
Max Current : 12A
Max Capacity : 8 tiles of MC-H

Name   : CAT-5
Part No.   : CAT-00811
Dimesion   : 800mm
Weight   : 0.10kg

Name   : CAT-5
Part No.   : CAT-40411
Dimesion   : 300mm
Weight   : 0.03kg

Name   : CAT-5
Part No.   : CAT-30001
Dimesion   : 30000mm
Weight   : 1.33kg
Max Length : 100m

Name   : Power cable
Part No.   : PWC-40033
Dimesion   : 250mm
Weight   : 0.12kg

07 Control System:

The control system of MC-H series consist of receiving card and sending card.Receiving card is integated with LED panels.

Specification	
Working Voltage	90～260VAC
Power	＜10W
Working temperature	-30℃～ 50℃
Input port	DVI
Output ports number	2 ports
Communication port	USB/RJ45
Max resolution	1024x768
Data transmission port	1000M Ethernet
Material	SPCC
Dimension	L280*W 175*H 50mm
Weight	1.48kg

Main controller (SDR-30001)
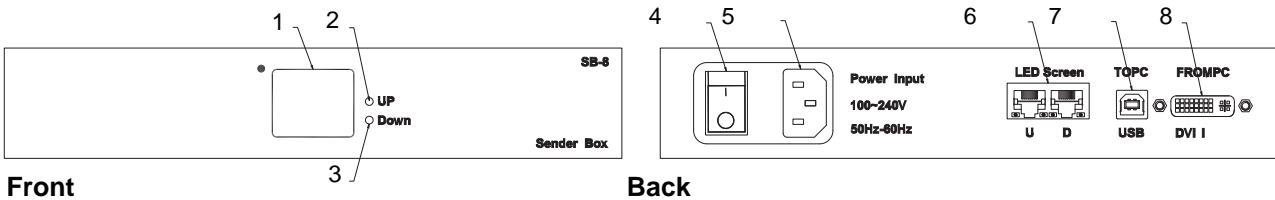
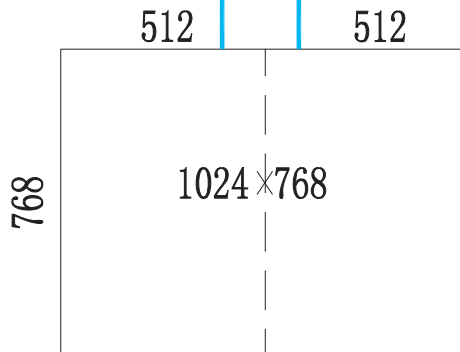**Front**

Back
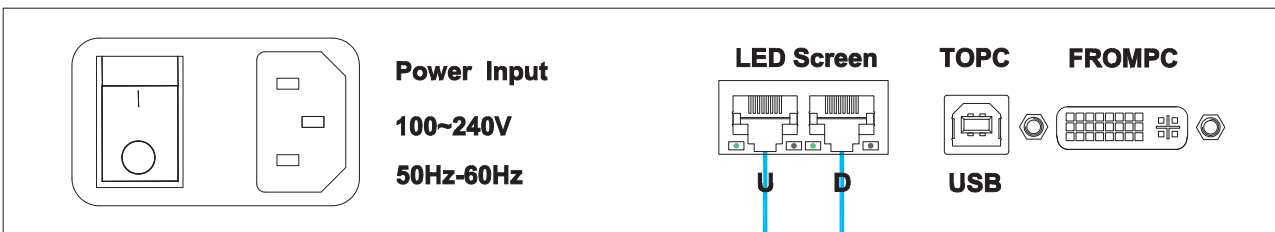
1. Indicator lamp
2. Up button
3. Down button
4. Switch
5. 100-240VAC input
6. RJ45 data out
7. USB port
8. DVI Input

Power Input 100~240V 50Hz-60Hz

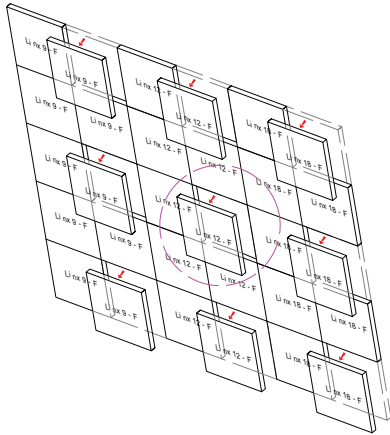LED Screen TOPC FROMPC
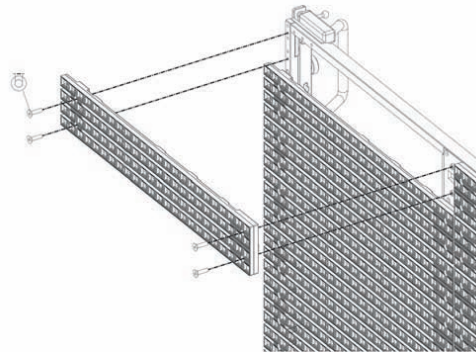
U D USB

512 512

1024×768

768

Software:

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

08 Service and Maintance:

Figure 1 : Maintenance on overall installation

Figure 2 : Replacement of LED strips

1. Loosen six buttons and replace the faulty pane.
2. Do repair for the faulty panel.

## Light status on the backside of MC-H Series

Power	Data	Color of Light	Factors
OK	Signal input from top to bottom	Green (2Hz/second)	Normal
OK	Signal input from bottom to top	Blue (2Hz/second)	Normal
OK	Error receiving card	Red (Always)	The receiving card doesn't work.
Above 36V or below 24V	OK	Red (2Hz/second)	The supply voltage is above 36V or below 24V.
OK	OK	Green (Always)	The temperature of panel exceeds 50℃.
OK	Wrong signal	Blue (Always)	1.The bad connection between the receiving cards. 2.The pins on the receiving card is curved or broken.
OK	No signal	Yellow (2Hz/second)	Disconnected the UTP cable between the receiving card and the panel.

Note: When the failure occurs,the color of indicator light will show the prority in the following order.
1. Error receiving card.
2. The power is above 36V or below 24V
3. Excessive panel temperature.
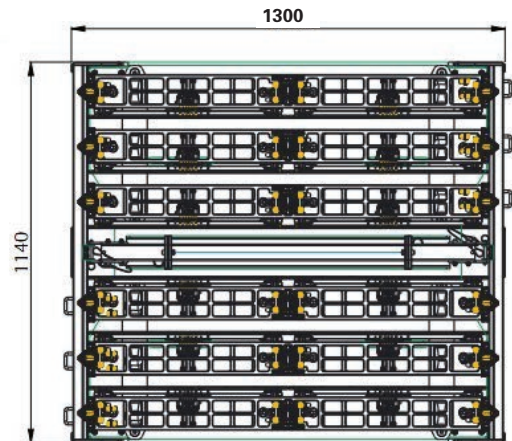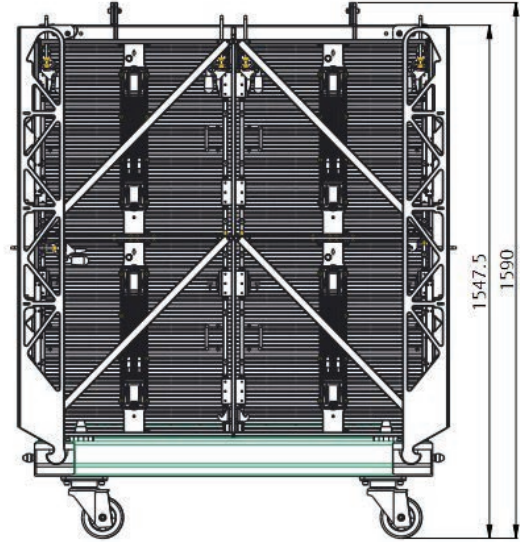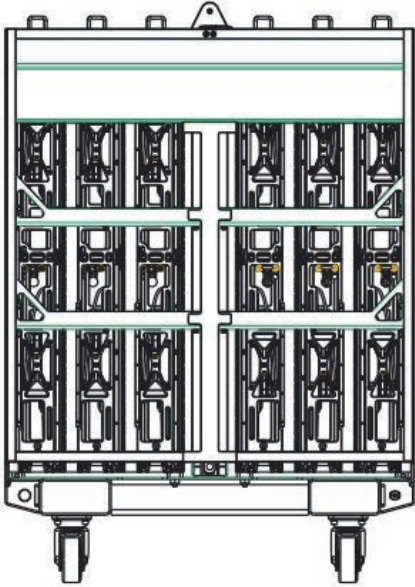4. Wrong signal.
5. No signal.

09 Package

12 pcs LED panels per flightcase
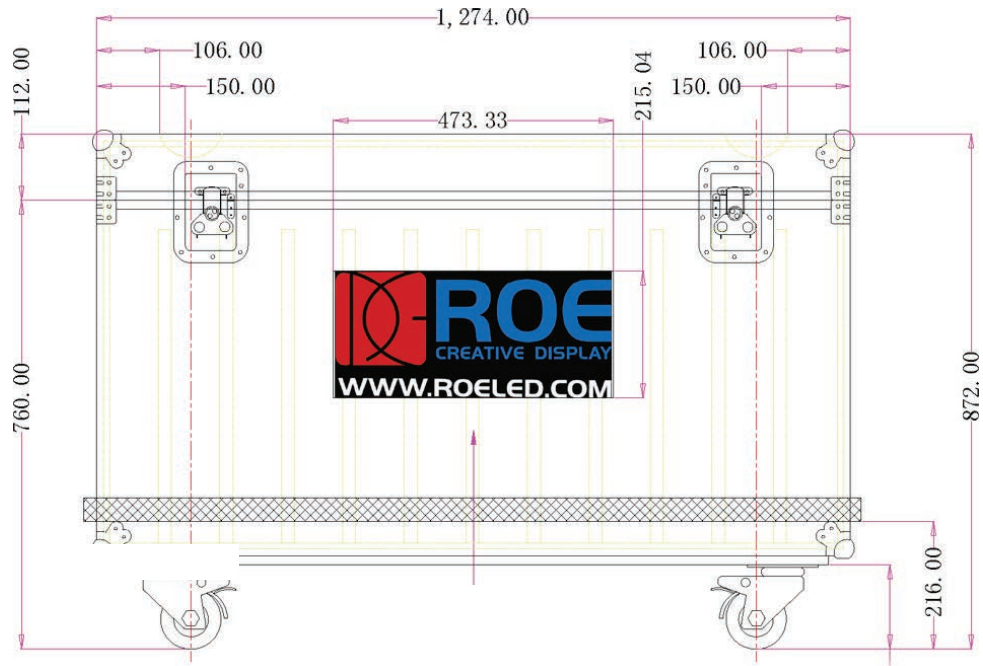
10 Tour Frame:

Frame dolly for 4*6 pcs LED panels

Note:
2*2 pcs LED panels as a column, fixed with framework on the backside.
One hanging bracket fixing one column panels can be easily carrying and quickly installation.

The end