

ego[®]
DISPLAY

EasyCOB

PRODUCT
MANUAL
COB LED Display



Chapter 2 Installation and Wiring

2.1 Out-of-Box Inspection

Check whether the packages are damaged. If the packages are intact, check the main components against the shipping list. If any inconsistency is found, contact us in time.

The main components include cabinets, signal cable, power cable, USB cable, DVI cable, and sending box. For details about the components, refer to the shipping list.

2.2 General Installation

Screen calibration is performed on the EasyCOB series product before shipment, and the product needs to be installed sequentially according to the cabinet number, as shown in Figure 2-1:

1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		D-1				D-2				D-3				D-4	
5	6	7	8	5	6	7	8	5	6	7	8	5	6	7	8
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		C-1				C-2				C-3				C-4	
5	6	7	8	5	6	7	8	5	6	7	8	5	6	7	8
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		B-1				B-2				B-3				B-4	
5	6	7	8	5	6	7	8	5	6	7	8	5	6	7	8
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		A-1				A-2				A-3				A-4	
5	6	7	8	5	6	7	8	5	6	7	8	5	6	7	8

Fig 2-1 Front View of the Display

2.2.1 Installation of Fixed LED Display-Front Installation

- 1) Check whether the bottom beam is level. Make sure that its levelness is within $\pm 1\text{mm}$.
(bottom beam is a must have)
- 2) Install the cabinets sequentially from bottom to top and from middle to both sides. In addition, in front of the screen, fix the front connecting plates and cabinets with installation screws to the square tubes.
- 3) Keep proper joints and flatness between the cabinets during cabinet installation.
- 4) After the installation of the cabinet is completed, connect the power cable and the signal cable between the cabinets.
- 5) Install the module on the corresponding cabinets. During the module installation keep flatness among the modules during modules installation.
- 6) The installation of the screen is completed.

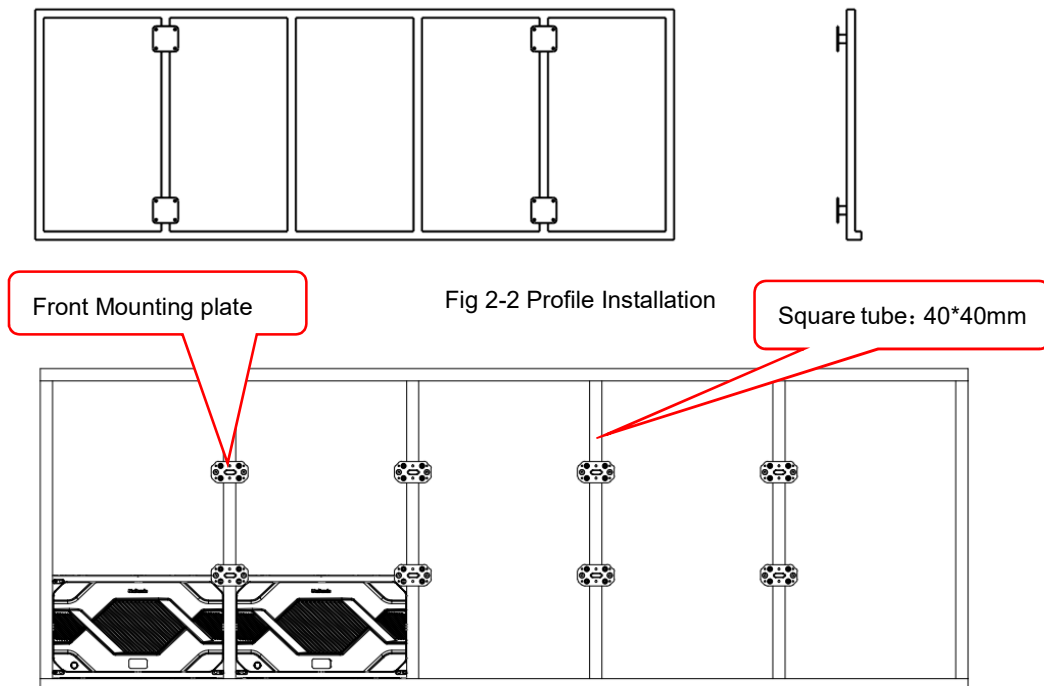


Fig 2-3 Cabinet Fixing

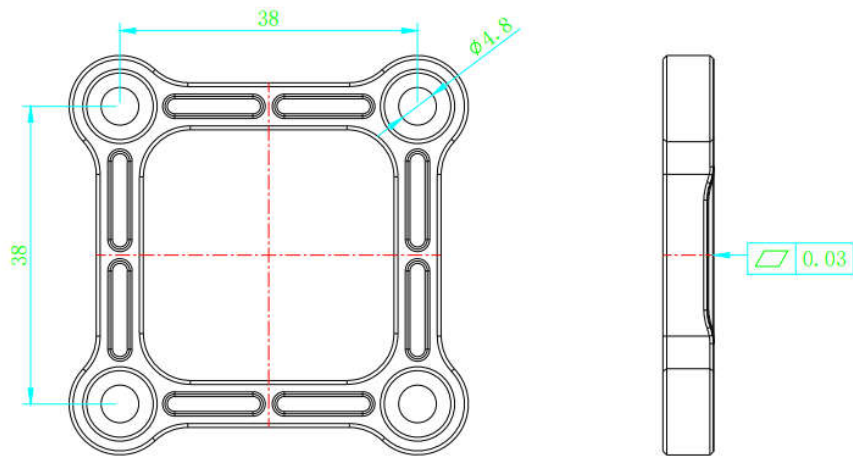


Fig 2-4 Mounting plate for front maintenance

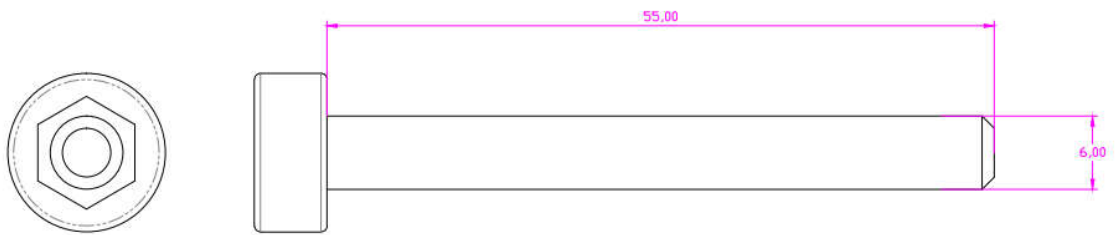


Fig 2-5 Front Installation M6X55 socket head cap bolt (front)

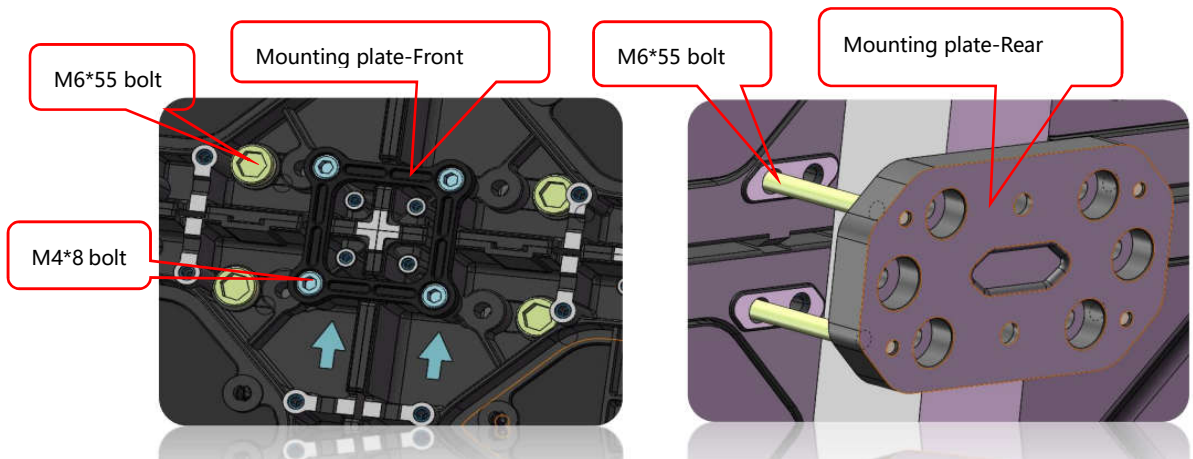


Fig 2-6 M8×65 socket

head cap bolt (front)

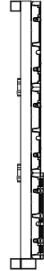
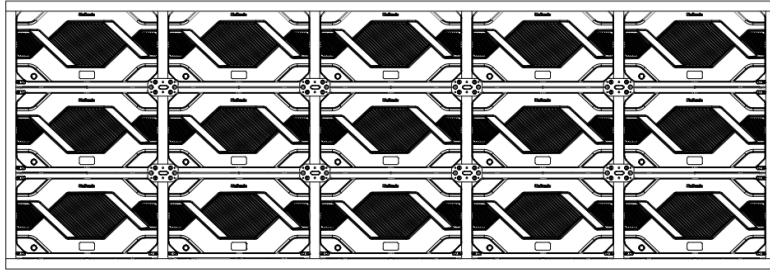


Fig 2-7 Back view of front maintenance Installation Details

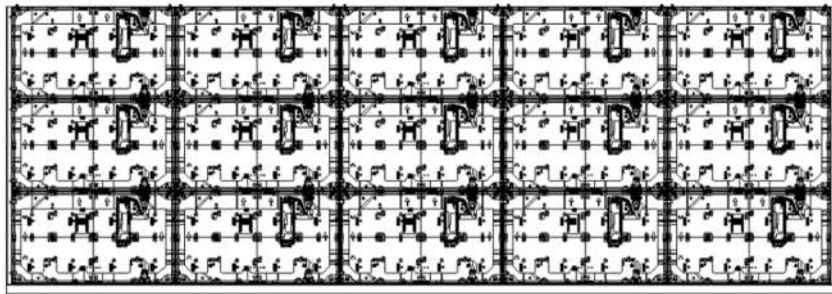


Fig 2-8 Front View of Cabinet Installation

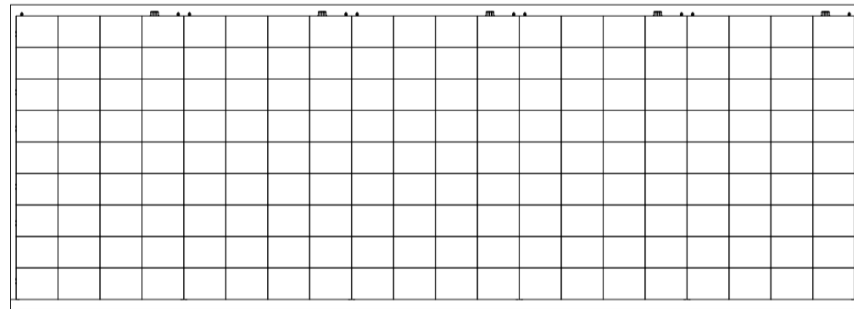


Fig 2-9 Front View of the Display

2.2.2 Concave Installation

- 1) Make sure that the bottom beam is horizontal, and the levelness value is within $\pm 1\text{mm}$;
- 2) Assemble the screen by building the cabinets from the bottom to the top and from the middle to both sides successively. Fix the curving connection plate (Fig 2-12) to the cabinet with M6*16 hexagon bolt (Fig 2-11), see below Fig 10 showing concave curving between cabinet.
- 3) Fixing the curving connection plate and cabinet to the square tube with M6*55 hexagon bolts (Fig 2-13).
- 4) After the first row of cabinets are installed, start to set up the second row of cabinets, and finally fix the vertical cabinets with M6*16 hexagon bolt (Fig 2-11).
- 5) During the whole time of installing cabinets for the screen, always pay attention to the gap and flatness between cabinets.

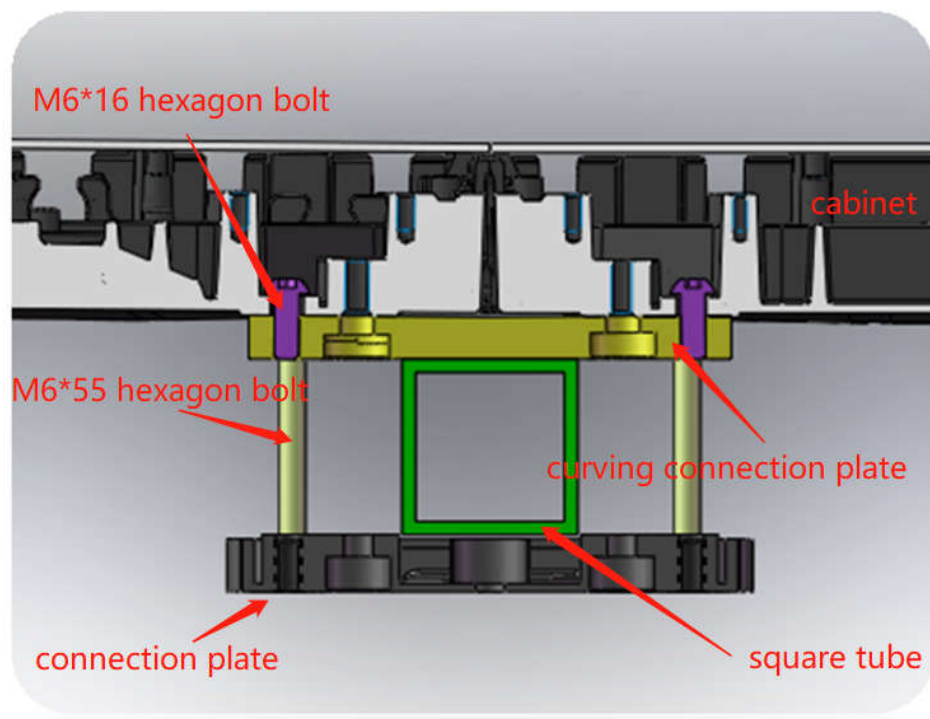


Fig 2-10 concave curving between cabinet



Fig 2-11 M6*16 hexagon bolt

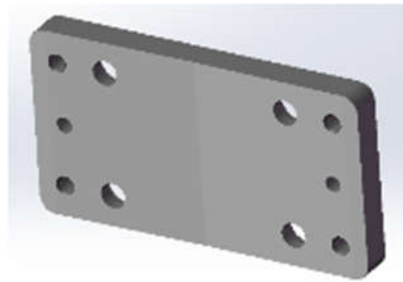


Fig 2-12 curving connection plate



Fig 2-13 M6*55 hexagon bolts

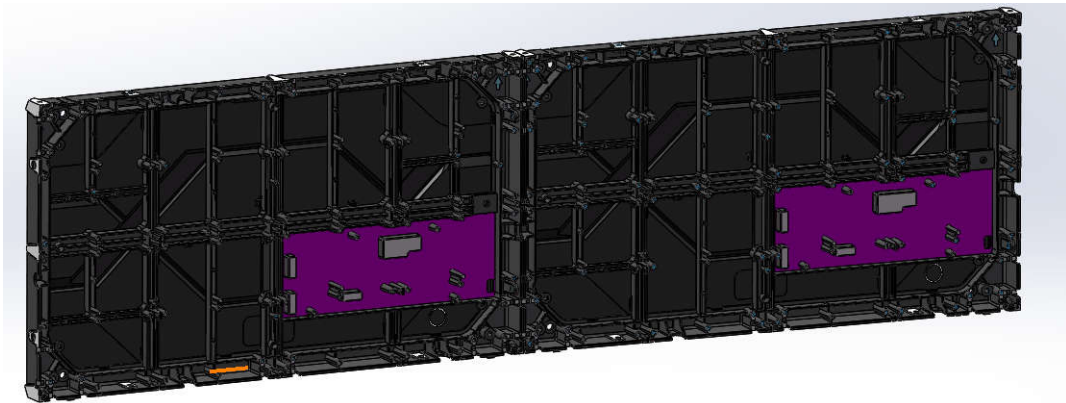


Fig 2-14 Splicing of left and right cabinets completed

2.3 Module Flatness Adjustment

2.3.1 Module Flatness Adjustment

When there is a deviation in flatness between adjacent modules, use the adjustment tool to adjust the magnet on the cabinet. For the module at the low end, adjust the adjustable magnet forward until the module is flush with the adjacent module. (one module has 9 adjustable magnets)

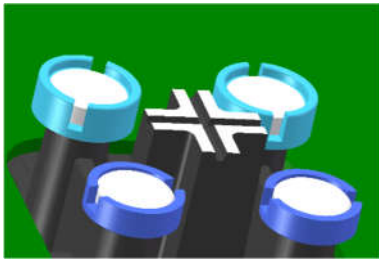
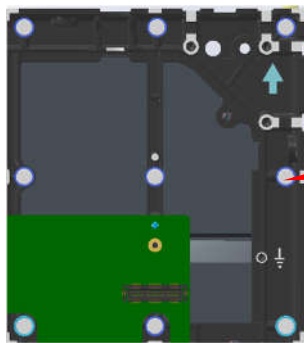


Fig 2-15 Adjustable magnet

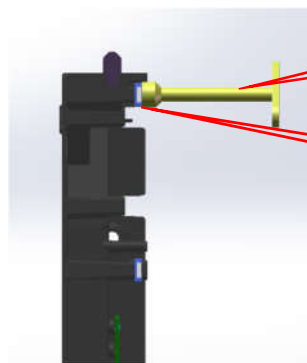


Fig 2-16 Adjusting tool



Adjustable magnet (9 for one module)

Fig 2-17 Schematic diagram of adjustable magnet



Adjusting tool

Adjustable magnet

Fig 2-18 Schematic diagram of module flatness adjustment

2.4 Wiring for LED Display

2.4.1 Common Cables



Signal cables
between cabinets



USB cable

DVI cable



1-for-N power cable
between cabinets

First signal cables



First Power cable



HDMI cable

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2.4.2 Signal Cable Connection

Signal cables shall be connected based on the wiring diagram of the delivered products for the project.

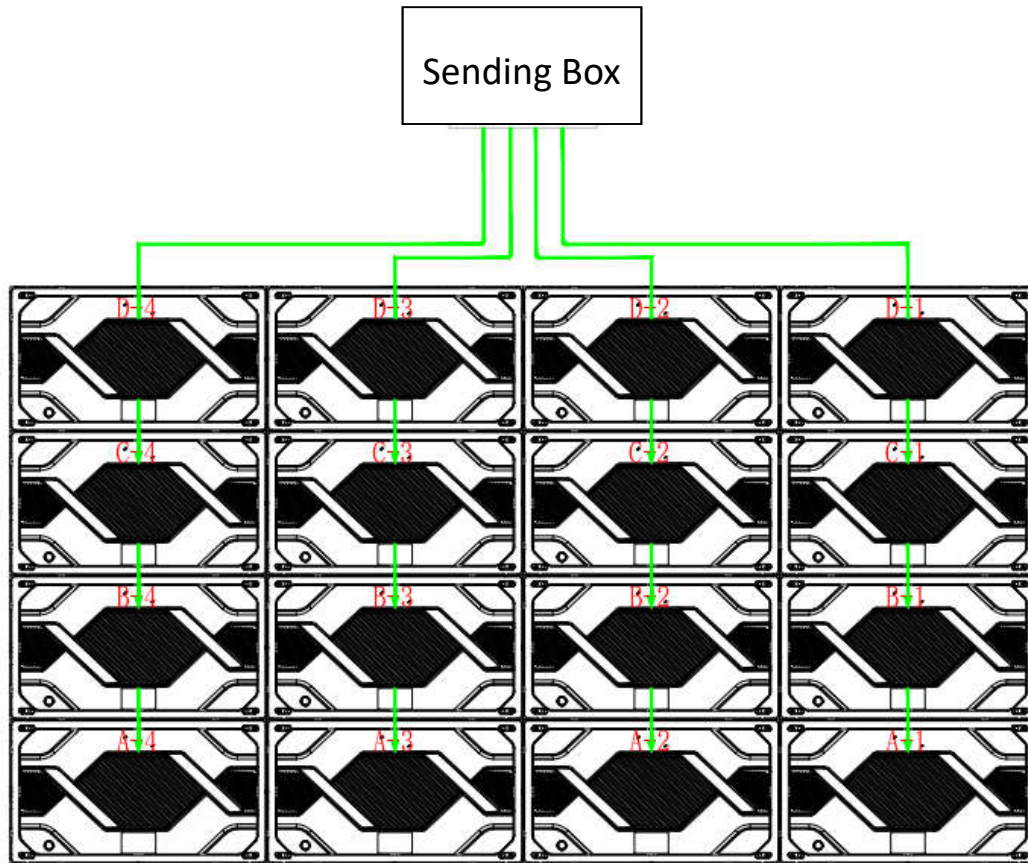


Fig 2-19 Signal Cable Connection Diagram

2.4.3 Power Cable Connection

Power cables shall be connected based on the wiring diagram of the delivered products for the project.

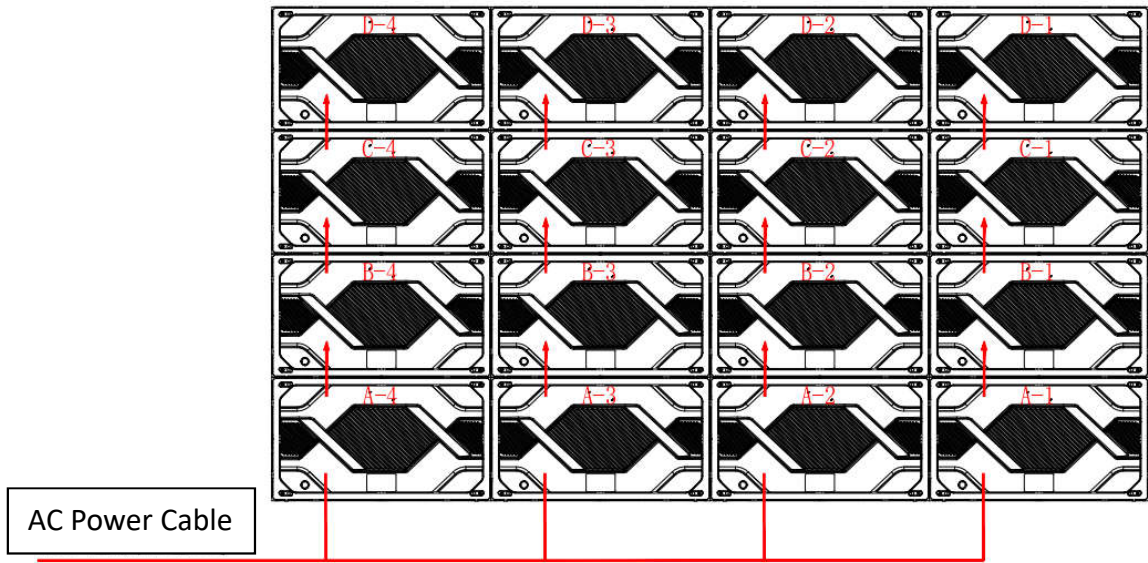


Fig 2-20 Power Cable Connection Diagram

2.4.4 Smart Control Distribution Box

The Smart Control Distribution Box can be used for distributing electric power to the LED display, and has the function for real-time monitoring of the temperature, humidity, smoke, and mains voltage of the external environment. The control software has the scheduled start/stop function, allowing you to set any time for the LED display to be remotely started or stopped.

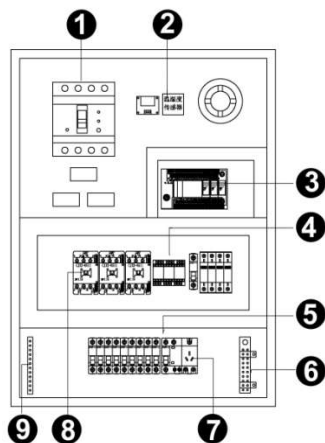


Fig 2-21 Internal Structure of Distribution Box

SN	Component	Remark (s)
1	Main switch	MCCB
2	Temperature sensor	Used for temperature detection
3	PLC	Used for smart control
4	Relays	Used to control the ON/OFF of the AC contactor
5	Circuit breaker	MCB, Connect to display live wire
6	Neutral wire socket	Connect neutral wire
7	Power Port	/
8	AC Contactor	Used to control the ON/OFF of the current
9	Earth wire socket	Connect earth wire