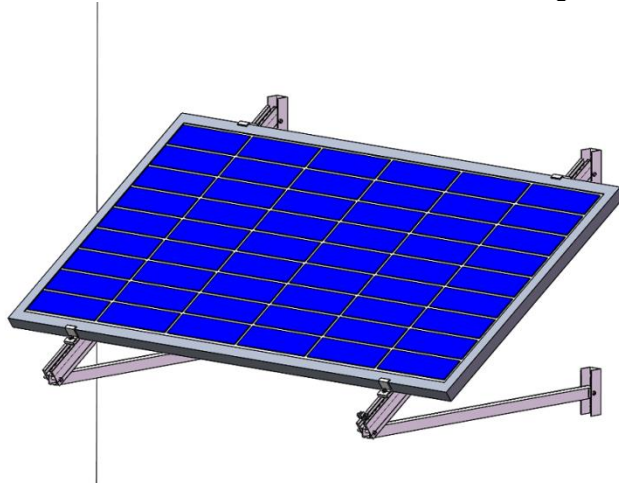




# INSTALLATION INSTRUCTION





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## I. Safety Precautions

Thanks for using Antai solar carpark mounting structure, please check the manual carefully before installation and maintenance.

- General notice
- Installation should be proceeded by professional workers, who will follow the installation manual.
- Please follow the local building standards and environmental protection regulations.
  - Please follow the labor safety regulations.
  - Please wear the safety gears. (especially helmet, boot, glove)
- Please make sure at least 2 installation workers on site in case of emergency.
  - Please bring at least 1 set installation manual to the site.

- When installing at height, please set up scaffolds to eliminate the risk of falling before proceeding. Please also use the gloves and safety belts.
- Do not modify Antai's products without permission to prevent accidents and malfunctions.
- Please pay attention to the sharp points of aluminum structures and be careful not to be injured.
- Please tighten all required bolts and screws.
- The wire might be damaged when it touches the profile section during electrical wiring work.
- Please do not use the broken, faulty or deformed products in case of danger.

### Requirements

- Please use Antai designated mounting accessories for installation, and do not modify Antai's products in any cases.
- Please do not make strong impact on the profile, while aluminum profile is easy to be deformed and scratched.
- Please note this manual is only for the mounting structures.

## II. Product Introduction

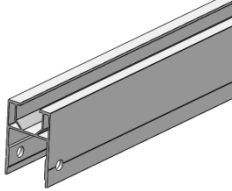
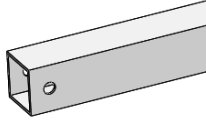
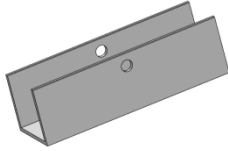
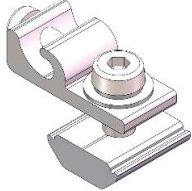
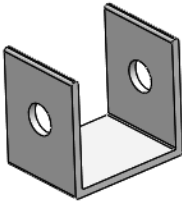
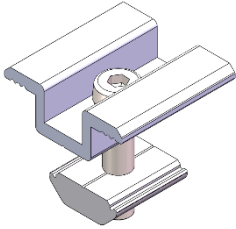
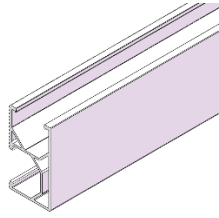
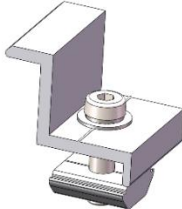
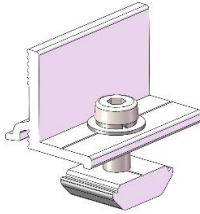
Antai wall mounting system is a photovoltaic mounting system for wall application, with lightweight profile design and solid triangular structure, it can be widely used on different types of walls. The whole system has a solid and simple structure, which saves the user's installation time and cost, and is an efficient solution for wall projects.

Please read the entire manual carefully before installation!

## III. Installation Tools & Equipment

			
8mm Inner Hexagon Spanner	Electric Drill	Measure tape	Marker
			
Torque Spanner	String	Adjustable spanner	Box spanner (M8)

## IV. Components

Mian Products			
			
Beam	Pole	Bottom Beam	Grounding Lug
			
Bottom Beam Connector	Mid Clamp	Rail 1 (Internal Lock Connection)	End Clamp
			
Rail Clamp			

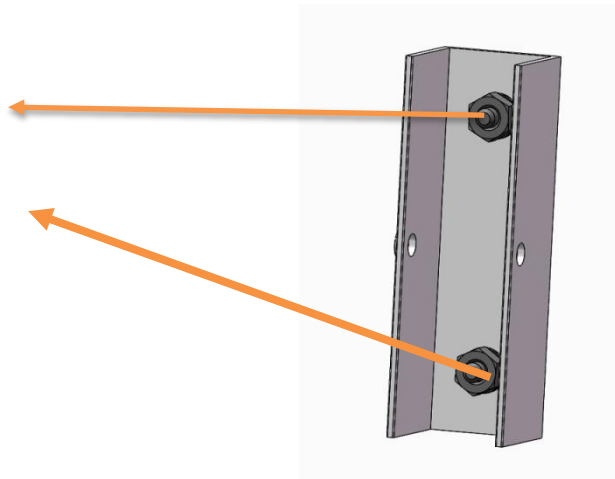
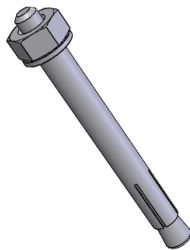
## V. Installation Instruction

### 5.1 Installation of triangle structure

#### 5.1.1 Installation of base

According to the drawings to determine the location of the base.  
Align a line to ensure that the bases are placed out of the same line.  
Fix the base on the marked place with expansion bolts.

Installation of the base follows:

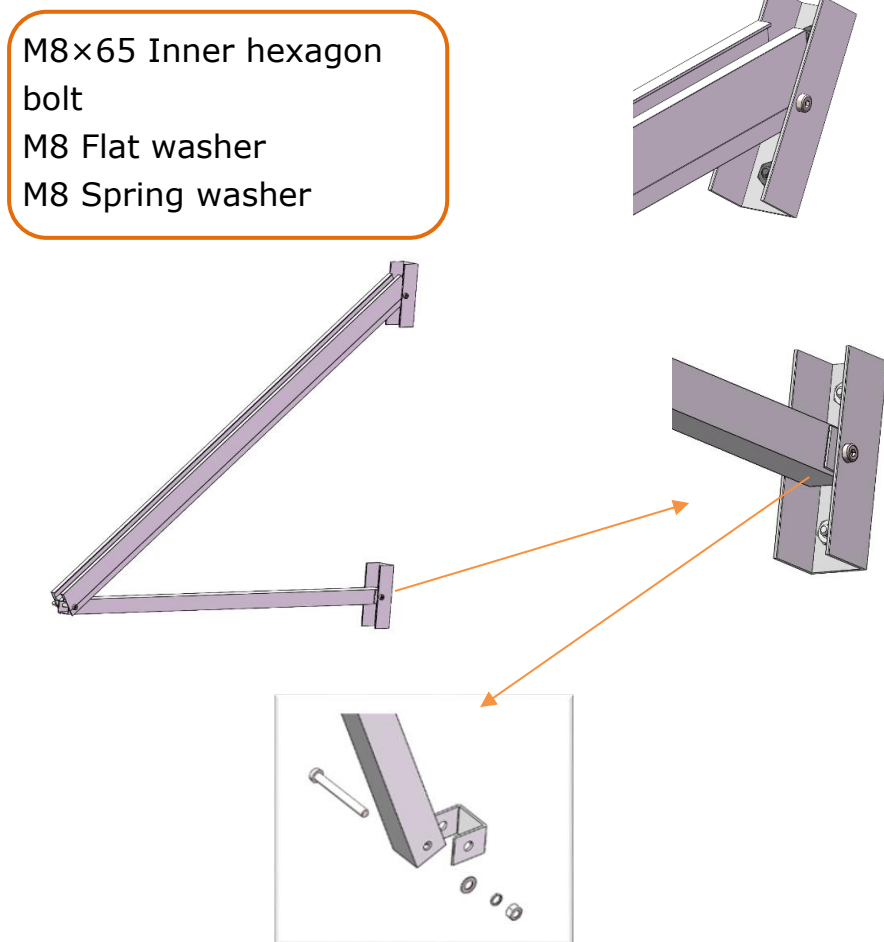


### 5.1.2 Installation of the triangle bracket

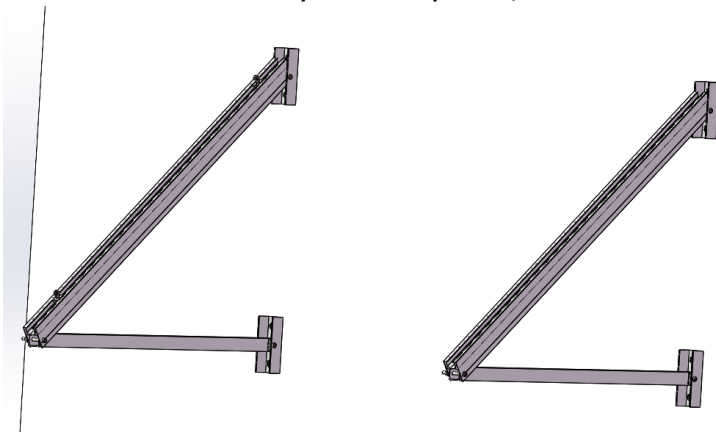
Pick out the corresponding beams, bottom beams and poles.

Pre-install them at the pre-cut hole position with bolts. After the final measurement and adjustment of the angle, fasten the bolts.

Installation is shown below:



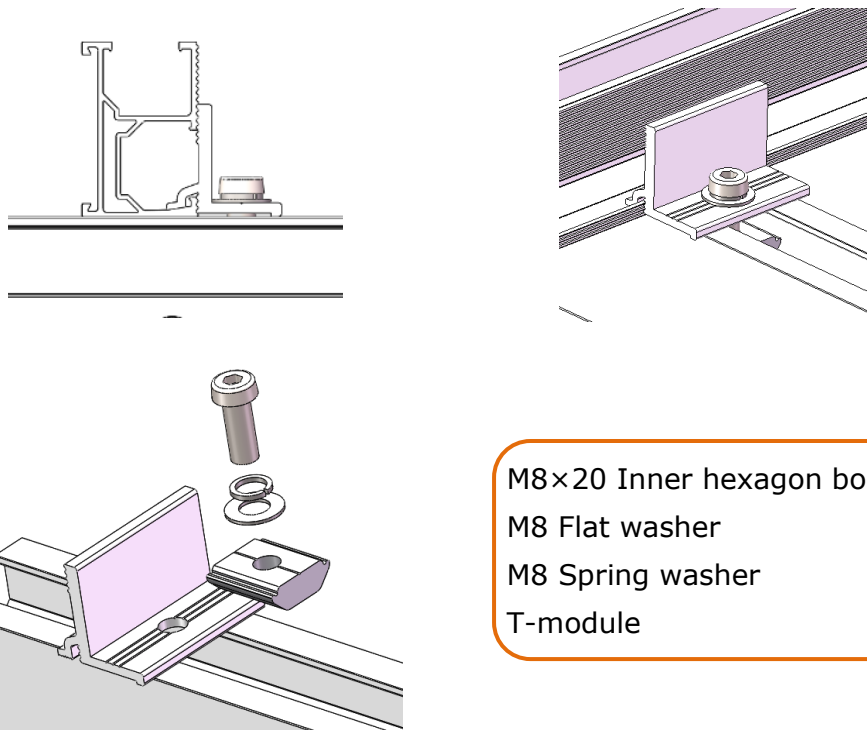
5.1.3 Pre-assembly is complete, as shown below:



## 5.2 Installation of rails (If the panel is placed horizontally, no rails are needed and this step can be skipped)

Fix the rail clamp to the beam first, then place the rail to the beam, adjust the position of the rail, and lock it with the bolt.

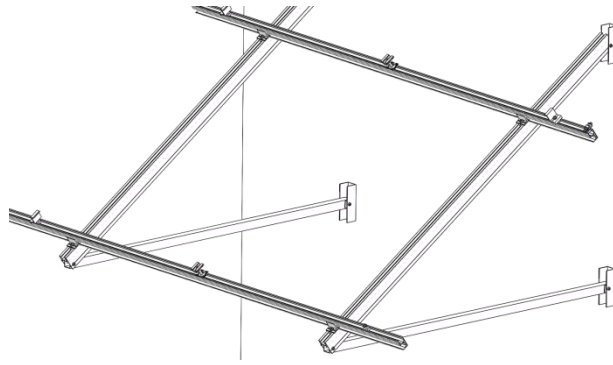
5.2.1 Place the rail on the beam, slide the rail clamp into the rail groove, and tighten the bolt. The length of the rail is selected according to the corresponding drawings.



Fixation of the rail clamp

5.2.2 The installation is completed as shown below.



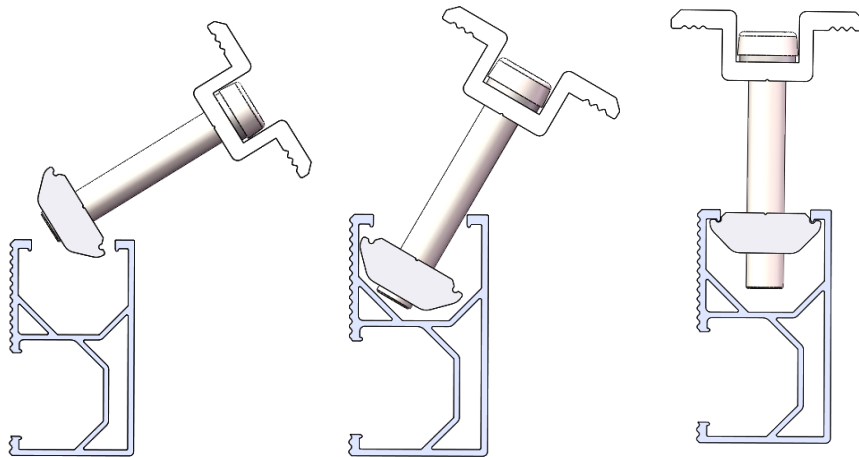


### 5.3 Installation of panels

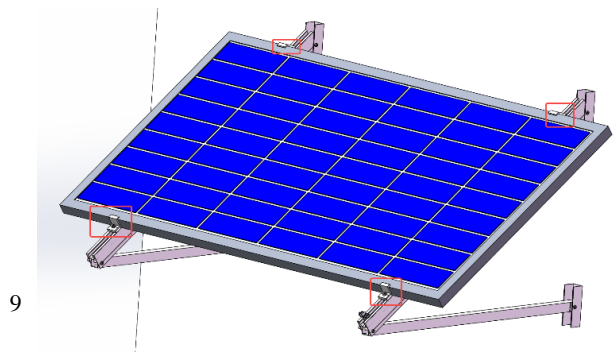
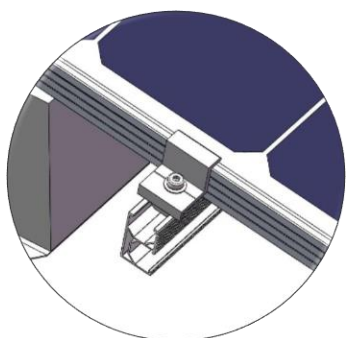
According to the installation drawing, place the panel on the rail and fix with end clamp and mid clamp.

The installation of T-module is shown below.

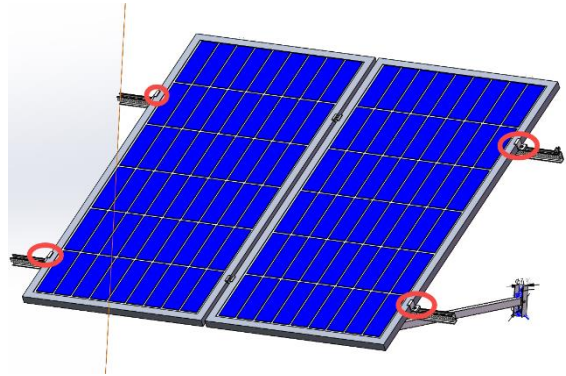
First pre-install the T-module on the corresponding bolt, tilt the T-module to the side at a certain angle, so that the T-module is completely into the rail groove, and then rotate to hold it in place, and then fix it.



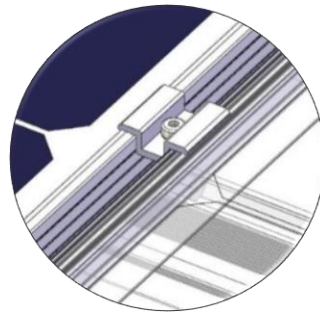
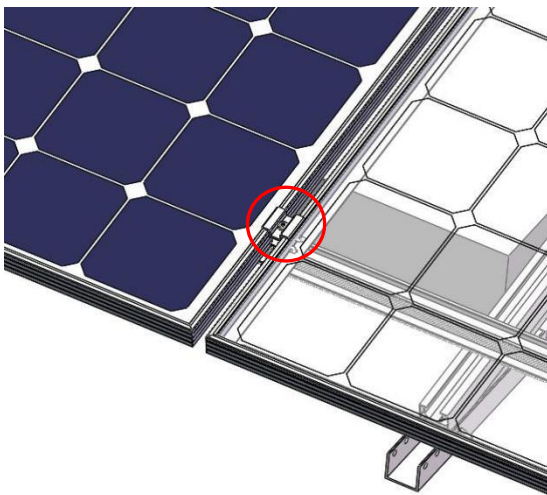
5.3.1 Place the panel on the rail and adjust the placement according to the drawing. After the adjustment, place the end clamp into the rail groove and tighten the bolt to fix it.



M8×30 Inner hexagon bolt  
M8 Flat washer  
M8 Spring washer  
T-module

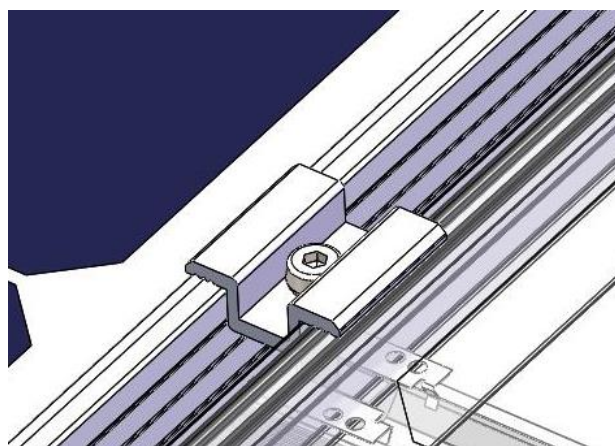


5.3.2 After fix the end clamp of the first panel, place the second panel on the rail, adjust the position, use the mid clamp to fix it with the first panel, and tighten the bolt.

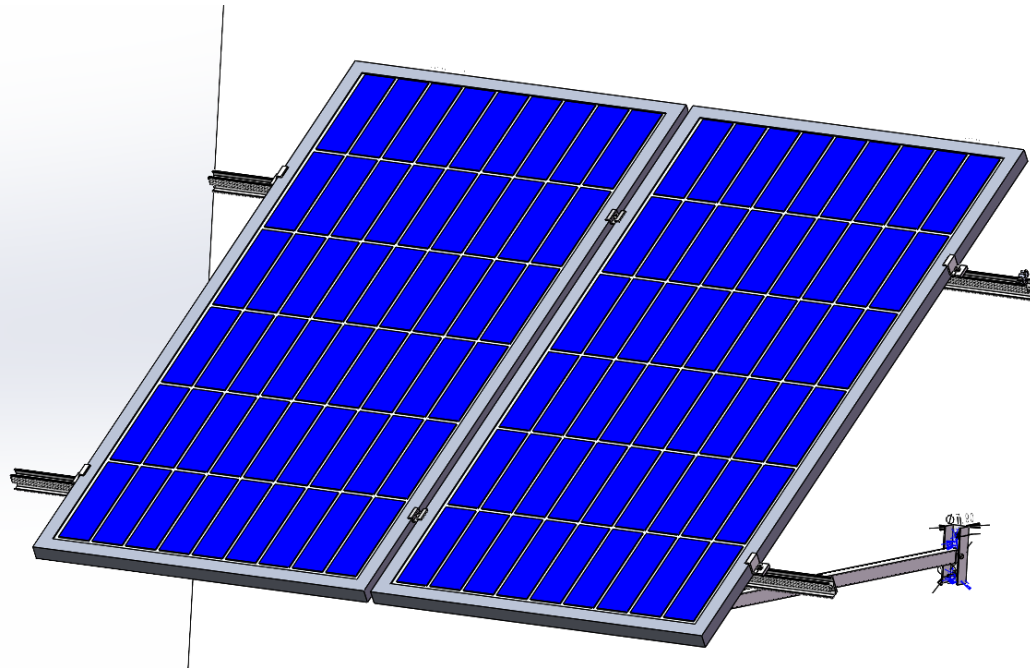


M8 Inner hexagon bolt  
M8 Spring washer  
T-module

5.3.3 If there is a earthing clip, then while installing the mid clamp, place the earthing clip between the panel and rail, and adjust the position to ensure that the left and right sides of the panel frame have pressed the spikes on the earthing clip. Then press the mid clamp, and tighten it with the bolt.

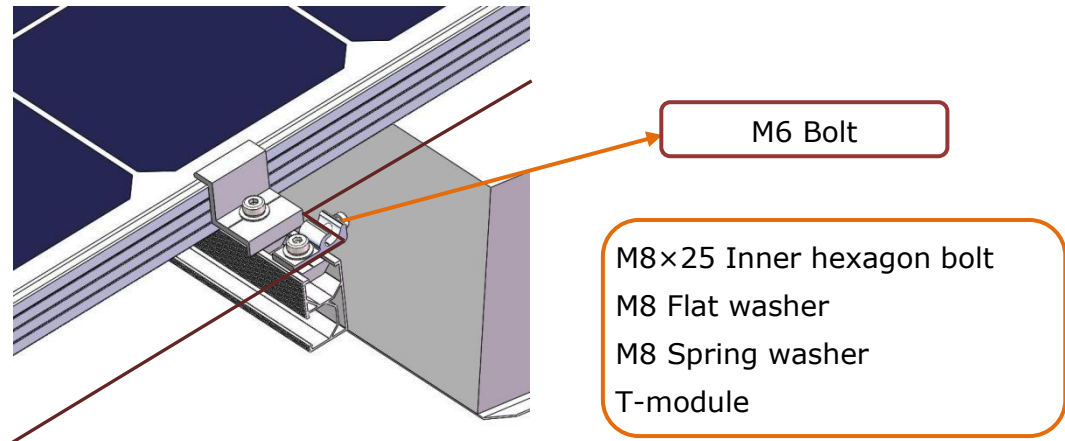


5.3.4 In this manner, install the remaining panels to the last one. Fix the end of the last panel with end clamp and tighten the bolts.

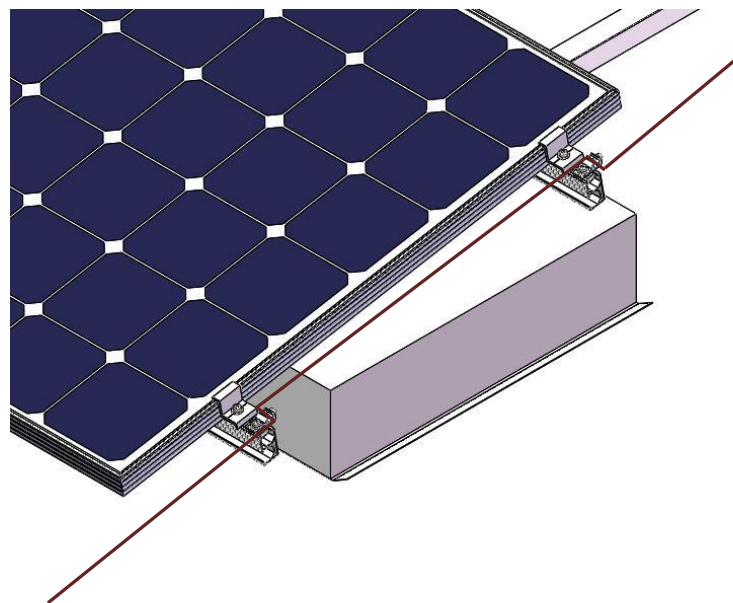


## 5.4 Installation of the grounding lug (Skip this step if no need)

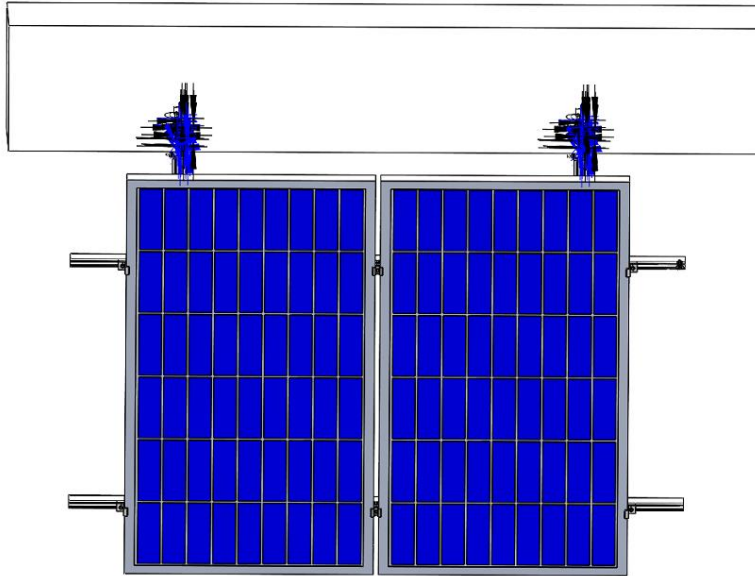
5.4.1 Set the grounding lug on the rail edge as shown and tighten the bolt.



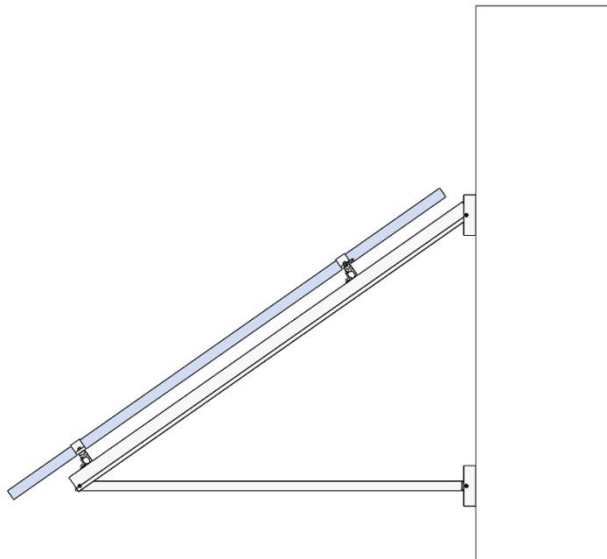
5.4.2 Connect each grounding lug at the edge of the row with a copper wire, fix the copper wire with M6 bolts, and ground the copper wire end.



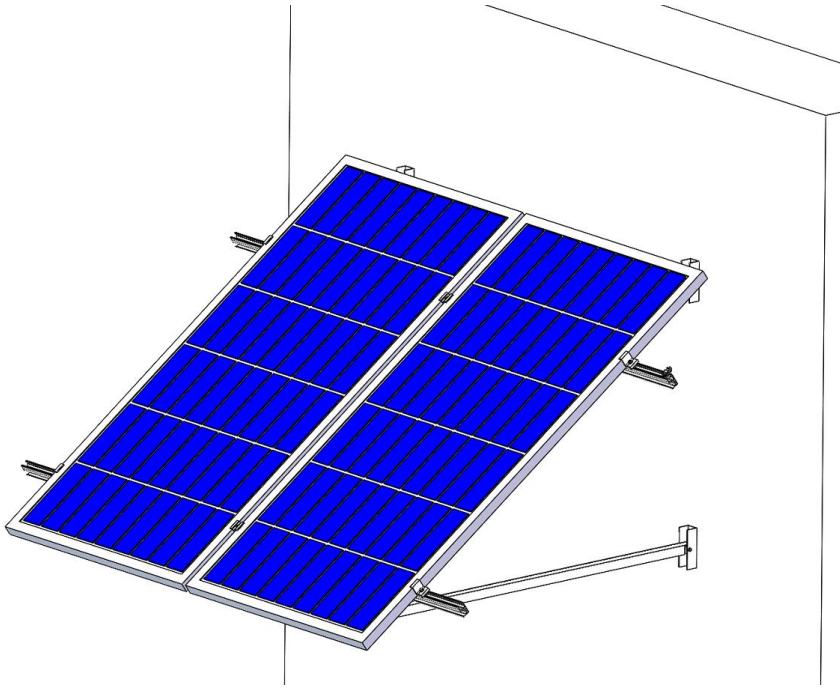
## 5.5 Finished Installation



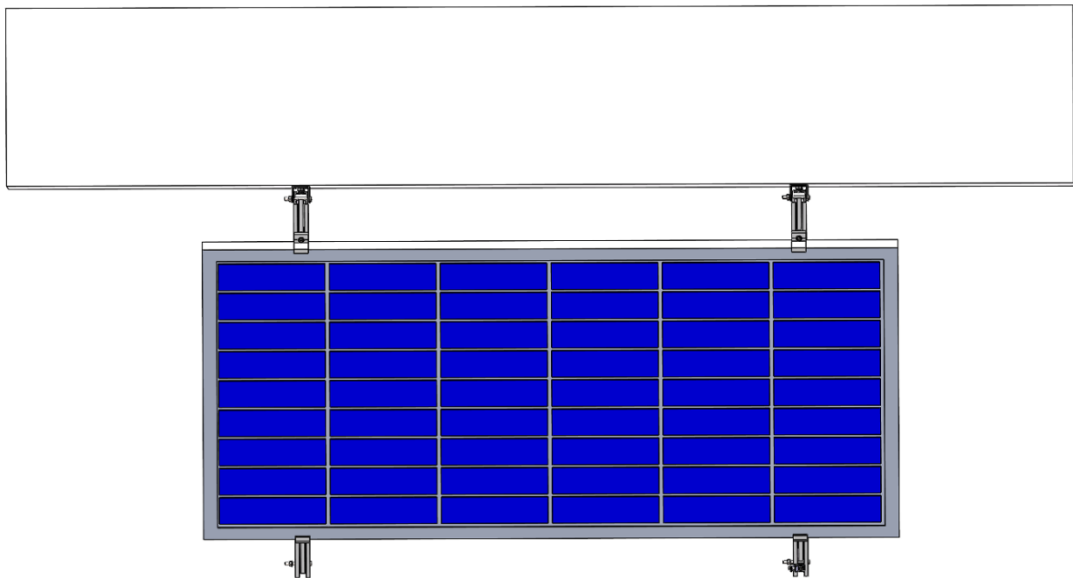
Top View (Vertical)



Side View (Vertical)

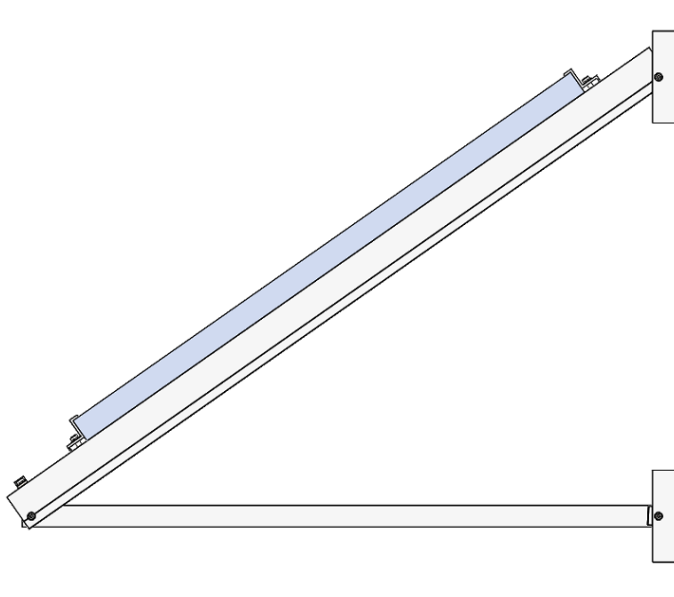


Axonometric Drawing (Vertical)

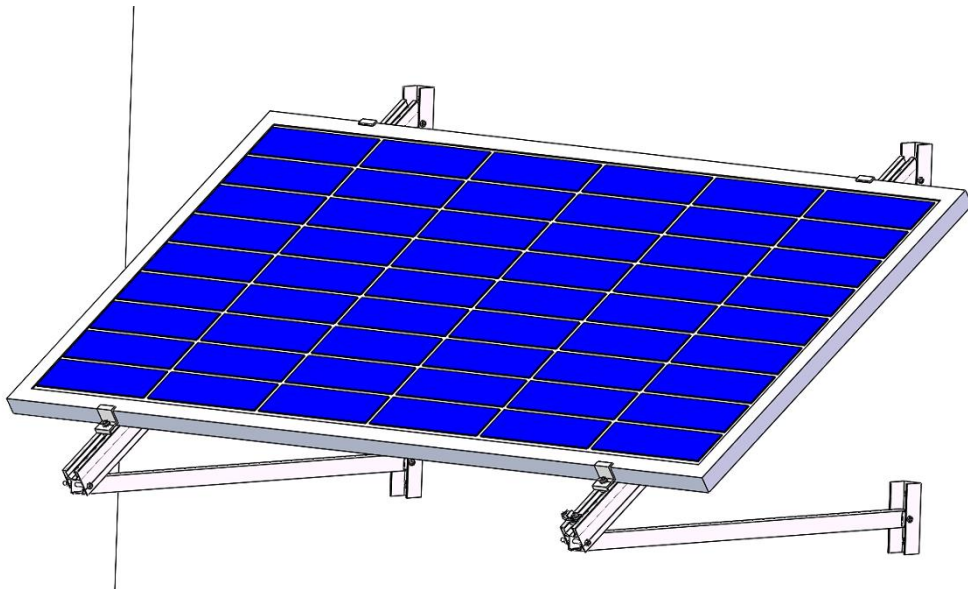


Top View (Horizontal)





Side View (Horizontal)



Axonometric Drawing (Horizontal)



## **VI. Notice**

### **6.1. Size attention for engineering installation**

All the dimensions involved in engineering installation should be in line with the construction drawing. The installation instructions shall be only used for explaining the products installation method.

### **6.2. Attention for stainless steel fasteners installation**

Because of the good ductility for stainless steel, the fasteners have big difference with carbon steel one in nature. If use in improper way, it will result in bolt and nut being "locked" which commonly known as "seizure". Prevention of lock basically has the following the basic prevention ways from locked.

#### 6.2.1. Reducing the friction coefficient:

- (1) Ensure that the screw thread surface is clean (no contrast, clutter);
- (2) Recommend that installation surface use water wax or add lubricant on surface during installation. (Such as butter, 40 # engine oil);

#### 6.2.2. The correct method of operation:

- (1) Must be perpendicular to the axis of the screw thread when screwing, can never be tilt.
- (2) In the process of tightening, the strength need to be balanced, tightening torque shall not exceed the prescribed safety torque value;
- (3) Choose torque wrench or socket wrench as far as possible, avoid using adjustable wrench or electric wrench.
- (4) Do not use it when the temperature is high; do not use it with high speed spin; avoid to be locked by rapid rise of temperature. (Such as electric wrench, etc.



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