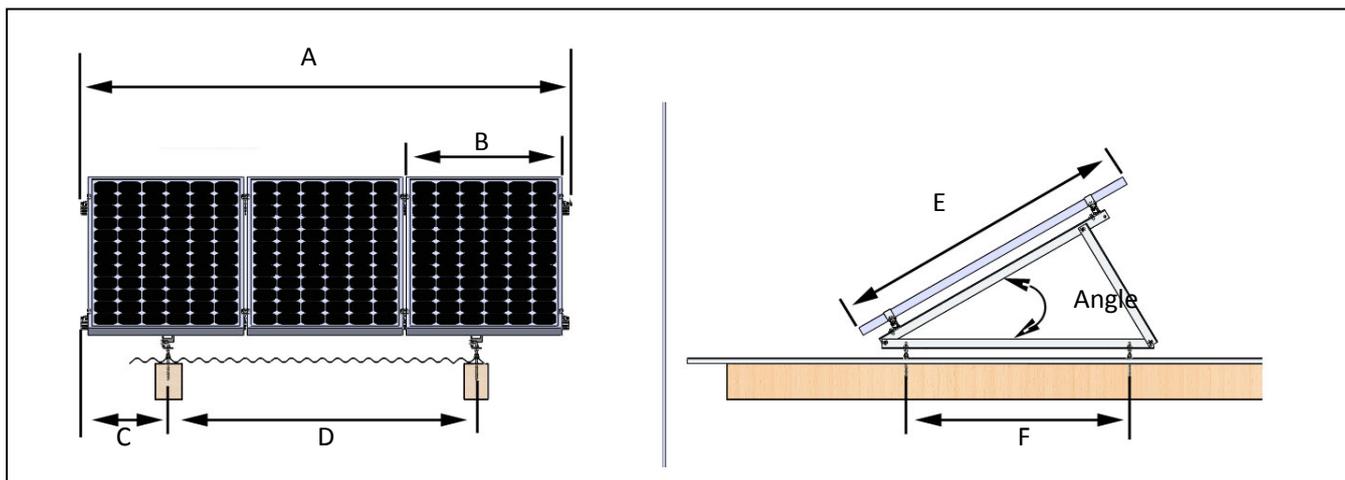


**[5.4.] Installing tilt roof mounting system(fixed)**

**Step 1: Designing the module field**

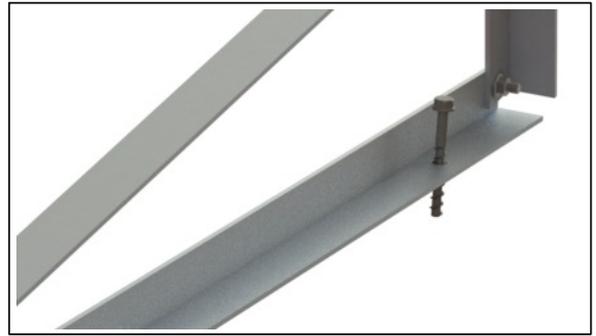
According to the specification of modules, calculate the length of rails, distance and span between two triangle brackets. Details and drawings is as below:



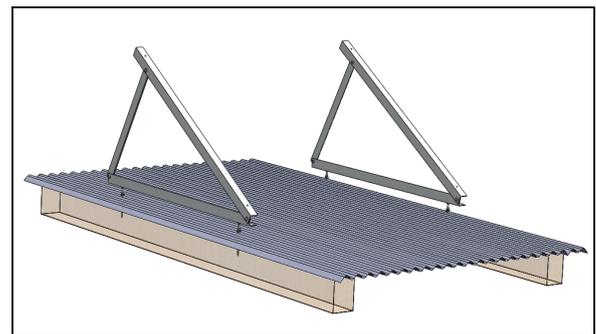
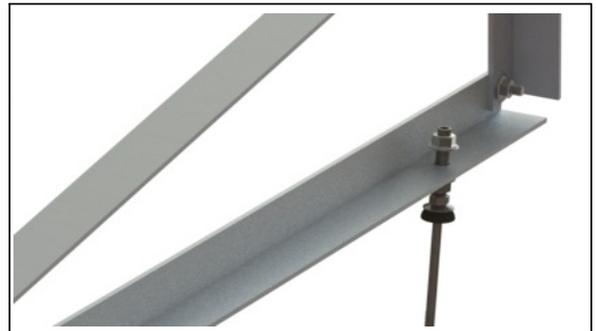
A	Rail Length= (Module width B +18)*Module Qty + 32 mm
B	Module Width
C	Cantilever Length <= Span D / 2
D	Triangle Bracket Span
E	Module Length
F	Foundation Bolts Spacing, Please look the 2. 6 to plan

**Step 2. Installing the triangle bracket**

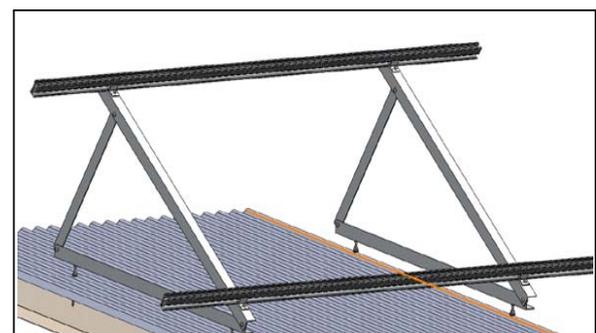
Fix the tri-bracket to the rafter using 2 pcs 6.3\*80mm tapping screws.



Fix the tri-bracket to the rafter using 2 pcs hanger bolt.

**Step 3. Installing the Rail**

Connect the rail to L connector of the tri-bracket by inserting the T-clip into the rail channel (**recommended torque is 15-20Nm**).

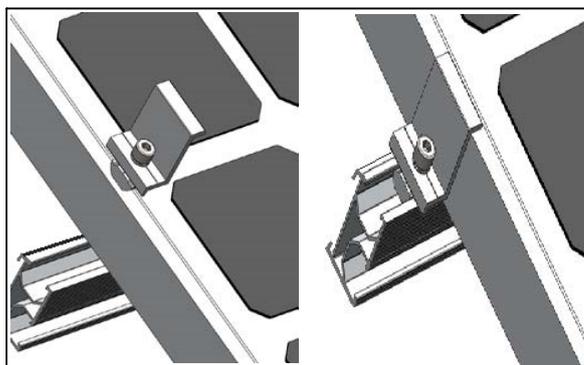


Installation of the splice to connect multiple rails together. Slide the splices on the rear side of the pre-assembled rails halfway to the side. Fasten the first M8 bolt firmly using the Allen key. Now slide the next rail segment into the splice. Tighten the second M8 bolt. The connection is finished.



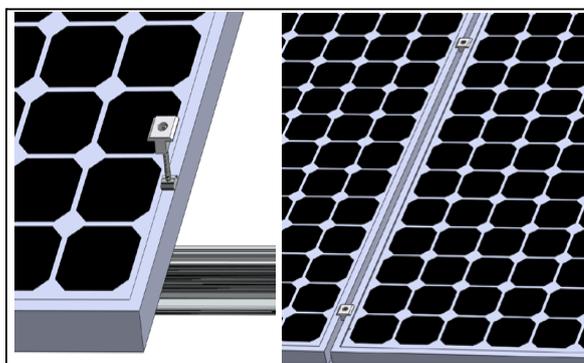
#### Step 4. Installing the End Clamp

Insert T-clip of the end clamp into the rail channel. Using a 6 mm hex driver/Allen key, secure the first solar panel to the railing starting as close to the end of the row as possible. A minimum of 50 mm between the end of the rail and edge of the first solar panel is required (**recommended torque is 15-20Nm**).



#### Step 5. Installing the Mid Clamp

Insert the T-clip of the mid clamp into the rail channel and position the clamp against the first panel frame. Hand-tighten the screw 2-3 turns to loosely hold the clamp in position. Ensure the EarthLock washer is placed between the Fastensol rail and the frame of the panel (**pls refer to the chapter [5.6.] if you have any questions about the grounding installation**).



#### Step 6. Finish installing all the panels

Repeat doing last step till finish installing all the panels. Check the whole system and re-fix all outer screws after finish installing the panels.

