

# PV-ezRack®

By Clenergy 

## Elevate Series – SolarBalcony

Solar PV Mounting frame for high-rise installations



Want to grow energy on your Balcony?

# Introduction

## 1. Introduction

PV-ezRack® SolarBalcony has been developed for PV installation on balcony of building. With large adjustment and highly pre-assembled solution, the structure can cover all common size balcony and install in a very short time.

Please review this manual thoroughly before installing PV-ezRack® SolarBalcony. This manual provides:

- 1) Supporting documentation for PV-ezRack® SolarBalcony;
- 2) Installation instructions.

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The PV-ezRack® SolarBalcony parts, when installed in accordance with this guide, will be structurally sound and will meet the KBC2016 standard. During installation, and especially when working on the roof, please comply with the appropriate Occupational Health and Safety regulations. Please also pay attention to any other relevant State or Federal regulations. Please check that you are using the latest version of the Installation Manual, which you can do by contacting Clenergy via [www.clenergy.com](http://www.clenergy.com) or contacting your local distributor.

### The installer is solely responsible for:

- Complying with all applicable local or national building codes, including any updates that may supersede this manual;
- Ensuring that PV-ezRack and other products are appropriate for the particular installation and the installation environment;
- Using only PV-ezRack parts and installer supplied parts as specified by PV-ezRack project plan (substitution of parts may void the warranty and invalidate the letter of certification);
- During installation, ensure that the self-tapping screws and metal screw have sufficient strength and shear force;
- Keep the roof waterproof system intact;
- Recycling: Recycle according to the local relative statute;
- Removal: Reverse installation process;
- Ensuring that there are no less than two professionals working on panel installation;
- Ensuring the installation of related electrical equipment is performed by licenced electricians.

### Disclaimer

Once the unit is installed, the PV-ezRack® SolarBalcony system can only be modified, repaired or serviced by a certified solar installer.

As the homeowner, you understand that you may lose your warranty on the Clenergy PV-ezRack® SolarBalcony system if anyone modifies, repairs or services the unit without authorization of the original installer or an equivalent certified solar installer.

# Tools & Components

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## 2. Tools & Components

### 2.1 Installation Tools



Allen Key 6mm  
(M8 Hexagon  
Socket Screw)



Torque Wrench  
(M6/M8)



Spanner

### 2.2 Components



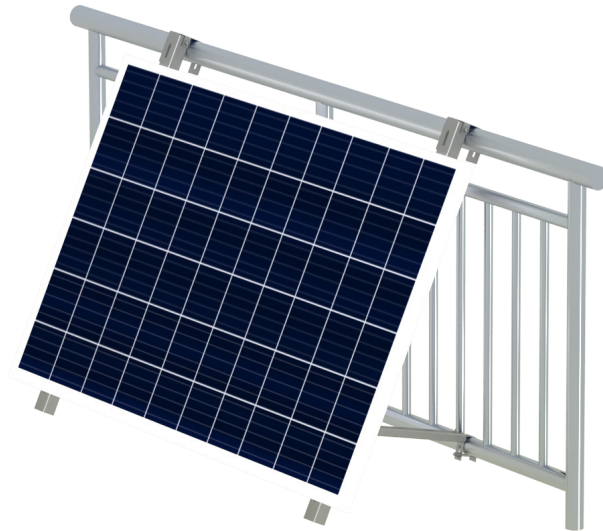
SolarBalcony

# System Overview

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## 3. System Overview

### 3.1 Overview of SolarBalcony



### 3.2 Precautions during Stainless Steel Fastener Installation

Improper operation may lead to deadlock of Nuts and Bolts. The steps below should be applied to stainless steel nut and bolt assembly to reduce this risk.

#### 4.2.1 General installation instructions:

- (1) Apply force to fasteners in the direction of thread
- (2) Apply force uniformly, to maintain the required torque
- (3) Professional tools and tool belts are recommended
- (4) In some cases, fasteners could be seized over time. As an option, if want to avoid galling or seizing of thread, apply lubricant (grease or 40# engine oil) to fasteners prior to tightening.

#### 4.2.2 Safe Torques

Please refer to safe torques defined in this guide as shown below. If power tools are required, Clenergy recommends the use of low speed only. High speed and impact drivers increase the risk of bolt galling (deadlock). If deadlock occurs and you need to cut fasteners, please make sure that there is no load on the fastener before you cut it. Avoid damaging the anodized or galvanized surfaces.

Recommended torque for M8\*L bolts of SolarBalcony system is 18~20 N·m

Recommended torque for M6\*L bolts of SolarBalcony system is 8~10 N·m



# Installation Instruction

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## 4. Installation Instruction

### 4.1 PV Module Installation

4.1.1 Check whether the modules, components and tools are ready.

4.1.2 Adjust the connecting hole of U-Rail and C-Rail base on the installation angle. Do not fasten the bolt, keep the U-Rail rotatable as shown in Figure 1

Note: If necessary, use ribbons or other ropes to keep the U-Rail from falling after adjustment.

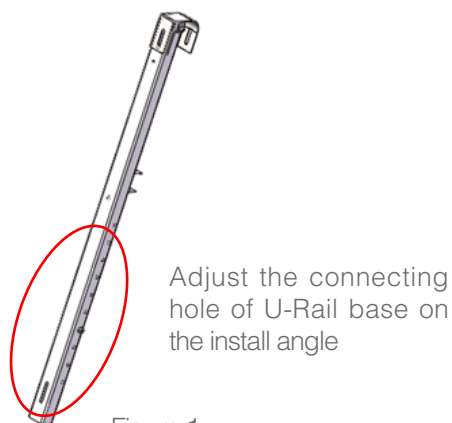


Figure 1

4.1.3 Fix the PV module and bracket with M6\*20 screw (two plain washer, one washer, nut and screw), fasten the screws from top to bottom after position is determined, as shown in Figure 2.

Recommended torque for M6 bolts is 8~10 N·m

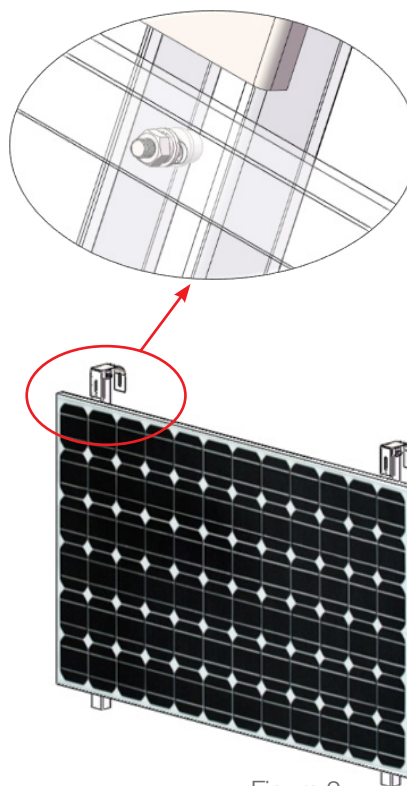


Figure 2

# Installation Instruction

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## 4.2 Bracket Installation

4.2.1 The installer should take effective safety measures accordance with the surrounding environment and local safety regulations

4.2.2 Attach the upper bracket to the balcony with M8\*125 bolt (one plain washer, washer, nut and bolt). Do not fasten the bolt as shown in Figure 3.

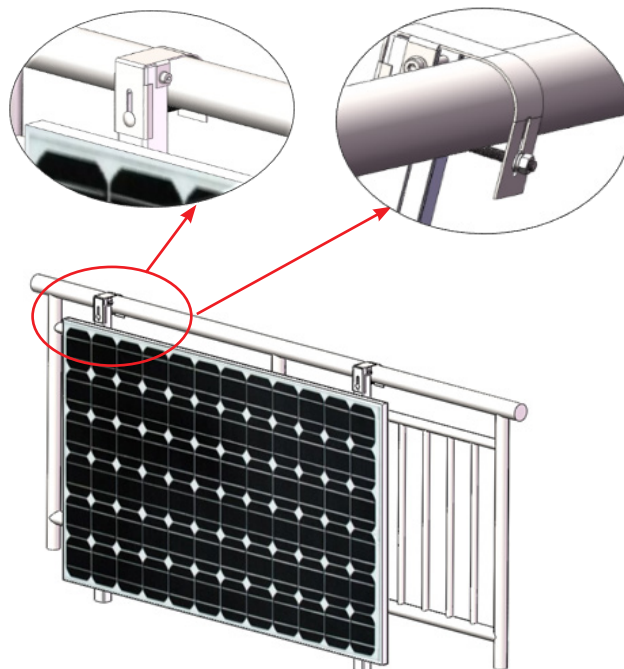


Figure 3

4.2.3 Unfold the U-Rail to planned angle, Attach the bottom bracket to the balcony with M8\*70 bolt (one plain washer, washer, nut and bolt).

Fasten the bolts of upper bracket, bottom bracket and U-Rail until the whole system is stable as shown in Figure 4.

Recommended torque for M8 bolts is 18~20 N·m

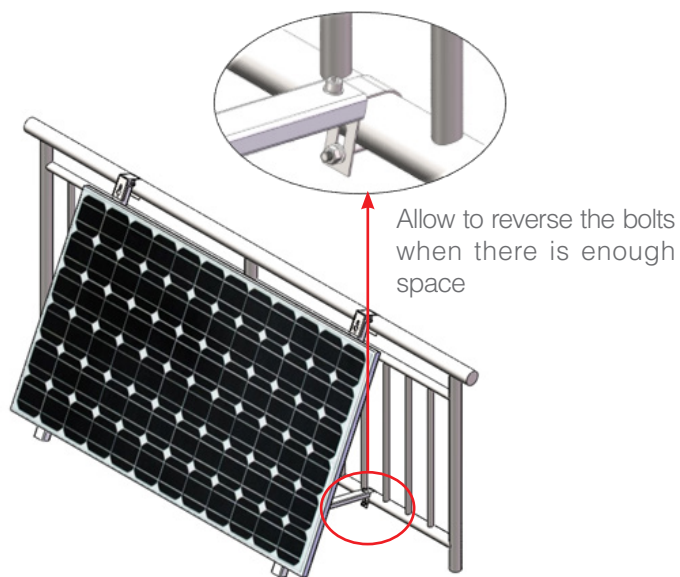


Figure 4

# Certificate



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## Innovating renewable energy

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## Worldwide Network

